

AUGUST 1990
VOLUME 32
NUMBER 8

STORM DATA



AND UNUSUAL WEATHER PHENOMENA
WITH LATE REPORTS AND CORRECTIONS



noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE / NATIONAL CLIMATIC DATA CENTER ASHEVILLE, N.C.

COVER: Residential damage in the Warwick Estates Subdivision (west of Joliet/Crest Hill, Illinois) where two people died as a result of the devastating Plainfield/Crest Hill tornado of August 28, 1990. F2 and F3 damage was produced in the subdivision by the tornado (although subsequent cleanup makes it look worse). *Photo courtesy: Herald-News; Joliet, Illinois.*

CONTENTS

	<u>Page</u>
Storm Folks	3
Outstanding Storms of the Month	4
Storm Data and Unusual Weather Phenomena	20
Late Reports and/or Corrections	158
Reference Notes and "F" Scale Definitions	159
Storm Summaries	160

STORM DATA

(ISSN 0039-1972)

National Climatic Data Center

Editor: Roger W. Tanner

Associate Editor: Vince Miller

Publication Staff: Lanny Dimmick, Jay Hollifield, Mary Ann Byrd, and Sara Lackey

STORM DATA is prepared, funded, and distributed by the National Oceanic and Atmospheric Administration (NOAA). The Outstanding Storms of the Month section is prepared in cooperation with Mr. Vince Miller, Associate Editor. He is a broadcast meteorologist for THE WEATHER CHANNEL® in Atlanta, Georgia.

The Storm Data and unusual Weather Phenomena Narratives and Hurricane/Tropical Storm summaries are prepared by the National Weather Service. Monthly and annual statistics and summaries of tornado and lightning events resulting in deaths, injuries, and damage are compiled by cooperative efforts between the National Climatic Data Center and the National Severe Storms Forecast Center.

STORM DATA contains all confirmed information on storms available to our staff at the time of publication. However, due to difficulties inherent in the collection of this type of data, it is not all-inclusive. Late reports and corrections are printed in each edition.

Maps of the National Weather Service Forecast Zones which are used in the Storm Data and Unusual Weather Phenomena section will be printed in all editions.

Except for the limited editing for grammatical errors, material submitted are generally published as received.

Subscription, pricing, and ordering information is available from:

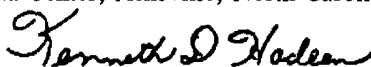
National Climatic Data Center
Federal Building
Asheville, NC 28801-2696
(704) 259-0682 or (704) CLIMATE

The editors of **STORM DATA** solicit your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or unusual weather events (past or present). These could be for use in the "Outstanding Storms of the Month" or "Et Cetera" sections of **STORM DATA**. We request our subscribers or other interested persons to mail such items to:

Mr. Vince Miller
1464 Wood Thrush Way
Marietta, GA 30062

Any such items received by the editors will be for use in **STORM DATA** only. Any other use will be with the permission of the owner of said items. Materials submitted will be returned if requested in the original submission.

"I certify that this is an official publication of the National Oceanic and Atmospheric Administration and is compiled from information received at the National Climatic Data Center, Asheville, North Carolina 28801."



Director
National Climatic Data Center

STORM FOLKS . . .



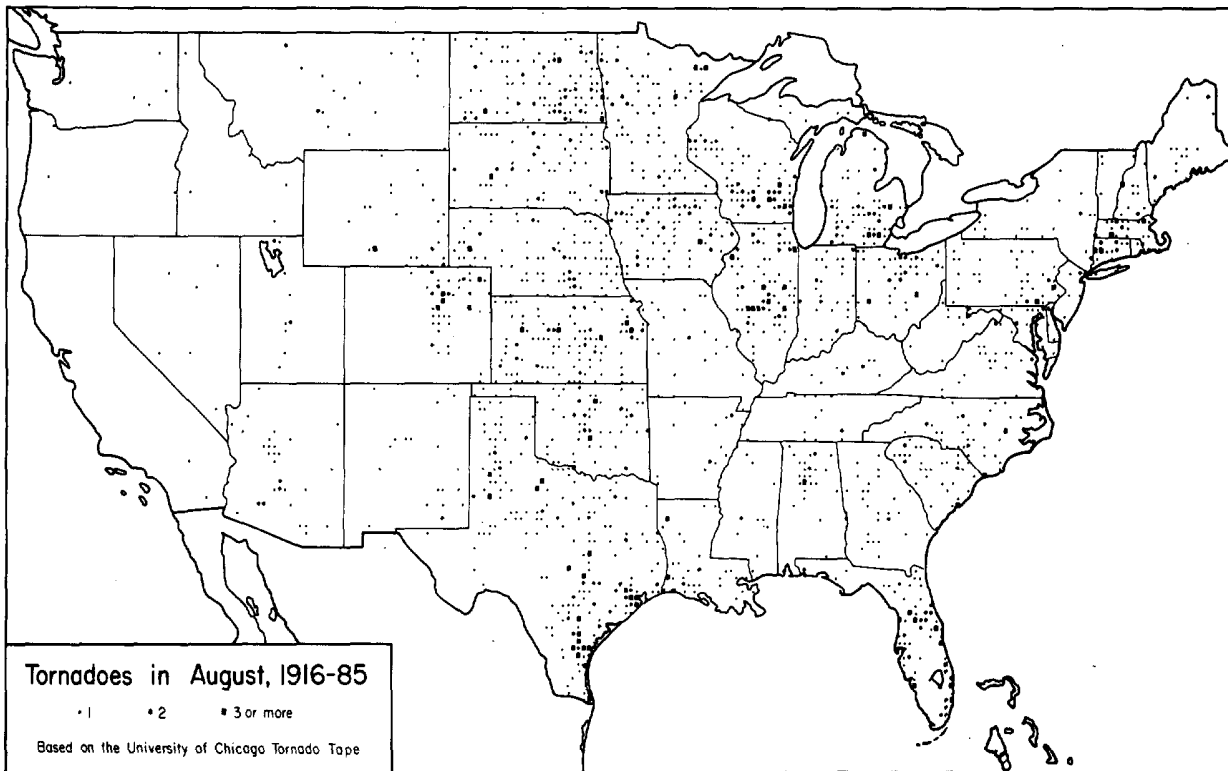
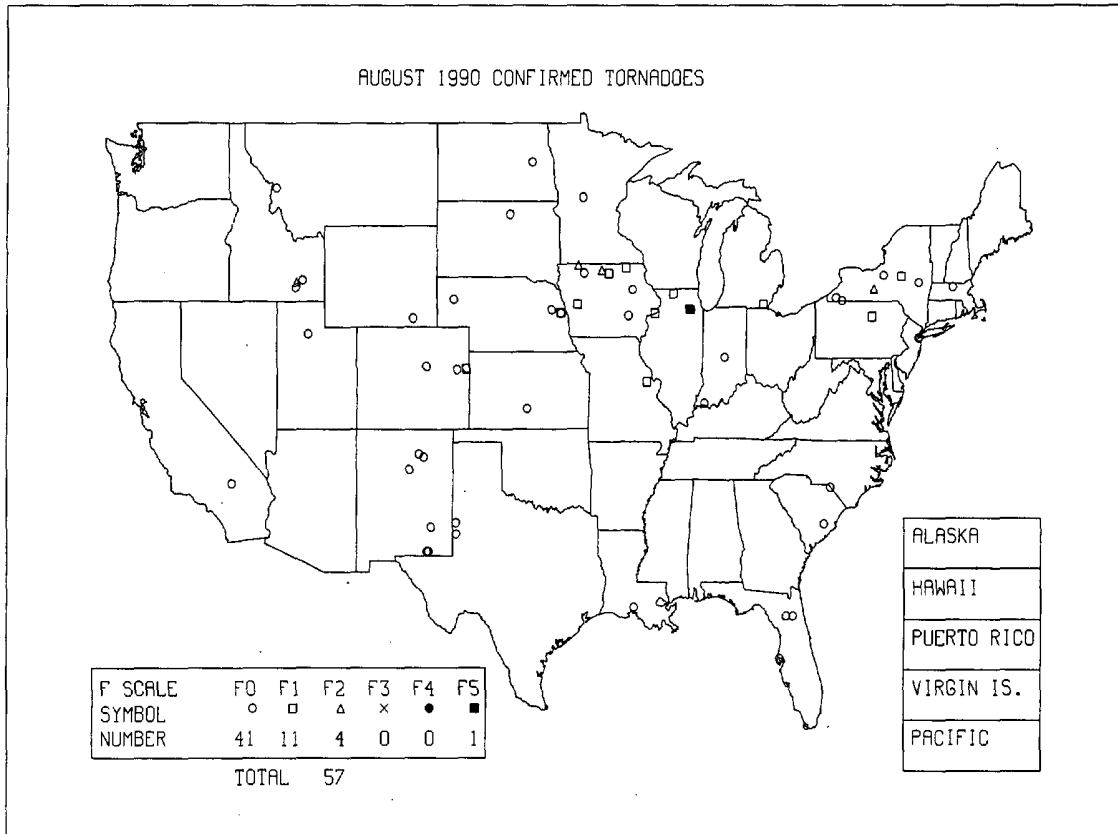
Biographical Sketch
MARY JO PARKER
WPM WSFO Columbia, SC

Mary Jo graduated from the State University of New York College at Oneonta in May of 1976 with a BS degree in meteorology. Prior to graduation she was a summer trainee with the NWS at WSFO Buffalo during the summer of 1974. She served as an intern at WSFO Columbia, SC from 1976 to 1980 and was promoted to forecaster at WSFO Columbia in 1980. Mary Jo became the WPM at WSFO Columbia in 1981 and currently serves in that position.

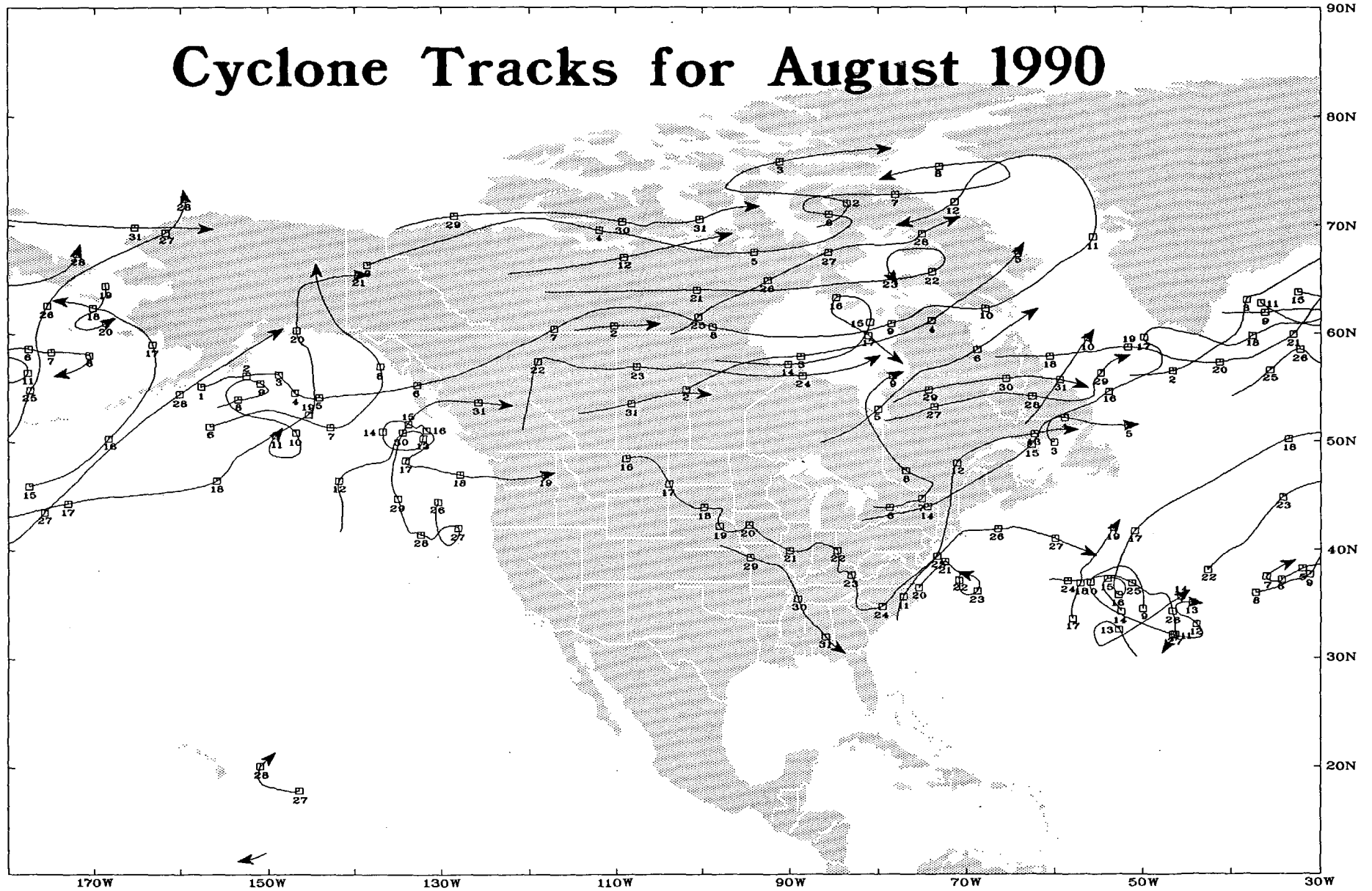
Mary Jo has been involved in the annual Tornado/Severe Weather Awareness Week and statewide tornado drill, the annual Hurricane Awareness Week, and the annual State Hurricane Conferences. She has trained spotters at the

State Highway Patrol Academy, amateur radio clubs, and many other groups. Mary Jo initiated the annual Tornado Safety Poster Contest, sponsored by the South Carolina Emergency Preparedness Association, and aimed at increasing awareness of tornado hazards and safety rules at the elementary school level. She participated in FEMA hazard mitigation survey teams for Hurricane Hugo and the October 1990 floods in South Carolina. Mary Jo worked with Southern Bell to develop a videotape on severe weather and hurricane safety for use with their employees and other businesses. She also was involved in developing a series of hurricane preparedness video tapes produced by South Carolina Education Television.

OUTSTANDING STORMS OF THE MONTH



Cyclone Tracks for August 1990



1. PRECIPITATION AND TEMPERATURE ANOMALIES - AUGUST 1990

Table 1 shows the August 1990 temperature and precipitation rankings for the nine climatically homogeneous regions shown in Fig. 1. August 1990 rainfall was quite variable over the contiguous United States (Figs. 2 and 3 on the following page). The Northeast region had the 7th wettest August of record (since 1895), while the Southwest, South, and Southeast regions were in or near the dry third of the historic August record. Much of the contiguous U.S. experienced slightly above normal August temperatures. The greatest negative departures were noted in the southern Rockies, Rio Grande Valley, and adjacent Plains (Fig. 4 on page 8).

