Storm Data FAQ Page

When does data become available?

Due to the amount of time it takes to collect, validate, and enter post Storm Data information, the National Climatic Data Center (NCDC) regularly receives Storm Data from the National Weather Service (NWS) approximately 60-90 days after the end of the data month.

The NWS has 60 days to submit their data files to the NWS Headquarters in Silver Spring, MD. The NWS Headquarters (NWSHQ) then collects all of the data files from the 124 NWS Forecast Offices (NWSFO). The NWSHQ then uses several algorithms to prepare the Storm Data product into the integrated database. The NCDC receives a copy of this database approximately 75-90 days after the end of the month. A publication and archive are produced and the Storm Events Database is then updated within 90-120 days after the end of the month

Where does the data come from?

NCDC receives Storm Data from the National Weather Service. The National Weather service receives their information from a variety of sources, which include but are not limited to: county, state and federal emergency management officials, local law enforcement officials, skywarn spotters, NWS damage surveys, newspaper clipping services, the insurance industry and the general public.

How accurate is the data?

Storm Data Disclaimer:

Storm Data is an official publication of the National Oceanic and Atmospheric Administration (NOAA) which documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce. In addition, it is a partial record of other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occurs in connection with another event. Some information appearing in Storm Data may be provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals, etc. An effort is made to use the best available information but because of time and resource constraints, information from these sources may be unverified by the NWS. Therefore, when using information from Storm Data, customers should be cautious as the NWS does not guarantee the accuracy or validity of the information. Further, when it is apparent information appearing in Storm Data originated from a source outside the NWS (frequently credit is provided)

Storm Data customers requiring additional information should contact that source directly. In most cases, NWS employees will not have the knowledge to respond to such requests. In cases of lega

proceedings, Federal regulations generally prohibit NWS employees from appearing as witnesses in litigation not involving the United States.

How are the latitude and longitudes determined?

Storm data is entered into the database as a distance in miles and a direction on 16-point compass scale from a known location, usually a town or city. Example: 4.5 miles ESE Atlanta. The NWS uses a database of over 106,000 cities and towns including their latitudes and longitudes. Using an algorithm the location 4.5 miles ESE of Atlanta can be derived from the known latitude and longitude of Atlanta These latitude and longitude pairs are generated by the NWS and populated into the database. The latitude and longitude are in DMS (degrees, minutes, seconds) format.

How are the damage amounts determined?

The National Weather Service makes a best guess using all available data at the time of the publication The damage amounts are received from a variety of sources, including those listed above in the Data Sources section. Property and Crop damage should be considered as a broad estimate.

Why is there no lightning strike information?

At this time, the only lightning data contained within Storm Data are lightning events that result in fatality, injury and/or property and crop damage. These events are reported to the NWS for inclusion into the Storm Events Database. If you need information on lightning strikes that do not result in this criteria, you can obtain the lightning strike data from Vaisala here: Vaisala Lightning Strike Data

How are tornadoes counted?

Tornadoes may contain multiple segments. A tornado that crosses a county line or state line is considered a seperate segment. Also, a tornado that lifts off the ground for less that 5 minutes or 2.5 miles is considered a seperate segment. If the tornado lifts off the ground for greater than 5 minutes or 2.5 miles, it is considered a seperate tornado. Tornadoes reported in Storm Data and the Storm Events Database are in segments. For official tornado counts by state, please use the Annual Summaries, found here: NCDC Annual Summaries or use the monthly counts at the Storms Prediction Center here Storms Prediction Center Tornado Data

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Other information:

- Fatality Codes:
    - For events that include a fatality, there is a code containing the gender, age and fatality location at the end of the event narrative.

      1st letter: Gender (M/F)

      2nd numbers: Age

      3rd letters: Fatality location (see table below)

Example: M51IW Male, 51 years of age, fatality occurred In Water.

Fatality Location Abbreviations:

Code	Location
BF	Ball Field
BO	Boating
BU	Business
CA	Camping
EQ	Heavy Equipment/Construction
GF	Golfing
IW	In Water
LS	Long Span Roof
MH	Mobile Home
PH	Permanent Home
OT	Other
OU	Outside/Open Areas
SC	School
TE	Telephone
UT	Under Tree
VE	Vehicle

List of Acronyms:

WCM - Warning Coordination Meteorologist
NWS - National Weather Service
NOAA- National Oceanic and Atmospheric Administration

- More Notes
  An Episode is an entire storm system and can contain many different types of events.

  An Event is an individual type of storm event. (Thunderstorm Wind, Hail, Tornado and Flood are events)

  When listing wind speed values under Magnitude, Ex. 81 kts., the value listed is can be either estimated by damage caused, or measured by official NWS approved calibrated anemometers. 1 kt. = 1.152 mph.

  When listing hail size under Magnitude, ex. 2.25 in, the hail size is given in inches and hundredths of inches. These values are assigned a size in inches from their appearance.

Approximate hail size

Appearance	Approximate size in inches
Pea	0.25 - 0.50 inch
Penny	0.75 inch
Nickel	0.88 inch

Nickel	0.88 inch
Quarter	1.00 inch
Half dollar	1.25 inch
Walnut/Ping Pong	1.50 inch
Golf ball	1.75 inch
Hen Egg	2.00 inch
Tennis Ball	2.50 inch
Baseball	2.75 inch
Tea Cup	3.00 inch
Grapefruit	4.00 inch
Softball	4.50 inch

When listing property and crop damage, the figures indicated are the best guess made by the NWS from the available sources of information at the time of the printing.

The fatalities, injuries, and damage amounts appearing in tropical cyclone events are attributed only to wind damage experienced in the coastal counties/parishes listed. Other tropical cyclone related events such as tornadoes and flooding are listed within their separate event types.

The Saffir-Simpson Scale

Category One Hurricane:

Winds 74-95 mph (64-82 kt or 119-153 kph). Storm surge generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

Category Two Hurricane:

Winds 96-110 mph (83-95 kt or 154-177 kph). Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

Category Three Hurricane:

Winds 111-130 mph (96-113 kt or 178-209 kph). Storm surge generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large tress blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying

escape routes are cut by rising water 3-5 hours before arrival of the hurricane center Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

Category Four Hurricane:

Winds 131-155 mph (114-135 kt or 210-249 kph). Storm surge generally 13-18 ft above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).

Category Five Hurricane:

Winds greater than 155 mph (135 kt or 249 kph). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

http://www.ncdc.noaa.gov/oa/climate/sd/sdfaq.html
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Please see the NCDC Contact Page if you have questions or comments.