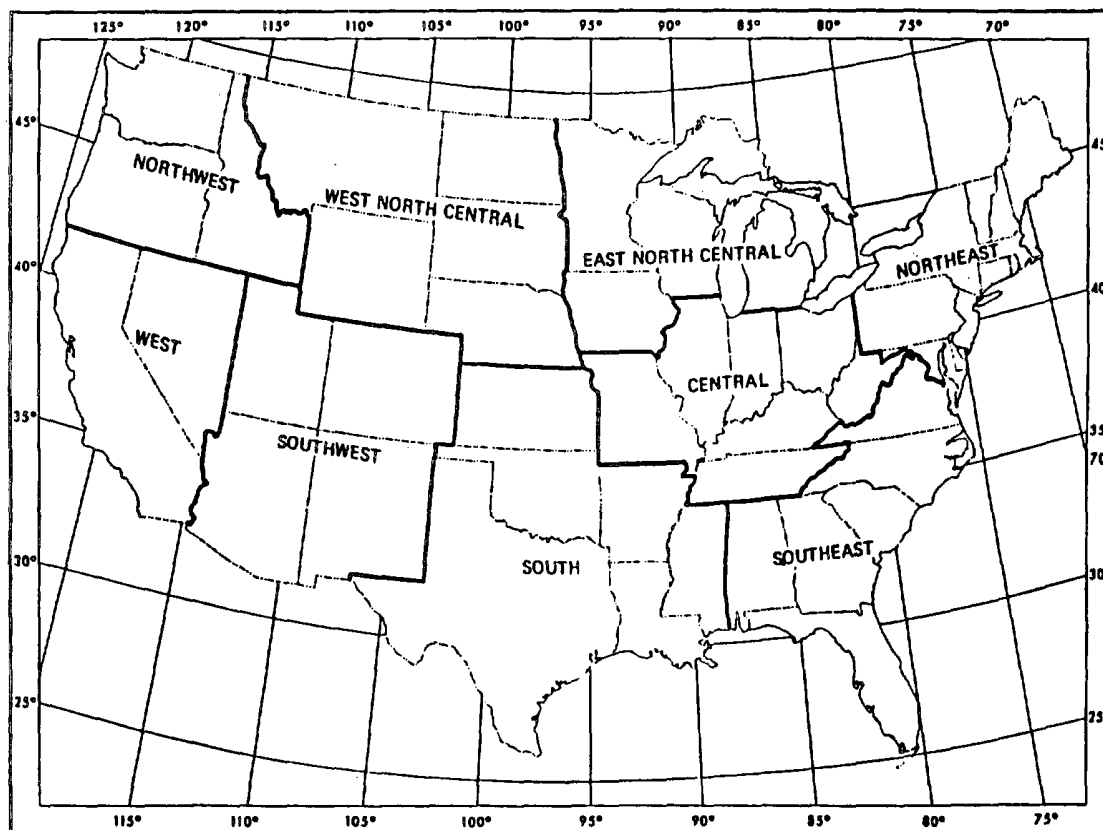
TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR AUGUST 1990, BASED ON THE PERIOD 1895-1990.

1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

<u>REGION</u>	<u>PRECIPITATION</u>	<u>TEMPERATURE</u>
Northeast	90	69
East North Central	51	60
Central	55	36
Southeast	37	80
West North Central	50	77
South	29	43
Southwest	34	26
Northwest	82	74
West	65	62
National	46	68

From National Climatic Data Center

Fig. 1



From National Climatic Data Center

Fig. 2

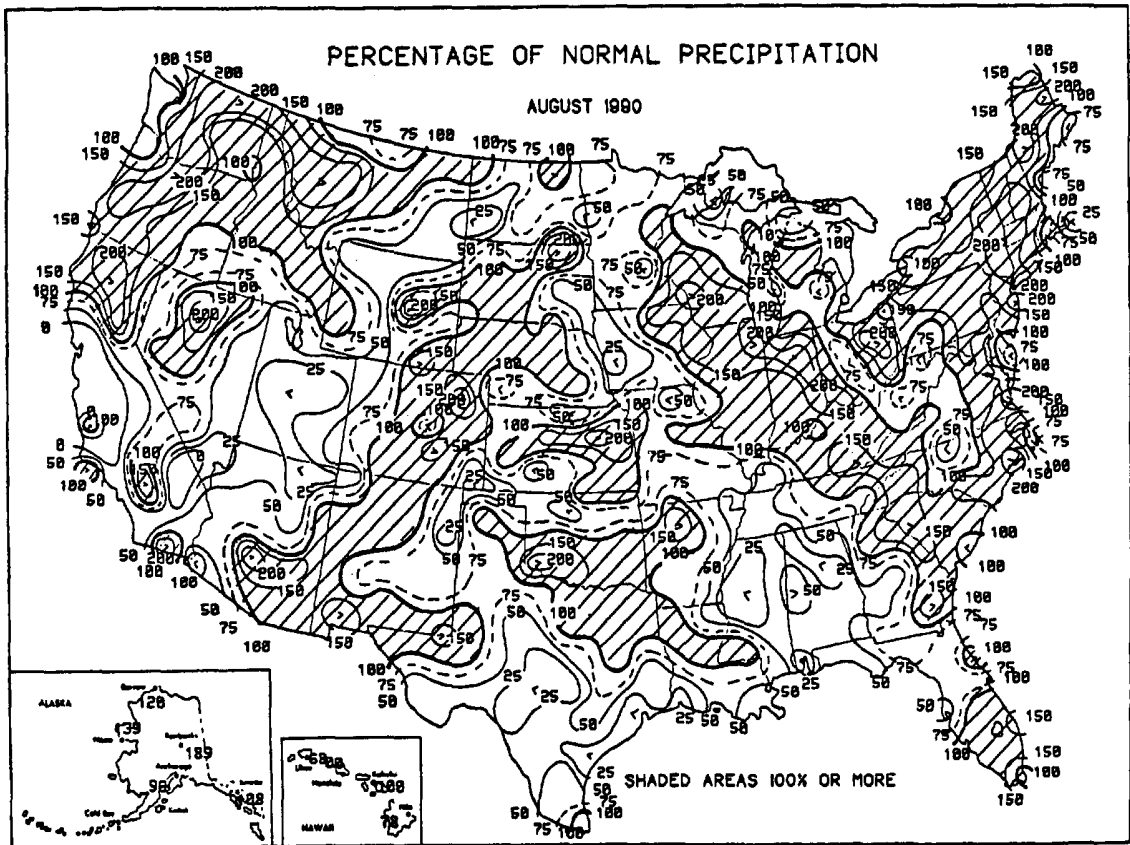
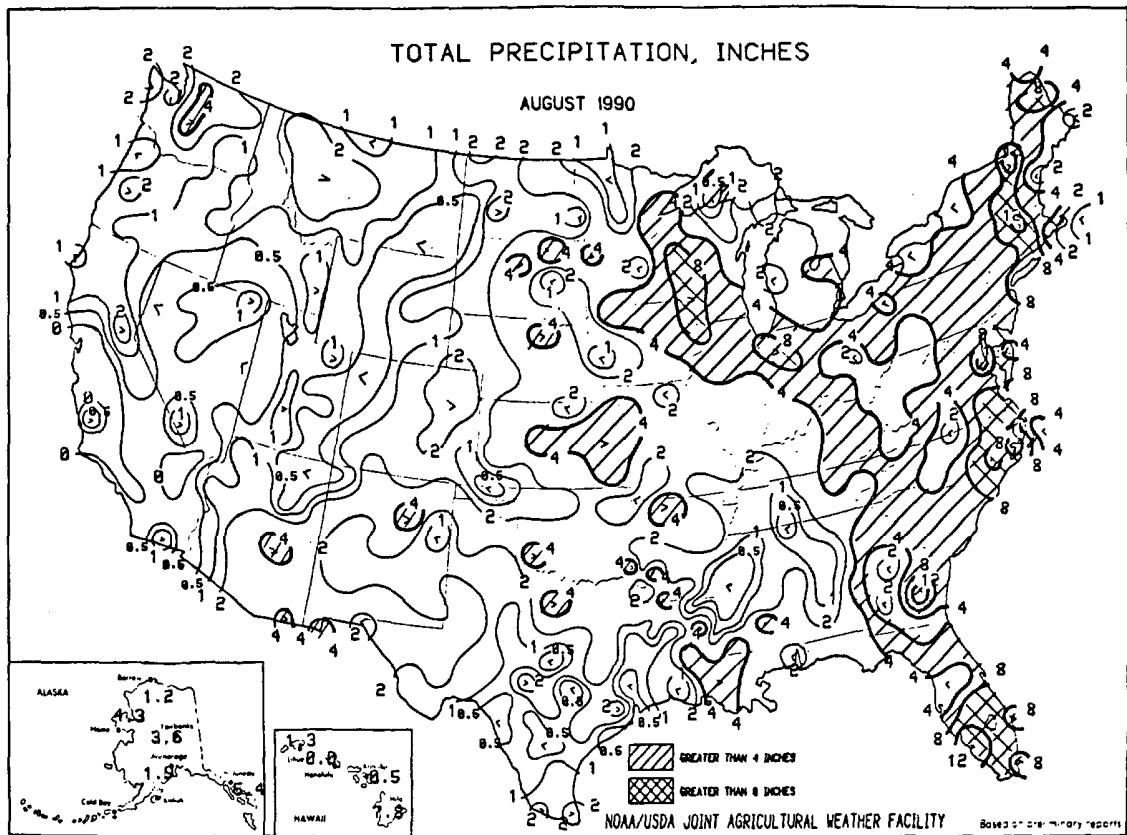
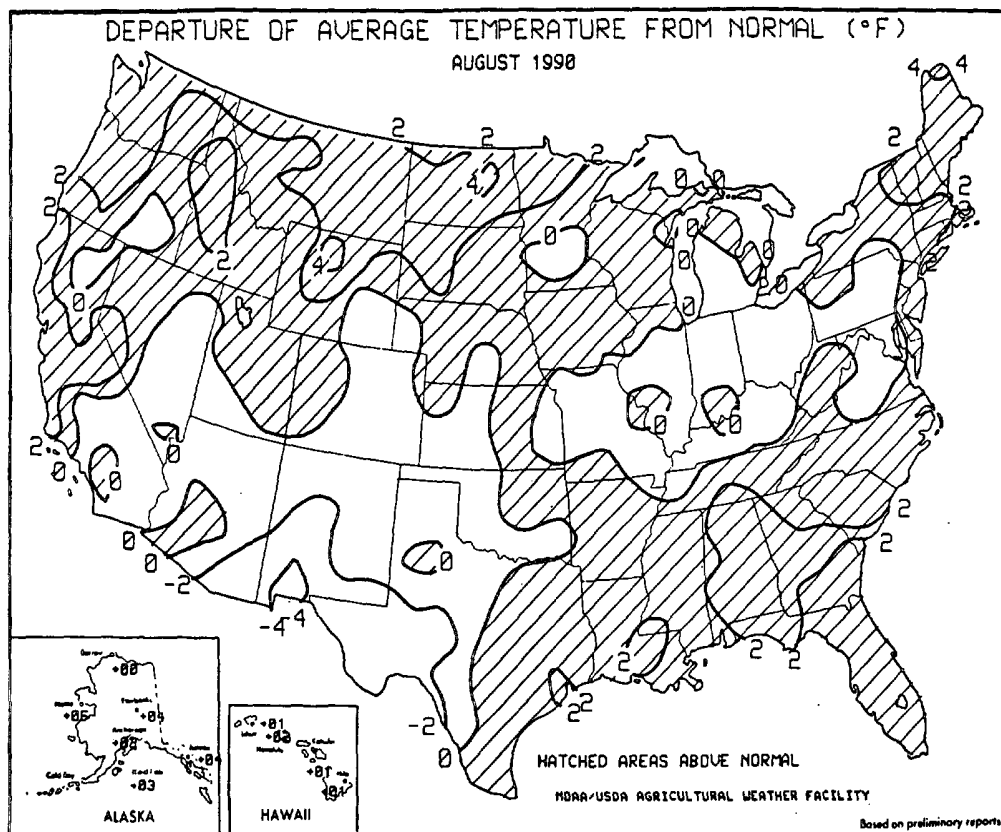


Fig. 3



Above figures reprinted from *Weekly Weather and Crop Bulletin* - September 11, 1990

Fig. 4



Reprinted from Weekly Weather and Crop Bulletin - September 11, 1990

2. PLAINFIELD/CREST HILL (ILLINOIS) TORNADO OF AUGUST 28, 1990

The deadliest tornado of 1990 (track length of 16.4 miles) killed 29 people and caused at least 350 injuries as it ravaged parts of Kendall and Will counties in northeastern Illinois on the afternoon of August 28th. This southwestward moving tornado was on the ground from approximately 2:15 p.m. CST to 2:45 p.m. CST. The tornado was most destructive from Plainfield to Crest Hill. The same storm system (which displayed supercell characteristics during much of its life span) also produced large hail and damaging winds from near Rockford, Illinois, to central Indiana; damage in Kendall and Will counties alone was in excess of \$160 million.

The tornado produced F5 damage as it approached the western part of Plainfield. As the tornado travelled through Plainfield and Crest Hill, it destroyed several schools with enrollments totalling over 1,500 pupils. Fortunately, classes had not been scheduled to start until the next day, August 29th. Thus, a

much higher toll was probably averted.

No known photographs or videos of the actual tornado exist. The tornado was embedded in heavy rain and hail during most of its lifetime, thus preventing visual warning of the impending event. This strongest U.S. August tornado since at least 1950 had a path width which ranged from 200-yards wide to a half mile wide, yet the core of the tornado was very tight, at times only 20 to 30 feet in diameter.

This tornado was the worst single killer tornado in the U.S. since May 22, 1987, when 30 people died at Saragosa, Texas. It was the worst Illinois killer tornado since 1967, when 33 people died in a Cook County tornado. Only one other Illinois August tornado had been a killer. On August 21, 1977, six people were killed at Lake Mattoon; all were vacationers living in a trailer court. The 1977 Illinois August tornado was also embedded in heavy rain.

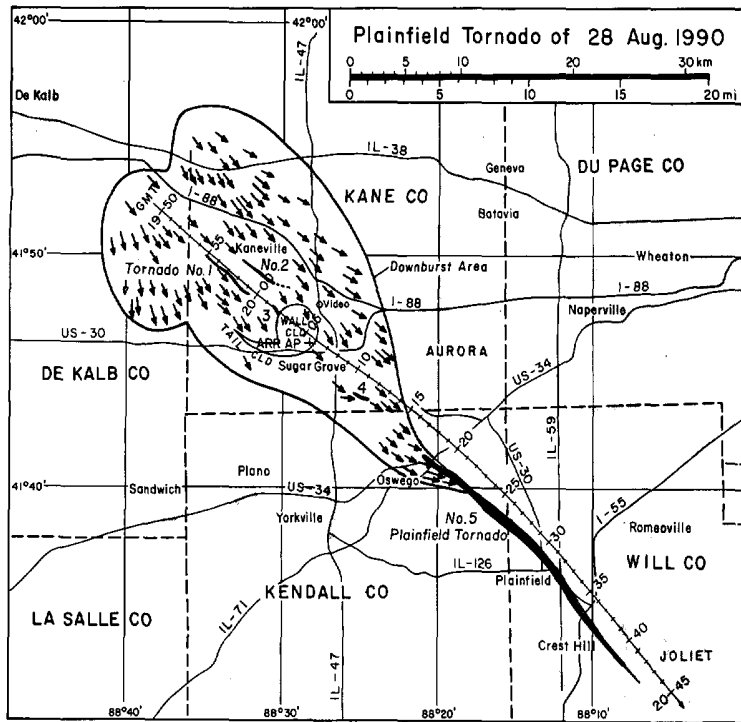


Fig. 5

Left: Results of an aerial survey done by Dr. Theodore Fujita and Mr. Duane J. Stiegler (of the University of Chicago) the morning following the tornado. Numerous microbursts preceded the touchdown of the Plainfield/Crest Hill tornado. The Plainfield/Crest Hill tornado is labelled as No. 5 on the map; tornadoes No. 1 through No. 4 are short-lived precursor tornadoes (which are not included in the "August 1990 Confirmed Tornadoes" map on page 4, nor in the Illinois listings in the "Storm Data and Unusual Weather Phenomena" section of this issue.

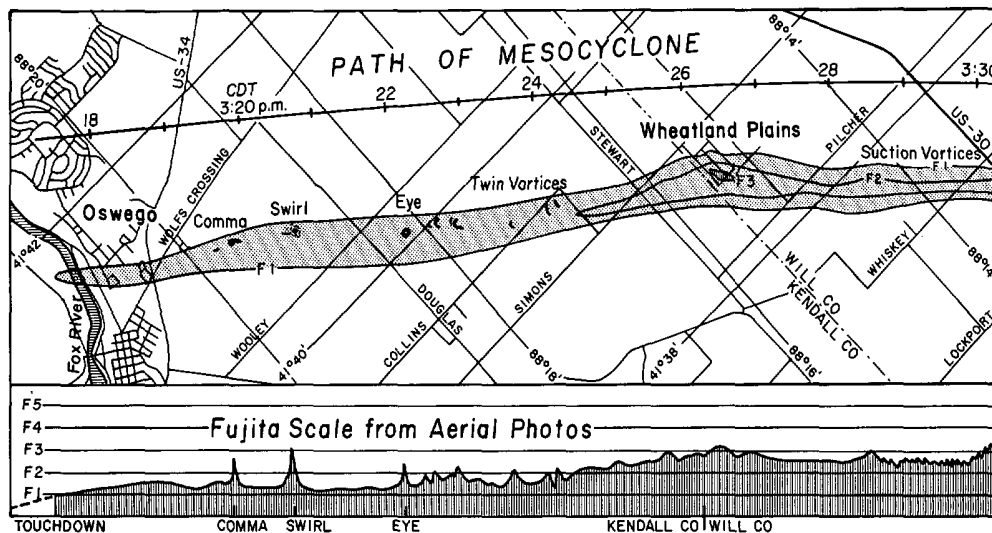


Fig. 6

Left (middle and bottom): Detailed map along the path of the Plainfield/Crest Hill tornado. Maps this page courtesy: Dr. T. Theodore Fujita; University of Chicago.

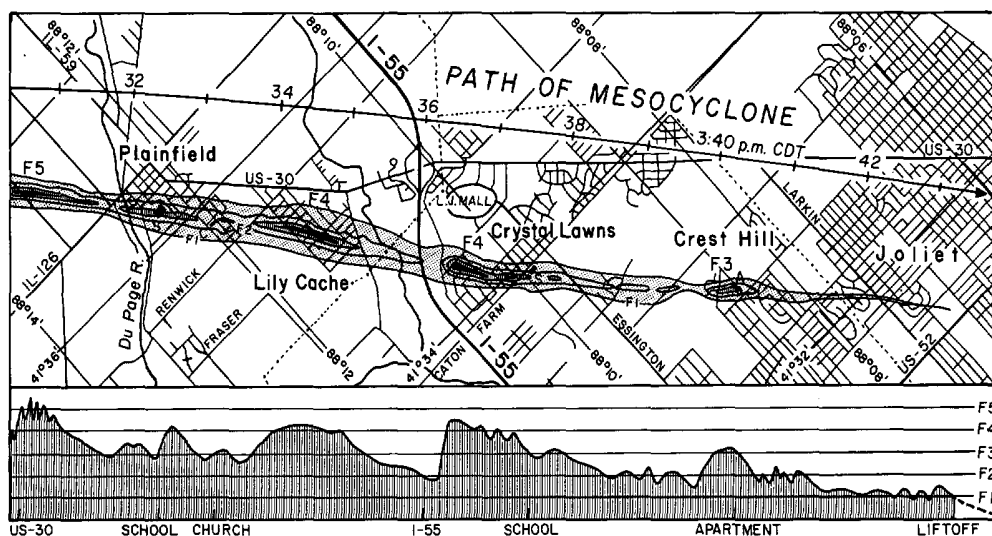
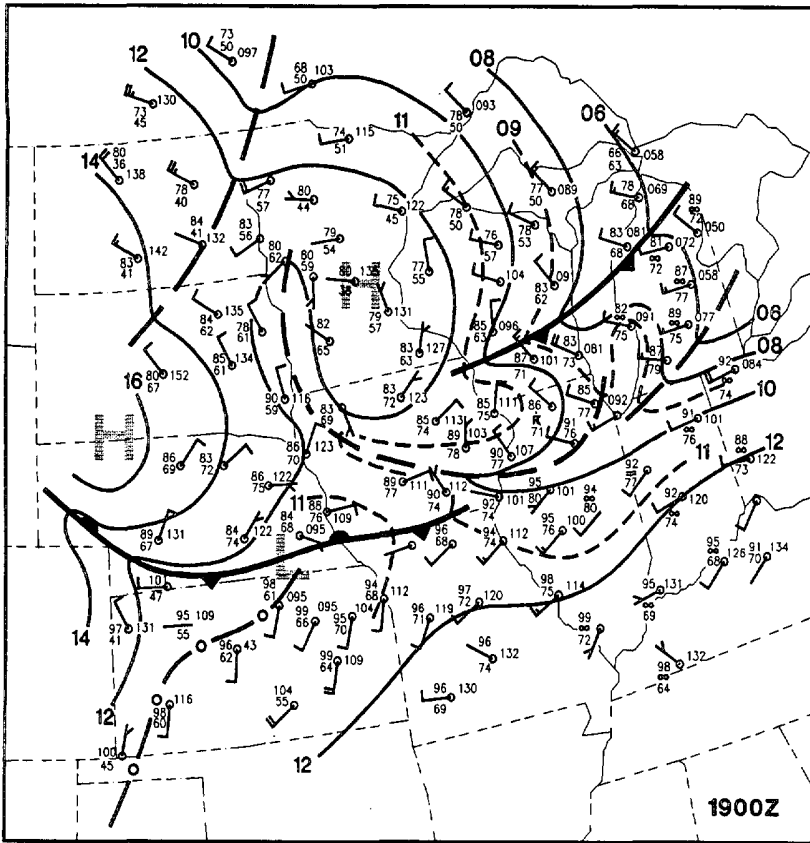
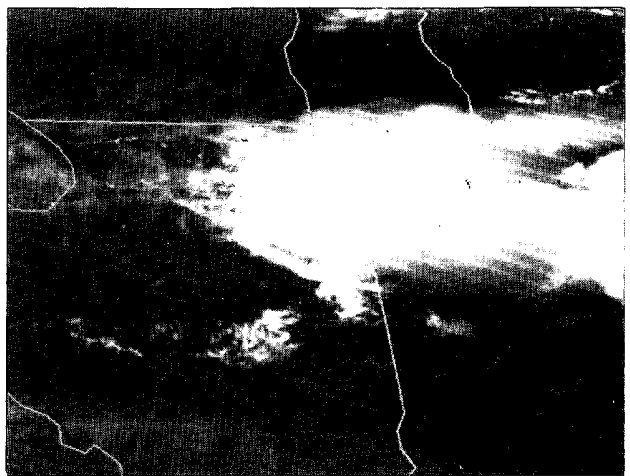
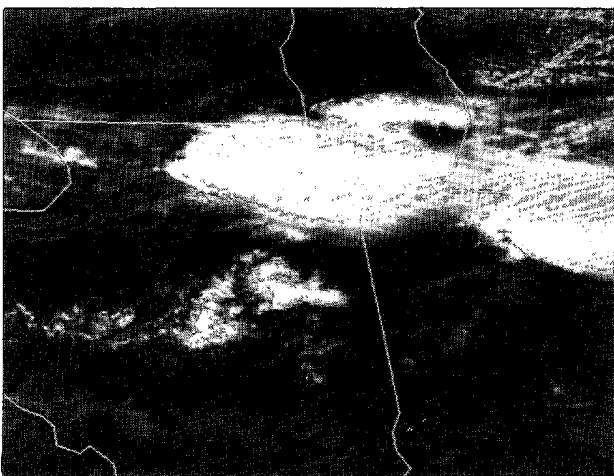
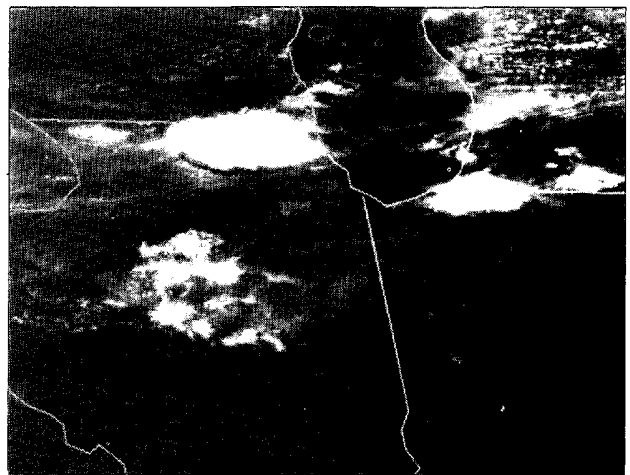
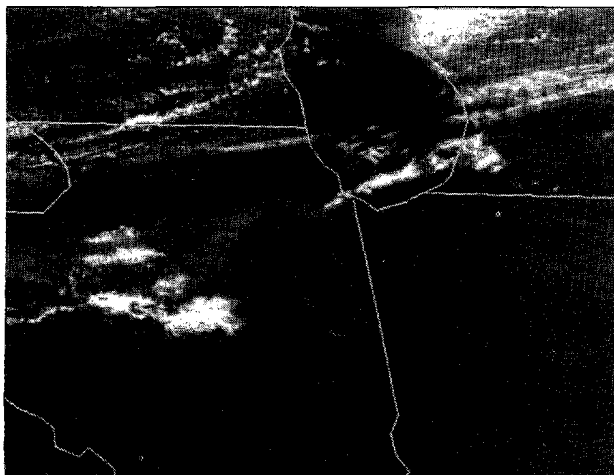


Fig. 7

Fig. 8



Left: AFOS surface data plotted for 1900 UTC (1:00 p.m. CST) on August 28, 1990. A subjective analysis of surface features is overlain. The surface parameters shown certainly do not hint strongly of a good chance of a violent (F5) tornado within several hours over northeastern Illinois (surface pressures not particularly low, no surface inflow, etc.). Visible GOES satellite imagery (below) shows the development of the tornadic thunderstorm and its progression southwestward across northern Illinois at: (a) 1746 UTC (11:46 a.m. CST); (b) 1846 UTC (12:46 p.m. CST); (c) 1946 UTC (1:46 p.m. CST); and (d) 2046 UTC (2:46 p.m. CST). Map and satellite photos from: NWS Natural Disaster Survey Report - THE PLAINFIELD/CREST HILL TORNADO; Northern Illinois; August 18, 1990.



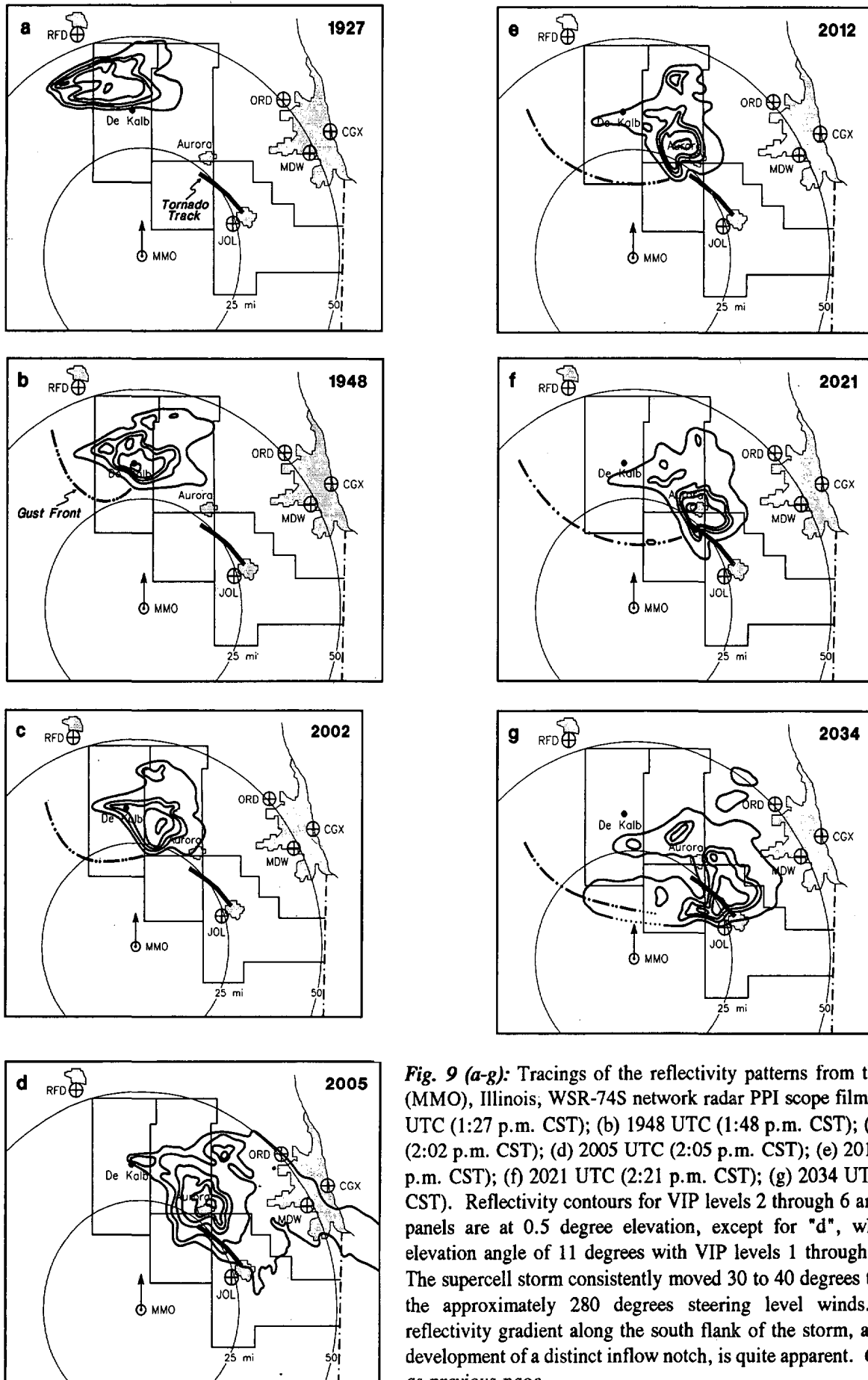
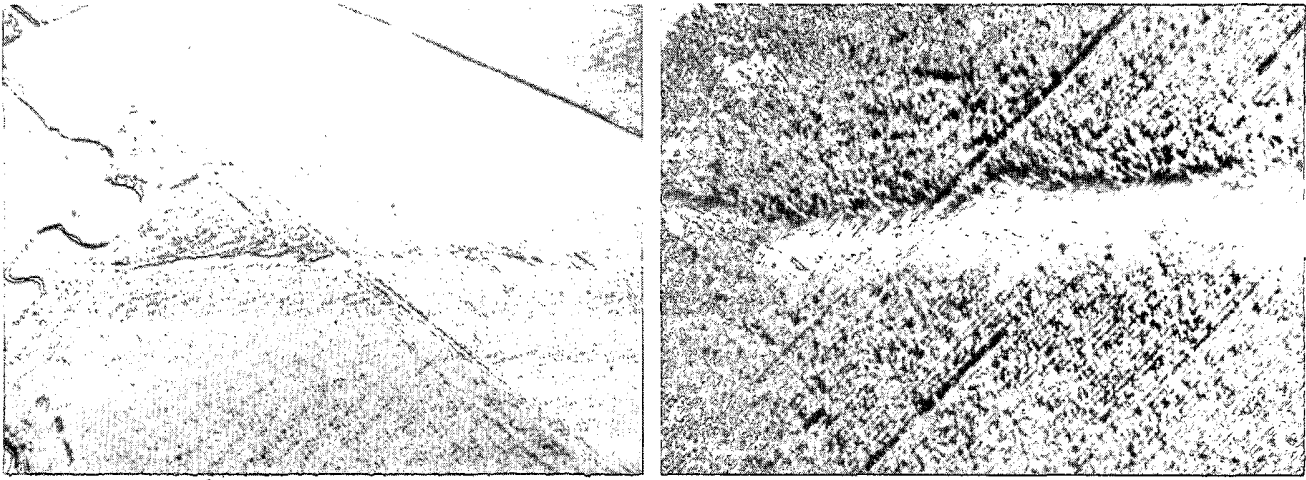
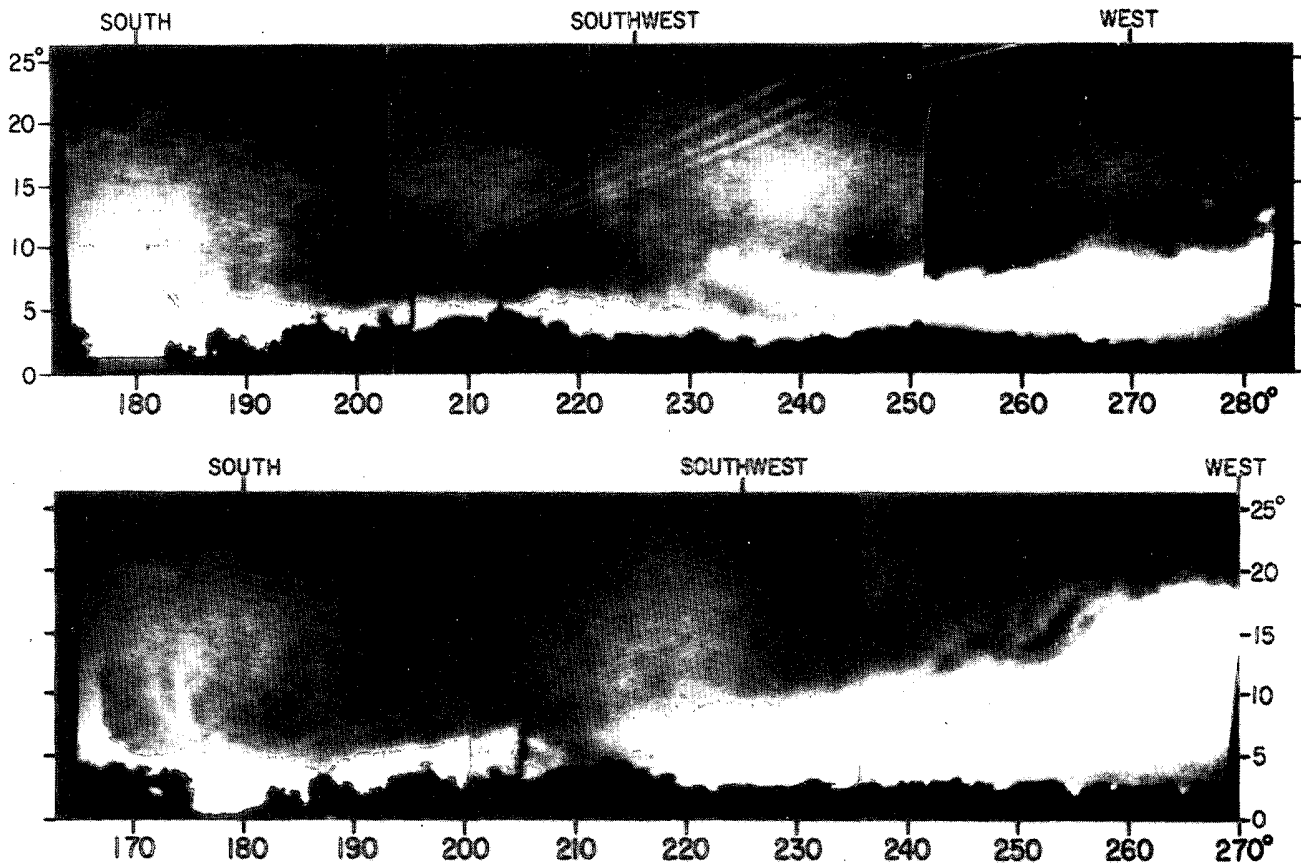


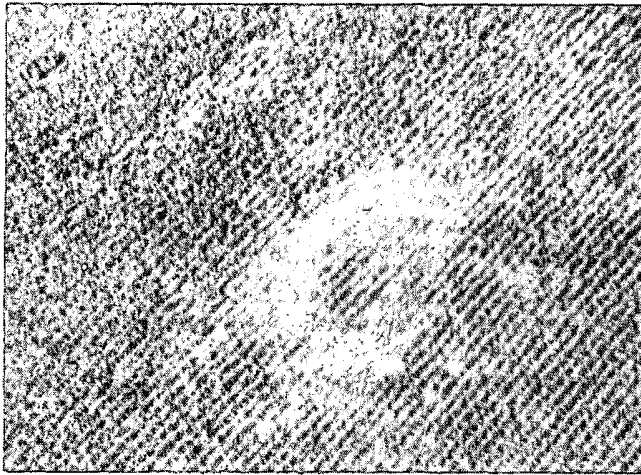
Fig. 9 (a-g): Tracings of the reflectivity patterns from the Marseilles (MMO), Illinois, WSR-74S network radar PPI scope film for: (a) 1927 UTC (1:27 p.m. CST); (b) 1948 UTC (1:48 p.m. CST); (c) 2002 UTC (2:02 p.m. CST); (d) 2005 UTC (2:05 p.m. CST); (e) 2012 UTC (2:12 p.m. CST); (f) 2021 UTC (2:21 p.m. CST); (g) 2034 UTC (2:34 p.m. CST). Reflectivity contours for VIP levels 2 through 6 are traced. All panels are at 0.5 degree elevation, except for "d", which is at an elevation angle of 11 degrees with VIP levels 1 through 6 contoured. The supercell storm consistently moved 30 to 40 degrees to the right of the approximately 280 degrees steering level winds. A strong reflectivity gradient along the south flank of the storm, along with the development of a distinct inflow notch, is quite apparent. *Credits: same as previous page.*



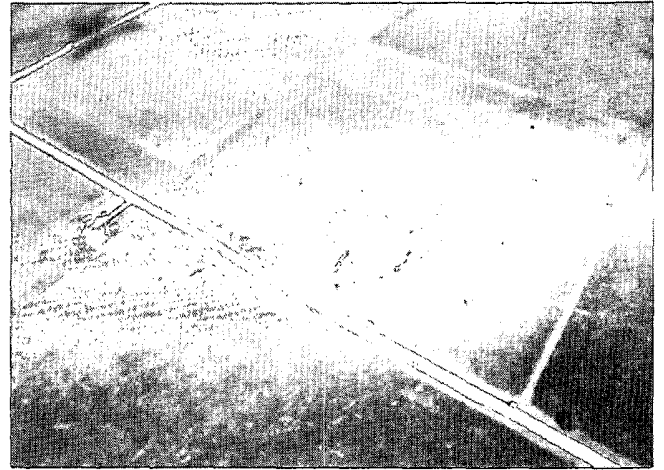
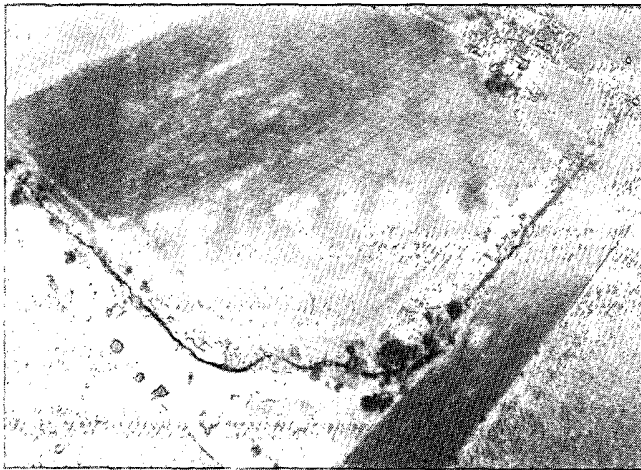
Above (left): Part of the 2.4-mile long path of a microvortex (Tornado No.2 in the large area of microbursts shown in Fig. 5). The vortex moved from right to left in this photo looking southwest. The intensity of this vortex was rated F2. **Above (right):** The left (dissipating) end of the same microvortex. The path is 20- to 40-foot wide and associated with a tight core of cyclonic rotation which moved from right to left. The core diameter pulsed before the vortex lifted. *Photos courtesy: Dr. T. Theodore Fujita; University of Chicago.*



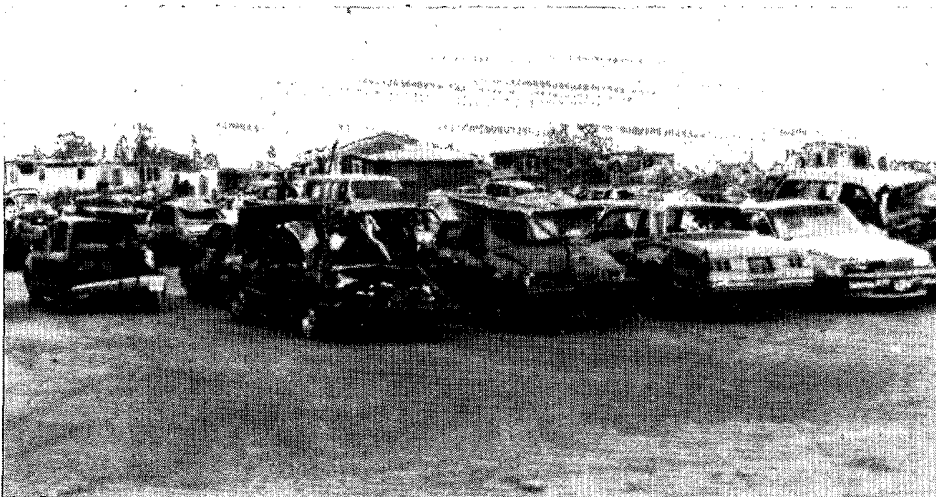
Middle and bottom: Composite from video short about 2:05 CST to 2:10 p.m. CST (see photographic location shown in Fig. 5). A distinct wall cloud was over and to the northwest of the Aurora airport (located in Sugar Grove); several funnels had also been observed by the photographer and his students. Tower controllers at the FAA-controlled airport felt they observed a wall cloud moving over the airport at about 2:05 p.m. CST immediately before winds gusted as high as 80 mph to 90 mph. The controllers abandoned the control tower. Extensive damage was inflicted on the airport, but information on the extent of the damage was not received at WSFO Chicago until about 3:30 p.m. CST. (The presence of a wall cloud often indicates the possibility of a tornado.) *Video composite courtesy: Dr. T. Theodore Fujita; University of Chicago; from video provided by Mr. Paul Sirvatka; College of Du Page.*



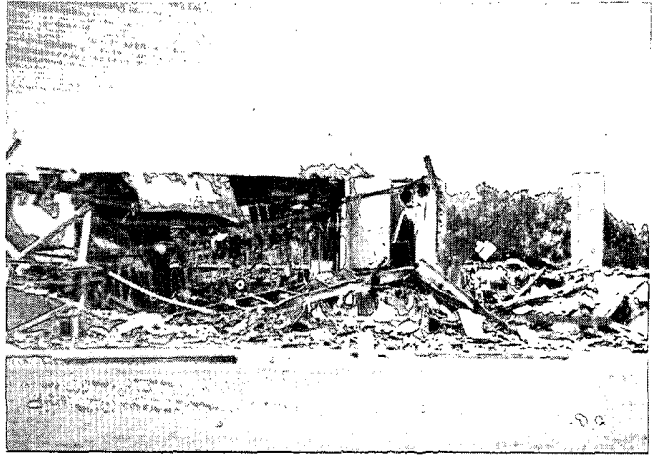
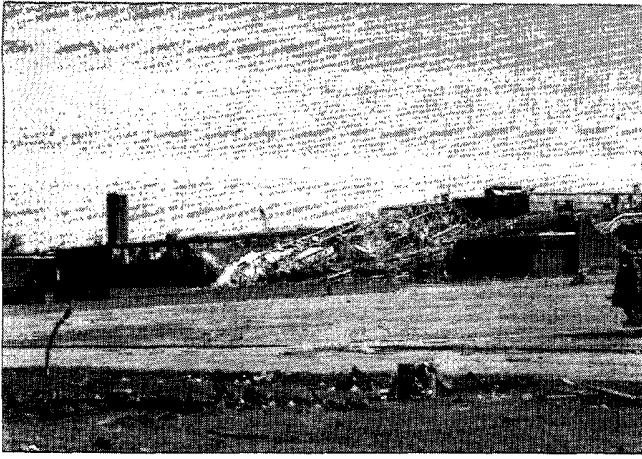
There were a number of spin-up vortices inside the first 2-mile segment of the path of the Plainfield/Crest Hill tornado (Tornado No. 5 in Fig. 5). *Above (left)*: A spin-up vortex with an "eye" made visible by undamaged corn stalks standing at the center of the swirl. *Above (right)*: Another spin-up vortex which moved from right to left, leaving a short damage path in a corn field.



The Plainfield/Crest Hill tornado induced at least 50 suction vortices within its 16.4-mile path. *Above left*: A series of 10 suction vortex marks in a field near Wheatland Subdivision. The intensity of the tornado, excluding the suction vortices, was increasing from F1 to F2. The intensity inside the embedded suction vortices was rated between F2 and F4. *Above (right)*: Intense F5 damage area on a farmstead and corn fields just northwest of Plainfield. Note the narrow convergence mark of debris along the path of the center of the tornado. This tornado was characterized by an unusually tight core which acted as a giant suction vortex. *Above photos courtesy: Dr. T. Theodore Fujita; University of Chicago.*

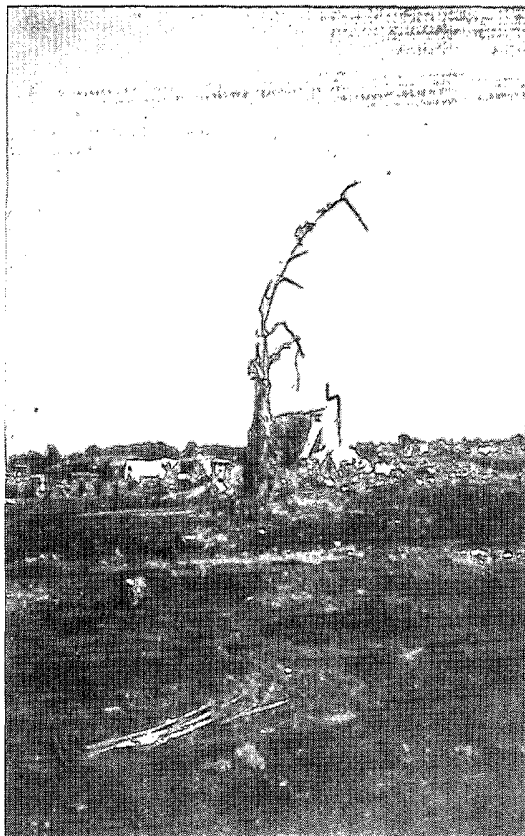


The Plainfield High School parking lot became a parking lot for wind damaged cars. *Photo courtesy: Jane Hollingsworth and Jim Lebda; WSFO Chicago.*

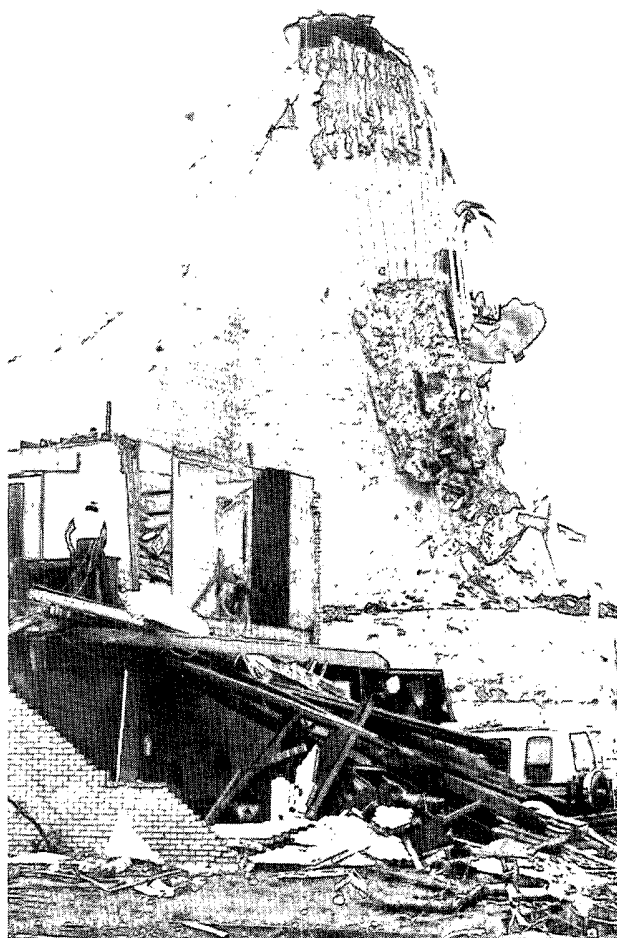


Clockwise (from left to above): Damage to the Plainfield High School where classes would have begun the next day. Two people died at the high school and one person was killed at the nearby district administration building. *Bottom (left and right):* Damage to nearby residential areas. *Photos supplied by NSSL; Norman, Oklahoma.*



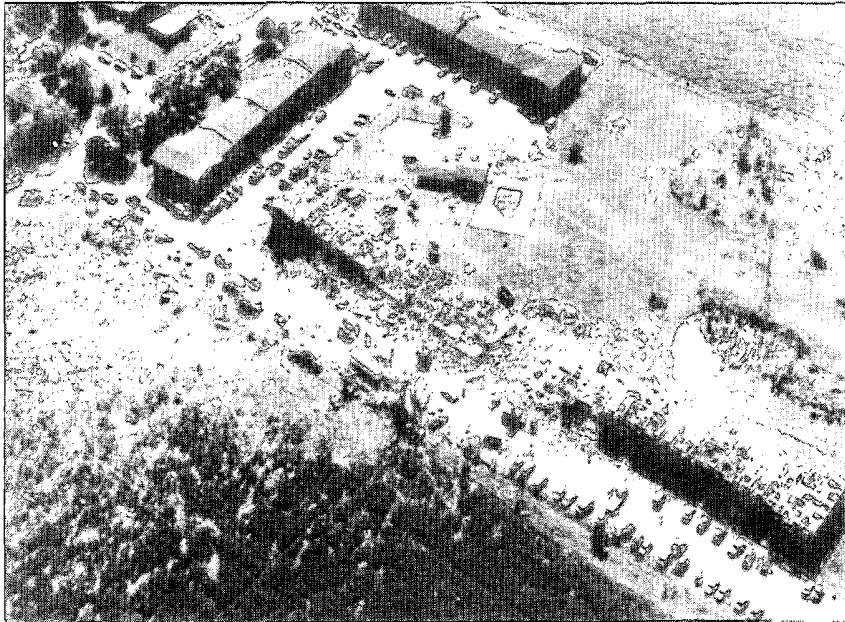


All (except bottom-right): Residential damage near Plainfield High School. Photos courtesy: left; Robert Jacobson; NWS. Above; Herald-News; Joliet, Illinois. Left (bottom two): via NSSL; Norman, Oklahoma. Bottom (right): St. Mary's Catholic Church is in the background (note cross on the right side of the church) - with St. Mary's School in the foreground. The principal and two others died here. Photo courtesy: Herald-News; Joliet, Illinois.





Left (top): Damage in the western section of Crest Hill. "Weaker" structures were generally blown off their foundations.



Left (middle): The Crest Hill Lakes Apartment complex (consisting of 3-story units) which was destroyed by the tornado; eight deaths occurred here. Note that the core of leveling to the ground in the center of the photo is very narrow. Large objects, including several residents, became airborne and were found in a nearby cornfield. The only post-event report of a funnel cloud along the damage track of this tornado came from a resident of this complex. She said she observed several funnel clouds swirling around her as the apartments were being destroyed. This would be consistent with the occurrence of a multi-vortex tornado (which was documented in the post-storm survey performed by Fujita and Stigler).
Photos courtesy: Dr. T. Theodore Fujita; University of Chicago.



Left (bottom): "Less" damaged wing of the Crest Hill Lakes Apartment complex (when compared to center of above photo). *Photo courtesy: Herald-News; Joliet, Illinois.*

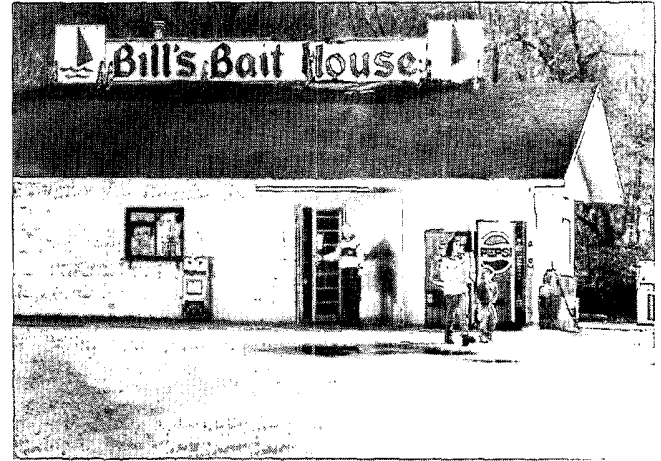
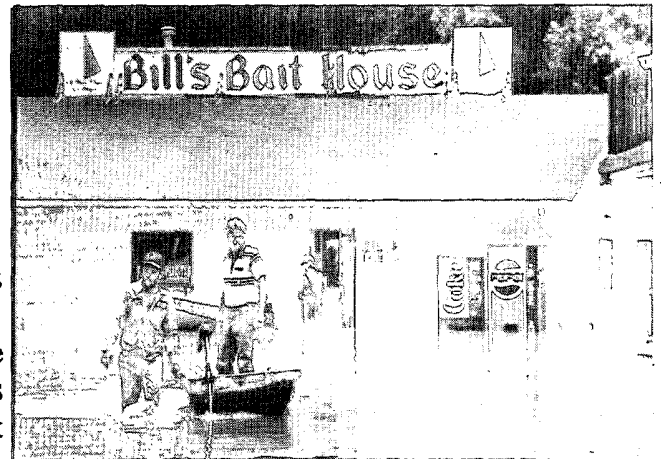
3. AUGUST 1990 WEATHER POTPOURRI

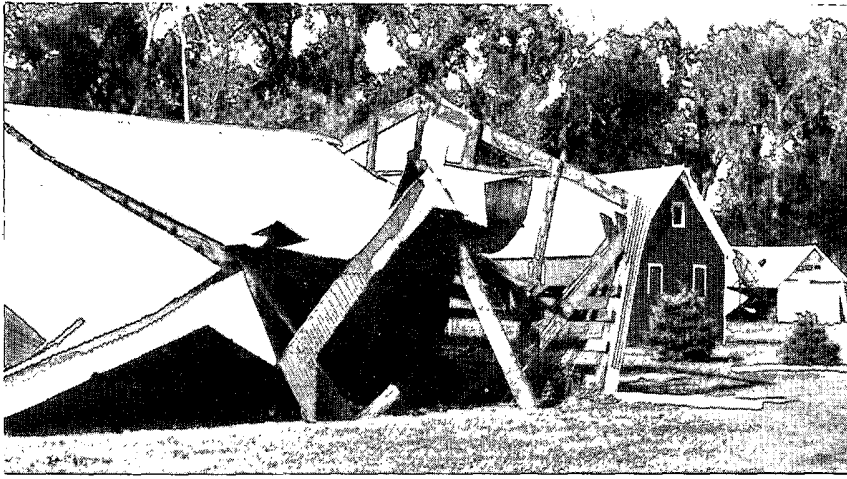
For further details concerning the following pictures, see the appropriate date and state information in the "Storm Data and Unusual Weather Phenomena" section which begins on page 20.



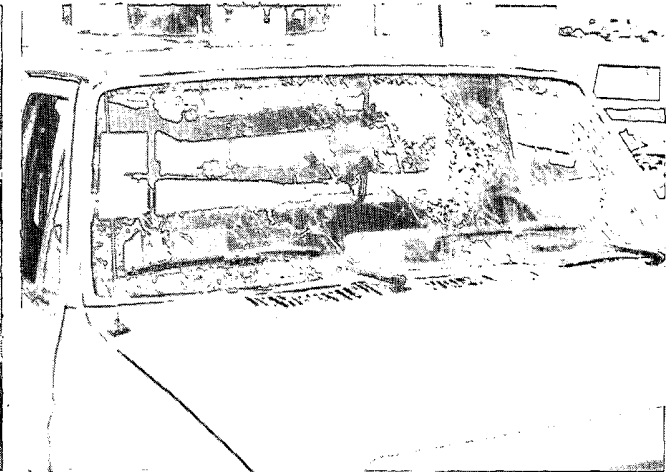
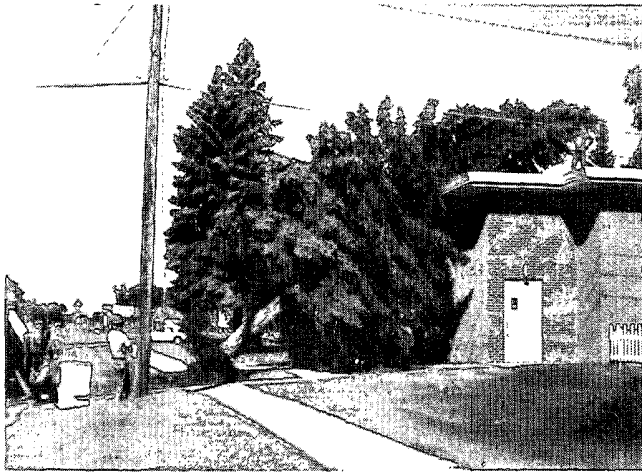
Left (middle) and top: The results of torrential rains which poured on Pipestone, Minnesota, on August 1st. No baseball for awhile at the West Playfield (left)! Question: Were the cars parked on the Highway 30 underpass before the rains came? Answer: No! *Photos courtesy: Pipestone (Minnesota) County Star.*

Right (middle and bottom): Flood and no flood at Bill's Bait Shop on Ohio 220 near Lake White State Park. The flood was the result of heavy overnight rains on the 21st through the 22nd. *Below:* Piles of flood debris near Ohio 220 as gathered by Lake White Improvement Association volunteers. *Photos courtesy: Chillicothe (Ohio) Gazette.*

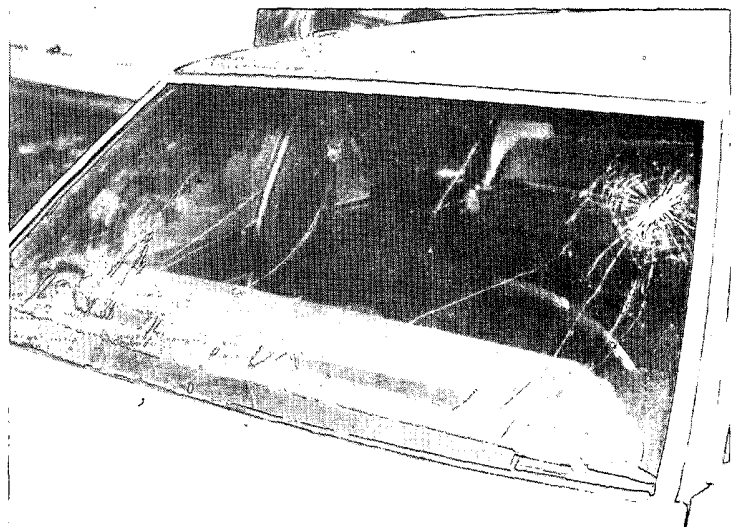


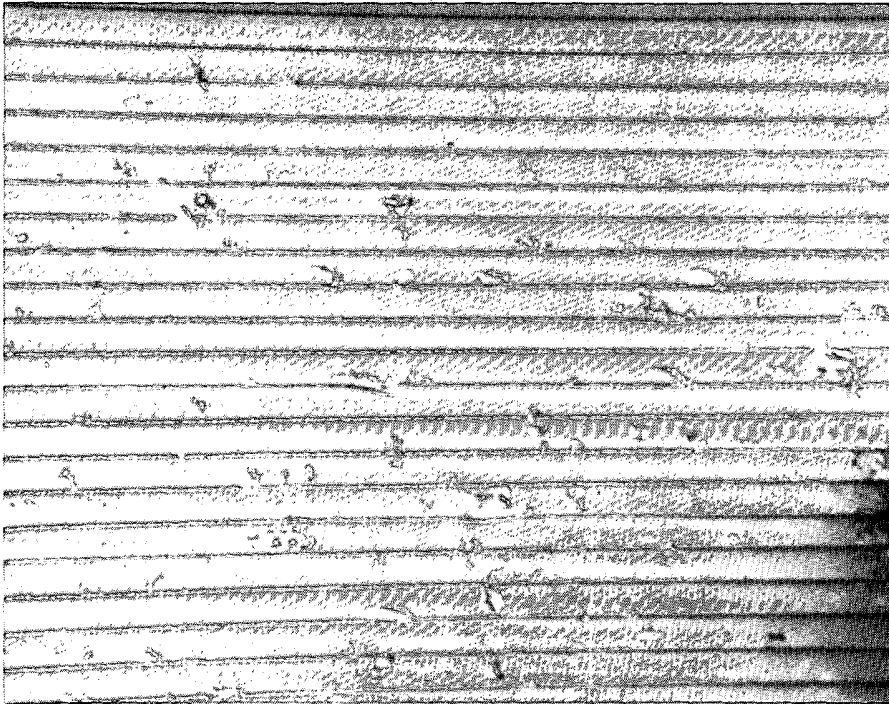
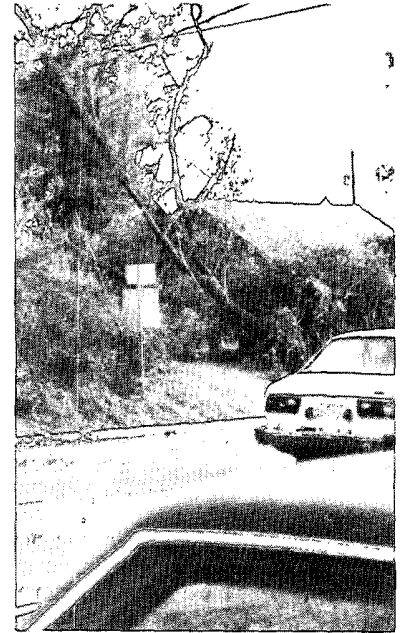
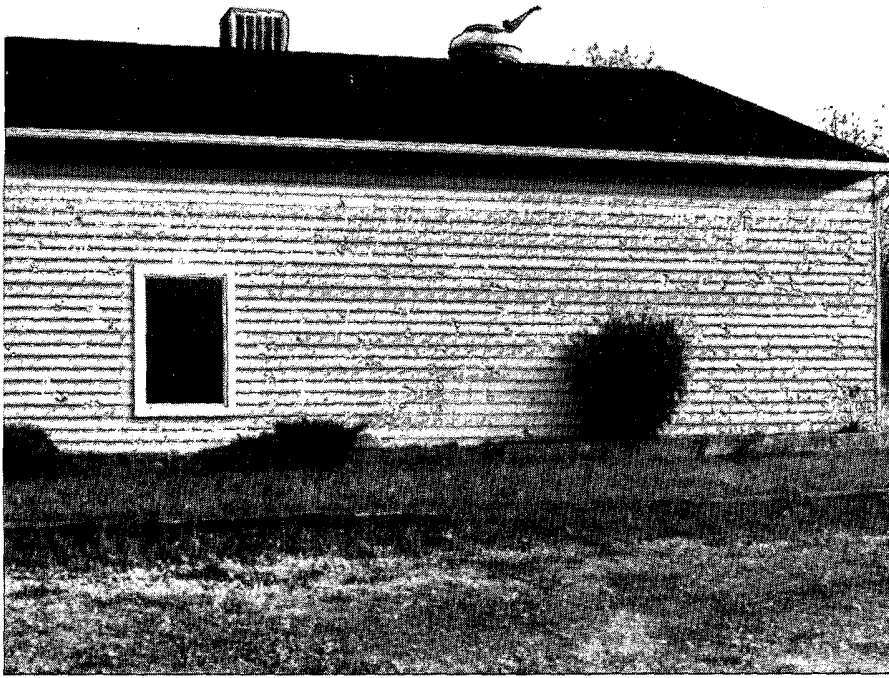


Left: Damage to the Gabbert farm 5 miles south of Hankinson, North Dakota, as a result of the severe thunderstorm of August 25th. Half of the pole barn in the foreground was destroyed, while walls of the garage in the background were blown out. **Left (middle):** Fallen tree on the St. Gerard's Community Hospital and Nursing Home in Hankinson from the same storm. *Photos courtesy: Hankinson (North Dakota) News.*



Above: Hail damage from the storm of August 27th to a vehicle in Cavalier, North Dakota. *Photo courtesy: The Cavalier (North Dakota) Chronicle.* **Below:** Hail damage to a vehicle at Foicy, Minnesota, from the storm of August 27. Every vehicle at the Murphy Chevrolet dealership was damaged by the hail storm. **Below (left):** Some of the stones, a day later, were still larger than baseballs. Old timers in the area said they could not ever remember such large hail falling in the region. *Photos courtesy: Benton County (Minnesota) News.*





Left (top and center) and above: Destruction from the severe storm of the 29th -- the worst storm in the history of Crossville, Tennessee. The left two pictures show the pitting from the wind-driven hail. *Photos courtesy: Steve Norris; Crossville, Tennessee.*

A special thank you goes to the following people (who may not have been previously credited) for providing information, leads, press clippings, and/or pictures for this issue of STORM DATA:

Jon Davies, Pratt, Kansas; Jim Lebda, NWS Chicago, Illinois; Gene Rhoden, NSSL Norman, Oklahoma; John Sokich, NWS Silver Spring, Maryland.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ALABAMA

Jefferson County	02 1120CST			0	0	?	?	Thunderstorm Wind (G60)
	02 1125CST			0	0	?	?	Thunderstorm Wind
	02 1125CST			0	0	?	?	Lightning
	02 1145CST			0	0	?	?	Thunderstorm Wind (G70)

At 1120 CST thunderstorm winds gusted to 60 mph at Fairfield and 7 miles southwest of Warrior. Between 1125 CST and 1145 CST numerous trees and power lines were blown down throughout the cities of Birmingham and Bessemer. Numerous trees were blown onto vehicles. Lightning struck several buildings and set at least two businesses on fire. At 1145 CST thundersform winds were estimated at 70 mph in the extreme eastern area of Birmingham.

Houston County	02 1545CST			0	0	?	?	Lightning
	02 1555CST			0	0	?	?	Lightning
	02 1620CST			0	0	?	?	Thunderstorm Wind
	02 1620CST			0	0	?	?	Lightning
	02 1630CST			0	0	?	?	Lightning
	02 1645CST			0	0	?	?	Thunderstorm Wind

At 1545 CST lightning caused a barn to burn down at Cowarts. At 1555 CST a house was set on fire by lightning in Dothan. At 1620 CST a home was damaged by lightning in Hodgesville. At about the same time, trees and power lines were blown down in the Dothan vicinity. At 1630 CST lightning caused a house to burn down in Dothan. At 1645 CST numerous trees and power lines were blown down in Dothan.

Marshall County	04 1735CST			0	0	?	?	Thunderstorm Wind
-----------------	------------	--	--	---	---	---	---	-------------------

Trees and power lines were blown down at Boaz.

Mobile County	05 0955CST			0	0	0	0	Waterspout
---------------	------------	--	--	---	---	---	---	------------

A large waterspout was observed at 0955 CST about a mile northeast of Alabama Port. It moved west a short distance, then dissipated over Mobile Bay before reaching land.

Baldwin County	05 1305CST			0	0	?	?	Thunderstorm Wind
----------------	------------	--	--	---	---	---	---	-------------------

A roof was damaged at a truck stop and power lines were blown down at Interstate 10 and Alabama Highway 59.

Houston County	09 1240CST			0	0	?	?	Thunderstorm Wind
----------------	------------	--	--	---	---	---	---	-------------------

An apparent thunderstorm downburst caused damage over about a 300-yard-long area. One business received major roof damage. One tree was blown onto two service vehicles. Two businesses sustained metal awning damage.

Marshall County	18 1740CST			0	0	?	?	Thunderstorm Wind
-----------------	------------	--	--	---	---	---	---	-------------------

Numerous trees were blown down and several camper vehicles were damaged at Guntersville State Park.

Randolph County	19 1445CST			0	0	?	?	Thunderstorm Wind
-----------------	------------	--	--	---	---	---	---	-------------------

Several trees were blown down at Wedowee.

Autauga County	19 1454CST			0	2	0	0	Lightning
----------------	------------	--	--	---	---	---	---	-----------

Two persons were injured by lightning in Pine Level. One was hospitalized and the other released. The two were touching a chain-link fence when lightning struck the fence.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CORPSES	

ALABAMA Cont'd

Shelby County	19	1500CST			0	2	?	?	Thunderstorm Wind
<p>Strong thunderstorm winds unroofed a fire station in Pelham. Two firemen suffered minor injuries, were treated at local hospitals and released. There was minor damage to one or more fire trucks. The storm also destroyed two houses that were under construction in the Pelham/Helena area and tossed a portable restroom about 100 feet into the air. Numerous trees were blown down in the area.</p>									
Coosa County	19	1525CST			0	0	?	?	Thunderstorm Wind
<p>Trees were blown down at scattered locations in the county.</p>									
Elmore County	19	1525CST			0	0	?	?	Thunderstorm Wind
<p>Trees were blown onto power lines at Holtville.</p>									
Tallapoosa County	19	1525CST			0	0	?	?	Thunderstorm Wind
<p>Trees were blown down at scattered locations in the county.</p>									
Monroe County	19	1530CST			0	0	?	?	Thunderstorm Wind
<p>At Monroeville strong thunderstorm winds blew trees onto power lines. Several roofs were blown off buildings and the shutters were blown off the City Hall.</p>									
Chilton County	19	1600CST			0	0	?	?	Thunderstorm Wind
<p>At Union Grove, 21 acres of apple trees were damaged and the roof of a barn was blown off by strong thunderstorm winds. In the same vicinity the roof was blown off a campground building. Power poles and signs were also blown down.</p>									
Crenshaw County	19	1600CST			0	0	?	?	Thunderstorm Wind
<p>Trees and power lines were blown down at Highland Home.</p>									
Escambia County	19	1600CST			0	0	?	?	Thunderstorm Wind
<p>Trees were blown onto power lines and into streets at Brewton.</p>									
Coffee County	19	1605CST			0	0	?	?	Thunderstorm Wind
<p>Trees were blown onto power lines at several locations in Elba.</p>									
Pike County	19	1630CST			0	0	?	?	Thunderstorm Wind
<p>At Goshen and Henderson, chicken houses were destroyed killing 4,000 chickens. Trees were blown onto power lines in Troy and at scattered other areas in the county.</p>									
Baldwin County	19	1642CST			0	0	?	?	Thunderstorm Wind
	19	1710CST			0	0	?	?	Thunderstorm Wind
<p>At 1642 CST trees were uprooted at Gateswood. At 1710 CST trees were blown onto power lines one-quarter-mile north of Stapleton.</p>									
Covington County	19	1800CST			0	0	?	?	Thunderstorm Wind
<p>Eight hangars and five or six aircraft were damaged at the Andalusia-Opp Airport. Numerous trees were blown down in the same area.</p>									
DeKalb County	20	1235CST			0	0	?	?	Thunderstorm Wind
<p>Strong thunderstorm winds destroyed a mobile home in the Geraldine community. Trees and power lines were blown down in the same vicinity.</p>									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ALABAMA Cont'd

Cullman County	20	1240CST			0	0	?	?	Thunderstorm Wind
Trees were blown down at Vinemont.									
Jefferson County	20	1339CST			0	0	?	?	Thunderstorm Wind (G65)
	20	1435CST			0	0	?	?	Thunderstorm Wind
	20	1515CST			0	0	?	?	Thunderstorm Wind (G75)
At 1339 CST thunderstorm winds were estimated at 65 mph about five miles northwest of Birmingham. At 1435 CST trees were blown across a road in Warrior. At 1515 CST thunderstorm winds were estimated at 75 mph at Hoover, which blew signs down.									
Blount County	20	1410CST			0	0	0	0	Hail (0.75)
Dime-size hail fell at Cleveland.									
Walker County	20	1450CST			0	0	?	?	Thunderstorm Wind
Power lines were blown down at Dora and Sumiton.									
Shelby County	20	1530CST			0	1	?	?	Thunderstorm Wind
At 1530 CST trees and large tree limbs were blown down 2 miles west of Montevallo. At about the same time, at a construction site in Pelham, thunderstorm winds blew wooden trusses to the ground, slightly injuring a worker.									
Fayette County	20	1540CST			0	0	?	?	Thunderstorm Wind
Trees were blown across a road about 5 miles south of Fayette.									
Madison County	20	1545CST			1	0	?	?	Lightning
A 19-year-old male was killed by lightning while working at a construction site in Huntsville. (M190)									
Bibb County	20	1630CST			0	0	?	?	Thunderstorm Wind
Trees were blown across roads in Centreville and at scattered locations in the county. Windows were blown out of a few buildings in West Blockton.									
Covington County	20	1650CST			0	0	?	?	Thunderstorm Wind
	20	1650CST			0	0	?	?	Hail (0.75)
Trees were blown down and a roof was damaged in Opp. Dime-size hail fell in the same vicinity.									
Lowndes County	20	1800CST			0	0	?	?	Thunderstorm Wind
Trees and power lines were blown down in the Calhoun vicinity.									
Marengo County	20	1820CST			0	0	?	?	Thunderstorm Wind
Trees were blown down at Demopolis.									
Baldwin County	20	1910CST			0	0	?	?	Thunderstorm Wind
The roofs were blown off several buildings in Summerdale.									
Mobile County	20	2025CST			0	0	?	?	Thunderstorm Wind
Part of the roof of a store was blown off at Alabama Port.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ALABAMA Cont'd

Morgan County	21	1300CST			0	1	?	?	Lightning
	21	1300CST			0	0	?	?	Thunderstorm Wind
At Lacey Springs a man was knocked unconscious by lightning. He was attending a clothes dryer when lightning struck the house. Trees were blown down at Somerville.									
Limestone County	21	1400CST			0	0	?	?	Hail (0.75)
Dime-size hail fell 10 miles west of Huntsville.									
Jefferson County	21	1533CST			0	0	?	?	Thunderstorm Wind
Trees were blown down at Trussville.									
Montgomery County	22	1310CST			0	0	?	?	Thunderstorm Wind
The roof of a business was damaged in Montgomery.									
Henry County	22	1315CST			0	0	?	?	Thunderstorm Wind
Trees and power lines were blown down 1 mile north of Lawrenceville.									
Crenshaw County	22	1430CST			0	0	?	?	Thunderstorm Wind
Trees and power lines were blown down at Glenwood.									
Mobile County	23	1600CST			0	0	?	?	Thunderstorm Wind
Along the western shore of Mobile Bay and along the Dog River about 8 miles south of downtown Mobile, trees were blown down. A few trees blew onto houses and a large boat was torn from its mooring.									
Lawrence County	29	1900CST			0	1	?	?	Lightning
A woman in Courtland was injured by lightning while outside.									
Morgan County	29	1958CST			0	0	?	?	Hail (0.75)
Dime-size hail fell at Decatur.									
Limestone County	29	2055CST			0	0	?	?	Thunderstorm Wind
Power lines and poles were blown down at Elkmont. Silos, power lines, and houses were damaged in Leggtown.									
Madison County	29	2127CST			0	0	?	?	Thunderstorm Wind (G66)
Thunderstorm winds were measured at 66 mph at the Huntsville Airport. Power lines were blown down at Madison.									
Marshall County	29	2222CST			0	0	?	?	Thunderstorm Wind
Power lines were blown down at Asbury.									
Bibb County	30	0700CST			0	0	?	?	Hail (1.75)
Golf ball-size hail fell in West Blockton.									
Chilton County	30	0730CST			0	0	?	?	Thunderstorm Wind
Several large trees were blown down in the Oak Grove area.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ALABAMA Cont'd

Geneva County	30	1140CST			0	0	?	?	Thunderstorm Wind
Trees were blown onto power lines at Black.									
Clarke County	30	1205CST			0	0	?	?	Hail (0.75)
Penny-size hail fell at Grove Hill.									
Washington County	30	1245CST			0	0	?	?	Thunderstorm Wind
Thunderstorm winds ripped the roof off a building and blew power lines down at Millry.									
Escambia County	30	1320CST			0	0	?	?	Hail (1.00)
Quarter-size hail fell at Huxford.									
Baldwin County	30	1358CST			0	0	?	?	Thunderstorm Wind
Trees were blown down at scattered locations in western Baldwin County.									
Mobile County	30	1505CST			0	0	?	?	Thunderstorm Wind
Trees were uprooted in west Mobile.									
Dale County	30	1520CST			0	0	?	?	Hail (0.75)
Nickel-size hail fell 2 miles northeast of Skipperville.									

ARIZONA

Cochise County Benson	01	1530MST			0	0	3	0	Flash Flooding
About 1.15 inches of rain fell in 15 minutes near Benson. Minor street flooding was reported in Benson and near Tombstone. A road east of Tombstone was closed for a short time due to flooding.									
Pinal County Coolidge	01	2125MST			0	0	0	0	Flash Flood
Sheriff's office reported streets were flooded in town.									
Yavapai County Prescott area	02	1830MST			0	0	0	0	Funnel Cloud
A funnel cloud was spotted near Big Bug Mesa.									
Pinal County Tucson	03	2005MST			0	0	4	0	Thunderstorm Winds Flash Flood
Sheriff's office reported a downed power pole and a flooded house in southeastern Tucson. Several vehicles were stuck in flood waters in the Tanque Verde area. One and eight-tenths inches fell in just 15 minutes.									
Maricopa County Phoenix	03	2130MST			0	0	4	0	Thunderstorm Winds
Trees were uprooted near 41st and Stanford. Nearby, some power lines were downed. KPHO-Channel 5 studio recorded 54 mph winds. Some 13,000 residents lost power.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARIZONA Cont'd

Carefree	03	2230MST			0	0	4	0	Thunderstorm Winds There was roof damage near the airport, and metal runway signs were bent over.
Maricopa County Williams AFB	05	1655MST			0	0	3	0	Thunderstorm Winds (G56)
Mohave County Lake Havasu City	05	1830MST			0	0	5	0	Thunderstorm Winds There was extensive damage around the area. A block wall section about 120 feet long was blown down, plate glass windows were blown out, and construction site debris damaged a car.
LaPaz County Parker	05	1900MST			0	0	5	0	Thunderstorm Winds Power lines were downed from Parker to Ehrenburg. Many traffic accidents occurred on Interstate 10, likely due to severe weather.
Mohave County Yucca Bullhead City Lake Havasu	06	1430MST			0	0	?	0	Thunderstorm Winds
	06	1625MST			0	0	5	0	Thunderstorm Winds Winds were estimated 50 to 60 mph and two house trailers were blown over.
Maricopa County Luke AFB	06	1636MST			0	0	6	0	Thunderstorm Winds (G62) Microburst winds from nearby thunderstorms hit this area. There was \$1 million in damage at Luke AFB mainly to toppled structures; trailers, poles, roofs, and cars on base. Minor damage to 12 aircraft was also reported. Two trailers in the JJ Trailer Park nearby were heavily damaged.
West Phoenix	06	1750MST			0	0	6	0	Thunderstorm Winds Trees were damaged due to strong winds. Power poles were downed.
LaPaz County Ehrenburg Parker	06	1935MST			0	0	5	0	Thunderstorm Winds Many areas in town were damaged; power lines were downed in Parker.
Yuma County San Luis	09	1715MST			0	0	5	3	Thunderstorm Winds Winds were estimated at 70 mph. Buildings, cars and other vehicles were damaged. At least seven mobile homes were destroyed.
Pima County north and west	11	1700MST			0	0	?	4	Hail Thunderstorms hit many areas of rural Pima County. Crop damage was reported in the Marana area and near-zero visibility was reported in Ajo.
LaPaz County Vicksburg Brenda Quartzsite	11	1845MST			0	0	4	0	Thunderstorm Winds (G65) Hail (0.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARKANSAS Cont'd

Boone County Harrison	12	2130CST			0	0	3	0	Lightning
Lightning strikes knocked out power to about 500 residents in and around Harrison.									
Benton County Gallatin	13	0130CST			0	0	5	0	Lightning
A 100-year-old farmhouse burned to the ground from a fire caused by a lightning strike.									
Van Buren County 10 E Bee Branch	13	0200CST			0	0	2	0	Lightning
Lightning struck a tree near a mobile home resulting in minor damage. Branches from the tree broke windows and a dog outside near the tree was killed.									
Garland County 4 S Hot Springs	13	1403CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds downed a few small trees and a few power lines.									
Pike County 2 SE Newhope	14	1415CST			0	0	2	0	Thunderstorm Winds
Thunderstorm winds downed a few trees near Newhope.									
Benton County Decatur	20	0530CST			0	1	0	0	Lightning
A man suffered burns on his left arm and temporary paralysis of his left arm and right leg, after being struck by lightning.									
Miller County Texarkana	20	1240CST			0	0	5	0	Lightning
Lightning started a fire at an apartment complex. Eight apartments suffered heavy damage.									
Pulaski County 9 N Little Rock	20	1300CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds took the roof off a mobile home and downed power lines in the Gravel Ridge area.									
Howard County Umpire	20	1330CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds downed trees and power lines.									
Calhoun County Hampton	20	1345CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds blew the roof off a county shop building and also blew down some large tree limbs. One car was damaged by the limbs.									
Pike County 8 SW Amity	20	1414CST			0	0	0	0	Hail (1.00)
	20	1414CST			0	0	2	0	Thunderstorm Winds
Thunderstorm winds blew down several trees.									
Clark County Alpine	20	1415CST			0	0	2	0	Thunderstorm Winds
Thunderstorm winds downed trees around Alpine.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARKANSAS Cont'd

Clark County
7 NE Okolona 20 1430CST 0 0 2 0 **Thunderstorm Winds**

Thunderstorm winds downed trees along Arkansas Highway 51.

Pike County
3 S Newhope 20 1430CST 0 0 2 0 **Thunderstorm Winds**
20 1430CST 0 0 0 0 **Hail (1.00)**

Thunderstorm winds downed trees south of Newhope.

Dallas County
Willow 20 1445CST 0 0 3 0 **Thunderstorm Winds**

Thunderstorm winds downed trees and power lines.

Dallas County
1 S Princeton 20 1455CST 0 0 3 0 **Thunderstorm Winds**

Thunderstorm winds downed trees and power lines.

Clark County
Gurdon 20 1500CST 0 0 0 0 **Hail (1.75)**
20 1500CST 0 0 3 0 **Thunderstorm Winds**

Thunderstorm winds downed trees and caused minor structural damage. Golf ball-size hail also fell during the storm.

Dallas County
5 S Bunn 20 1510CST 0 0 3 0 **Thunderstorm Winds**

Thunderstorm winds downed trees and power lines.

Arkansas County
Almyra 20 1615CST 0 0 4 0 **Thunderstorm Winds**

Thunderstorm winds damaged a few buildings and vehicles. A few trees and power lines were downed.

Sevier County
Lebanon 22 1338CST 0 0 0 0 **Hail (1.00)**

Sevier County
5 N Provo 22 1355CST 0 0 2 0 **Thunderstorm Winds**

Thunderstorm winds blew down trees near Provo.

Howard County
5 SW Dierks 22 1358CST 0 0 2 0 **Thunderstorm Winds**

Thunderstorm winds downed trees near Dierks.

Pike County
2 SW Murfreesboro 22 1435CST 0 0 2 0 **Thunderstorm Winds**

Thunderstorm winds downed trees along Arkansas Highway 27.

Pike County
Roy 22 1450CST 0 0 2 0 **Thunderstorm Winds**

Thunderstorm winds downed trees.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARKANSAS Cont'd

Izard County Oxford	29	1645CST			0	0	3	0	Thunderstorm Winds
A downburst knocked down a swath of trees roughly one-half mile long and one-quarter mile wide along County Road 53.									
Jackson County Swifton	29	1718CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds downed trees and power lines.									
Jackson County Swifton	29	1743CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds blew down a tractor shed.									
Poinsett County 2 W Harrisburg	29	1830CST			0	0	4	0	Thunderstorm Winds
Thunderstorm winds downed 13 power poles, an old barn, and damaged a grain bin.									
Craighead County Bono Egypt	29	1850CST			0	0	0	3	Hail (1.75)
	29	1850CST			0	0	0	3	Hail (1.75)
Hail up to the size of golf balls caused some minor crop damage.									
Poinsett County 4 W Trumann	29	1901CST							Funnel Clouds
Two funnel clouds were spotted west of Trumann.									
Statewide		Mid- to late-August			0	0	0	6	Heat
A heat wave put some strain on the Arkansas poultry industry. The high heat and humidity killed many birds and increased the cost to producers in terms of trying to cool down the poultry houses. Some producers reported losing near 1,500 birds a day.									

CALIFORNIA, Northern

Trinity County Hayfork	18	1900PDT			0	0	0	0	Hail (1.00)
An area of thunderstorms formed in Trinity County. Radar reported VIP5 echoes. In addition to the hail, heavy rain was reported.									

CALIFORNIA, Southern

San Bernardino County Victorville Apple Valley Hesperia	06	1830PST			2	7	?	0	Flash Flood Thunderstorm Winds (G?) Lightning
A powerful thunderstorm moved through the area from the east-southeast, accompanied by very strong winds and heavy rain. Some 15 to 40 homes in the area were flooded. The normally dry Mojave River filled rapidly and flood waters apparently swept two men to their deaths. Several roads and streets in Victorville were covered with water and scattered areas suffered wind damage. Lightning strikes caused numerous blackouts that affected some 23,000 customers.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

COLORADO Cont'd

Weld County
Erie
21 N Denver

11 1815MST 0 0 0 0 **Lightning**

A lightning bolt struck an Erie, Colorado fire station about 1815 MST causing extensive damage to the station's gas meter and electrical system. The sudden electrical surge blew out the station's television, a refrigerator, and a pop machine. Small fires spread throughout the structure, totally destroying the building's electrical wiring. The fires were quickly extinguished by the resident fire fighting crew.

Logan County
Sterling

11 1834MST 0 0 4 ? **Hail (1.75)**

Golf ball-size hail caused damage to windshields and roofs in Sterling. Some damage was reported to area field crops, but the exact amount and type of damage unknown.

Kit Carson County
Flagler
32 E Limon

11 1845MST 0 0 0 0 **Hail (1.00)**

Kit Carson County
3 NE Burlington

14 1245MST 0.5 20 0 0 0 0 **Tornado (F0)**

There were several reports from the public and State Patrol of a small tornado just northeast of the town of Burlington moving southeast. The tornado moved across open prairie before dissipating southeast of Burlington at 1310 MST.

Douglas County
Sedalia
20 S Denver

15 1730MST 0 0 0 0 **Lightning**

Lightning triggered a small attic fire in a house off State Highway 85 just north of the town of Sedalia.

Denver County
SE Denver

15 1800MST 0 0 0 0 **Lightning**

A furious lightning storm caused widespread power outages across southern sections of the Denver metropolitan area. One lightning bolt knocked out a Public Service substation, causing an hour and a half blackout in southeastern Denver, affecting approximately 10,000 Public Service customers.

Arapahoe County
S Aurora

16 1930MST 0 0 3 0 **Lightning**

Lightning caused minor damage to a south Aurora home. No injuries were reported.

Weld County
Firestone
20 N Denver

17 1330MST 0 0 4 0 **Flash Flood**

Heavy thunderstorm rains falling on the Boulder Creek/St. Vrain Creek drainage basin in eastern Boulder and southwestern Weld counties caused many area creeks and drainage ditches to rise to near bank full between 1300 MST and 1600 MST. High waters punched three 30-foot holes in the embankment of a drainage ditch which passes through the town of Firestone in southwestern Weld County around 1330 MST. A sheet of water 2- to 3-foot-deep rushed out onto the streets of Firestone, forcing the evacuation of a trailer park and residents from 50 neighboring homes. Officials reported other than mud and water damage, no injuries or serious damage were reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

COLORADO Cont'd

**Boulder County
Longmont**

17 1357MST 0 0 0 0 **Heavy Rain**

A Ham radio operator reported 2.35 inches of rain within a 45-minute period from a very slow-moving thunderstorm.

**Arapahoe County
Aurora**

17 1455MST 0 4 0 0 **Lightning**

Four construction workers standing in a field were hit by lightning and taken to a south-central Aurora hospital where they received treatment for minor injuries.

**Denver County
Denver**

17 1505MST 0 0 5 0 **Lightning**

Lightning struck the roof of a Methodist Church in central Denver, knocking down the highest peak of the roof. A half-dozen people were in the building, but no one was injured.

**Arapahoe County
SE Aurora**

17 1610MST 0 0 5 0 **Heavy Rain**

A roof suspended over a condominium clubhouse swimming pool collapsed under the weight of rain water that collected several inches deep on the almost flat roof. Slow-moving thunderstorms dumped 2 to 3 inches of rain within a 90-minute period on the southeastern Aurora neighborhood. Approximately 300 residents were evacuated from the 200-unit complex because of the structural damage to the clubhouse, but were allowed to return to their condos after it was determined that damage was confined to the clubhouse. No injuries were reported.

**Arapahoe County
E Aurora**

18 1824MST 0 0 3 0 **Hail (0.75)**

Dime-size hail and thunderstorm wind gusts to 50 mph were reported by several storm spotters near the intersection of Mississippi Avenue and Gun Club Road in east Aurora. The hail and winds reportedly damaged a number of windows in the area.

**Jefferson County
Wheatridge**

19 1630MST 0 0 0 0 **Hail (0.75)**

**Denver County
W Denver**

19 1645MST 0 0 0 0 **Heavy Rain**

One inch of rain fell from a thunderstorm over western Denver in 20 minutes, resulting in minor street flooding.

**Denver County
E Denver**

19 1704MST 0 0 0 0 **Hail (1.00)**

**Adams County
13 NE Denver**

19 1729MST 0 0 ? 0 **Hail (1.50)**

**Arapahoe County
Greenwood Village
9 SE Denver**

19 1834MST 0 0 4 0 **Lightning**

A house just west of Cherry Creek Reservoir in Greenwood Village sustained an estimated \$30,000 in fire damage when lightning struck the roof. No injuries were reported as the house was vacant at the time of the fire.

**Denver County
SE Denver**

19 1840MST 0 0 3 0 **Lightning**

A \$4,000 roof fire at a house in southeastern Denver was attributed to lightning striking a nearby utility pole, sending the charge into the house via the electrical wires.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

COLORADO Cont'd

Adams County
13 NE Denver 19 1840MST 0 0 0 0 **Flash Flood**

Heavy rain from thunderstorms caused gullies, irrigation ditches, and small streams to overflow their banks near the intersection of 120th Avenue and Riverdale Road in western Adams County. Flood waters 1- to 2-foot deep covered river bottom land along the South Platte River, though never threatening any structures.

Arapahoe County
14 NE Denver 19 1856MST 0 0 3 0 **Hail (1.75)**

Ping-Pong- to golf ball-size hail battered a sparsely populated section of southwestern Adams County. At 1856 MST, hail stones knocked out windows and caused an unspecified amount of damage to the roof of a house near the intersection of 122nd Avenue and Brighton Boulevard.

Kit Carson County
2 NE Burlington
25 W Burlington 22 1345MST 4.0 50 0 0 0 0 **Tornado (F1)**
 1410MST 0.15 15 0 0 0 0 **Tornado (F0)**

A line of thunderstorms moved southeast across the county, spawning 2 tornadoes. The first twister dropped down in open rangeland at 1345 MST about 2 miles northeast of Burlington. Storm spotters reported that the rope-like tornado skipped across the ground for about 20 minutes where it dissipated 5 miles east of Burlington. A second smaller tornado, reported by the State Patrol, touched down briefly around 1410 MST in a field near Seibert, 25 miles west of Burlington. No damage was reported with either tornado.

Jefferson County
Lakewood 22 1545MST 0 0 0 0 **Lightning**

Lightning knocked out power to about 2,500 homes in Lakewood for about an hour.

Lincoln County
Limon 22 1830MST 0 0 5 0 **Heavy Rain**

The roof on a Limon elementary school collapsed under as much as 8 inches of rain water that had collected on the roof. Thunderstorms passed suddenly through the area, depositing close to a quarter-inch (0.26 inch) of rain in a very short time at the Limon Airport just east of town. The collapse dumped water and debris in the building and damaged a half-dozen personal computers and numerous books and supplies. The roof was under repair at the time of its failure.

CONNECTICUT

CTZ001-004 10 All Day 0 0 5 0 **Heavy Rain**

Torrential downpours dropped from 1 to 4 inches of rain in western Connecticut flooding roads, low-lying areas, basements, and other flood-prone areas. Small streams and brooks overflowed but not major rivers. The heaviest rainfall was centred in the Danbury area where as much as 3 inches of rain fell in as many hours and a total of 4 inches fell during the day. In Winstead, road repairs were expected to cost several hundred-thousand dollars.

Fairfield County 13 2000EST- 0 0 4 0 **Lightning**
 2100EST 0 0 5 0 **Thunderstorm Winds**
Fairfield County 13 2030EST

About 13,000 electric customers lost power as a result of lightning and gusty winds in thunderstorms which knocked down trees and tree limbs as they moved through the area during the evening. A peak wind gust to 53 mph was recorded at Bridgeport.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

DELAWARE

Sussex County
Rehoboth Beach

19 1600EST 0 0 4 0 **Flooding**

Very heavy rainfall, coupled with poor drainage, caused ponding of water in the downtown area. Several stores reported damage to carpets and some merchandise.

New Castle County
Newport
Minquadale
Richardson Park
New Castle

29 1830EST 0 0 4 0 **Thunderstorm Winds**

About ten large oak trees were downed at Newport. Winds gusted to 52 knots (58 mph) at Greater Wilmington Airport (ILG). Trees downed power lines in western Minquadale, trapping people in a car with live wires. Trees and power lines were also downed at Richardson Park and New Castle. About 2,000 homes were without power.

FLORIDA

Palm Beach County
West Palm Beach

01 1815EST 2 1 1 0 **Lightning**

Lightning struck and killed a mother and daughter and injured another child as they fished in a pond near Palm Beach International Airport. (F310, F110)

Palm Beach, Martin, St. Lucie Counties

03 1343EST 0 0 5 0 **Thunderstorm Wind (G56) Lightning**

Thunderstorm wind gusts overturned three tractor semi-trailers in Fort Pierce (St. Lucie County). Lightning struck the Boynton Beach City Hall (Palm Beach County). Palm Beach International Airport reported wind gusts to 64 mph.

Orange County

03 1620EST 0 0 5 0 **Lightning**

Lightning caused a fire which destroyed a house in southern Orange County.

Monroe County
Key Largo

06 1350EST 0 1 0 0 **Lightning**

Lightning struck and injured a man fishing 4 miles off Key Largo.

Putnam County
22 E
Gainesville

06 1935EST **Short** 0 0 3 0 **Tornado (F0)**

A small tornado uprooted trees and downed power lines near Interlachen.

Clay County
Orange Park

07 2000EST 0 0 4 0 **Lightning**

Lightning struck an eight-unit apartment complex starting a fire and forcing 15 people to evacuate the building.

Alachua County
Gainesville

08 1350EST **Short** 0 0 3 2 **Tornado (F0)**

A small tornado was observed in a wooded area near the University of Florida. Several trees were uprooted.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

FLORIDA Cont'd

Broward County Miramar	11	1543EST			0	0	2	0	Thunderstorm Wind Strong thunderstorm winds split a telephone pole.
Dade County	11	1550EST			0	0	2	0	Thunderstorm Wind Strong thunderstorm winds felled trees and power lines.
Hillsborough County Tampa	12	1800EST			0	0	3	0	Thunderstorm Wind Lightning Strong thunderstorm winds knocked down trees and power lines and blew in windows. Lightning started several small fires.
Polk County Osceola County Orange County	13	1515EST			0	0	4	0	Thunderstorm Wind Twenty-five-foot-tall oak trees were uprooted near Walt Disney World. Sheds were smashed near Haines City (Polk County).
Polk County Winter Haven	13	1602EST	0.2	03	0	0	0	0	Tornado (F0) A tornado touched down briefly.
Martin County Stuart	14	1405EST			0	1	0	0	Lightning Lightning struck a cable repair technician as he approached his van.
Martin County Indiantown	15	1800EST			1	0	0	0	Lightning An elderly hiker was killed when lightning struck him as he hiked in the woods. (M670)
Duval County Jacksonville	17	1600EST			0	0	2	0	Thunderstorm Wind Thunderstorm gusts ripped off an aluminum roof from a shed and deposited it on the roof of an adjoining house.
Hardee County 3 W Zolfo Springs	17	1600EST			0	0	3	0	Thunderstorm Wind Lightning Thunderstorm winds uprooted trees, downed power lines and antennas, and blew the roof off several light metal sheds.
Dade County Florida City	18	1405EST			0	0	3	0	Thunderstorm Wind Thunderstorm winds uprooted trees and downed power lines.
Leon County Tallahassee	18	1545EST			0	0	3	0	Thunderstorm Wind Thunderstorm winds uprooted trees and downed power lines.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

FLORIDA Cont'd

Monroe County 5 SW Key West	24	0912EST			0	0	0	0	Waterspout
A small waterspout was observed offshore.									
Monroe County 8 SSW Key West	24	1300EST			0	0	0	0	Waterspout
A waterspout was observed offshore.									
Charlotte County 40 NE Fort Myers	24	1500EST			1	1	0	0	Lightning
A man was struck and killed by lightning and another injured near a pickup truck. (M200)									
Jackson County	24	1615EST			0	0	2	0	Thunderstorm Wind
Brief wind gusts ripped the roof off an outdoor flea market.									
Polk County	26	1700EST			0	0	0	0	Funnel Clouds
Three funnel clouds were observed, two between Winter Park and Eagle Lake and one in Frostproof. All the funnel clouds dissipated shortly after being observed.									
Lake County Leesburg	27	2045EST			0	1	0	0	Lightning
A man was struck in the back and hand by lightning but survived.									
Monroe County 6 NE Key West	28	1515EST			0	0	0	0	Waterspout
A waterspout was observed offshore.									
Palm Beach, Broward Counties	28	1515EST			0	0	2	0	Lightning Thunderstorm Wind
Lightning struck the roof of a house in Boca Raton (Palm Beach County) and set the attic on fire. Strong thunderstorm winds downed trees and power lines in several areas in eastern Broward County.									
Monroe County	30	1130EST			0	0	0	0	Waterspout
A waterspout was observed just south of Bahia Honda State Park in the lower Keys.									
Flagler County Bunnell	30	1130EST			0	0	2	0	Thunderstorm Wind (G52)
Thunderstorm wind gusts to 60 mph damaged trees and power lines.									
Volusia County	30	1145EST			0	0	2	0	Thunderstorm Wind (G52)
Thunderstorm wind gusts to 60 mph uprooted trees, blew down signs, power lines, and a number of lifeguard platforms near Daytona Beach and Ormond Beach.									
Escambia, Santa Rosa, Okaloosa, Walton Counties	30	1400EST			0	0	2	0	Thunderstorm Wind Lightning
Strong thunderstorm winds uprooted trees and blew down power lines. Lightning started several brush fires.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K D E A T H	I N J U R I E S	P R O P E R T Y	C O R P S	

FLORIDA Cont'd

Brevard County
5 NW Mims 30 1530EST 0 0 3 0 **Thunderstorm Wind**
Strong thunderstorm wind gusts toppled trees and downed power lines. Several mobile homes were damaged.

Brevard County
Kennedy Space Center 30 1645EST 0 0 3 0 **Thunderstorm Wind (G52)**
Wind gusts to 60 mph blew down signs. Buildings and cars were damaged mostly by flying debris.

Citrus County
Crystal River 31 1200EST 0 0 3 0 **Thunderstorm Wind
Lightning**
Strong winds blew over trees and power lines and caused minor damage to a few homes. Lightning started a few fires.

GEORGIA

Chatham County
Savannah 01 1327EST 0 0 4 ? **Thunderstorm Winds (G50)**
 01 1327EST 0 0 4 ? **Heavy Rainfall
Lightning**
Countywide 01 1327EST 0 0 0 ? **Thunderstorm Winds**
8 SE Savannah 01 1407EST 0 0 3 ? **Thunderstorm Winds (G61)**
Port Wentworth 01 1420EST 0 0 3 ? **Thunderstorm Winds**
7 SE Savannah 01 1430EST 0 0 4 ? **Thunderstorm Winds**
8 SE Savannah 01 1530EST 0 0 3 ? **Thunderstorm Winds**
Vernonburg 01 1700EST 0 0 3 ? **Thunderstorm Winds**
Wilmington Island

About 1327 EST, a severe thunderstorm moved across northern Chatham County and the Savannah metropolitan area and uprooted numerous trees. A building at the Savannah International Airport received substantial damage when half of its roof was ripped off by the winds. In addition, damage occurred to the air-conditioning units exposed to the heavy rainfall. At Port Wentworth, power lines were blown down by the winds. Around 1430 EST, large limbs and trees were blown down and house awnings were destroyed over Savannah. A few houses and automobiles had damage from the falling trees. Around 1530 EST, large trees were blown down on the south side of Savannah. By 1700 EST, many power lines and trees were downed over the entire area between Vernonburg and Wilmington Island. Several trees were set afire by lightning around Savannah during the storm about 1650 EST.

Wayne County
Jesup 01 1650EST 0 0 ? ? **Lightning**
Several trees were set afire by lightning around Jesup during the storm.

Douglas County
2 NE Douglasville 02 1255EST 0 0 ? ? **Hail (1.75)**

Cobb County
Kennesaw 02 1315EST 0 0 2 ? **Thunderstorm Winds**
A tree and a few large limbs were blown down around Kennesaw.

De Kalb County
Chamblee 02 1341EST 0 0 ? ? **Hail (0.75)**

Gwinnett County
Snellville 02 1348EST 0 0 4 ? **Thunderstorm Winds**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Snellville	02	1348EST			0	1	?	?	Lightning
Norcross	02	1350EST			0	0	3	?	Thunderstorm Winds
Lilburn	02	1355EST			0	0	3	?	Thunderstorm Winds
	02	1355EST			0	0	?	?	Lightning

A large tree fell onto a house in Snellville and caused the ceiling to cave in. A man received flesh wounds on his elbow from the sparks of a lightning strike nearby. Thunderstorm winds tore down trees, limbs, and power lines across Gwinnett County, including Lilburn and Norcross. At Lilburn, another 600 residents lost power due to lightning.

De Kalb County Doraville	02	1350EST			0	0	5	?	Lightning
Northern De Kalb County Decatur	02	1350EST			0	0	3	?	Thunderstorm Winds
	02	1410EST			0	0	3	?	Thunderstorm Winds
	02	1415EST			0	0	4	?	Lightning
Southern De Kalb County	02	1430EST			0	0	3	?	Thunderstorm Winds

Scattered trees and power lines were blown down over northern De Kalb County, resulting in scattered outages. Lightning set the attic and roof of a 12-unit apartment building in Doraville afire and caused extensive damage. Lightning struck a house in Decatur and started a small fire. Scattered power outages developed in southern De Kalb County after winds toppled several large trees onto power lines.

Rockdale County 4 N Milstead	02	1430EST			0	0	?	?	Thunderstorm Winds
---------------------------------	----	---------	--	--	---	---	---	---	--------------------

A few trees were uprooted along Georgia Highway 20 in northern Rockdale County.

Newton County Newborn	02	1510EST			0	0	4	?	Thunderstorm Winds
Countywide	02	1515EST			0	0	3	?	Thunderstorm Winds
									Small Hail
Covington	02	1535EST			0	0	3	?	Thunderstorm Winds
	02	1535EST			0	0	4	?	Lightning

At Newborn, trees were blown over onto a home and the recreation center at a church. Trees and large limbs blocked Georgia Highway 142. The wall of a vacant building was torn off with its bricks strewn over several feet. Thunderstorm winds damaged trees at several other locations over Newton County. Lightning struck several buildings and damaged a few transformers, along with an electrical box around Covington.

Jasper County Shady Dale	02	1530EST			0	0	3	?	Thunderstorm Winds
Northern Jasper County	02	1530EST			0	0	?	?	Thunderstorm Winds

Scattered power lines were blown down by thunderstorm winds over northern Jasper County. Several trees were blown down around Shady Dale.

Morgan County Countywide	02	1615EST			0	0	?	?	Thunderstorm Winds
-----------------------------	----	---------	--	--	---	---	---	---	--------------------

A few trees were blown down by winds along Georgia Highway 83.

Jones County Southern Jones County	02	1620EST			0	0	?	?	Thunderstorm Winds
---------------------------------------	----	---------	--	--	---	---	---	---	--------------------

Scattered trees and power lines were blown down by the winds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Effingham County Rincon	02	1700EST			0	0	?	?	Hail (1.75)
Early County Blakely	02	1715EST			0	0	3	?	Thunderstorm Winds
Thunderstorm winds tore down many large tree limbs and power lines, resulting in several outages along U.S. Highway 27.									
Glynn County Brunswick	02	1727EST			0	0	4	?	Thunderstorm Winds
Thunderstorm winds toppled a concrete wall under construction at a new retail center. The 16-foot wall damaged a vehicle when it fell.									
Laurens County 1 N Dublin	02	1745EST			0	0	3	?	Thunderstorm Winds
Power outages resulted after utility lines were torn down by falling trees during the thunderstorm.									
Chattooga County Summerville Gore	04	2100EST			0	0	3	?	Thunderstorm Winds
Summerville Gore	04	2130EST			0	0	5	?	Lightning
Scattered trees and large limbs were blown down by thunderstorm winds, resulting in power outages when utility lines were torn down. Additional outages developed when lightning destroyed three transformers at Summerville and Gore. Lightning struck the side of a church in Summerville and set it afire around 2130 EST. The church had extensive structural damage and property damage as a result.									
Walton County Monroe	05	1712EST			0	0	4	?	Thunderstorm Winds
Thunderstorm winds blew trees down in fifteen locations around Monroe.									
White County Helen	05	1720EST			0	0	?	?	Hail (.75)
Glynn County St. Simons Island	06	1817EST			0	0	4	?	Lightning
Lightning set a wood-frame house afire and caused about \$10,000 worth of damage to the home.									
Chatham County Wilmington Island	07	1515EST			0	0	?	?	Hail (1.50)
Wilmington Island	07	1530EST			0	0	3	?	Thunderstorm Winds
A few power lines and large tree limbs were torn down by thunderstorm winds on a plantation.									
Glynn County St. Simons Island	07	1625EST			0	0	?	?	Lightning
Lightning struck several transformers and power lines, resulting in extensive power outages.									
Greene County 7 SW Veasey Countywide	08	1400EST			0	0	?	?	Thunderstorm Winds Small Hail
Thunderstorm winds pushed several trees onto power lines, resulting in scattered outages. Many trees were uprooted around Lake Oconee.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD	EST			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Houston County Bonaire 4 SE Warner Robins	08	1430	EST			0	0	?	?	Hail (0.75)
	08	1430	EST			0	0	3	?	Thunderstorm Winds

Scattered trees were uprooted in a subdivision during the storm.

Cobb County Powder Springs	08	1430	EST			0	0	?	?	Hail (0.75)
Henry County McDonough	08	1455	EST			0	1	?	?	Lightning

A man was injured by lightning while on the golf course.

Dougherty County 6 NNW Bridgeboro	08	1506	EST			0	0	0	0	Funnel Cloud
Worth County 10 NW Sylvester	08	1506	EST			0	0	0	0	Funnel Cloud

Paulding County Countywide	08	1510	EST			0	0	?	?	Thunderstorm Winds
--------------------------------------	----	------	-----	--	--	---	---	---	---	--------------------

Strong winds caused scattered power outages over the county.

Cobb County Marietta	08	1510	EST			0	0	3	?	Thunderstorm Winds
10 W Roswell	08	1520	EST			0	0	?	?	Lightning Hail (0.75)

About 2,850 residences and businesses, mainly over northern Cobb County around Marietta, had outages during the storm. Falling trees and lightning strikes to transformers caused the outages.

Fulton County 4 NE Atlanta	08	1545	EST			0	0	1	?	Thunderstorm Winds
--------------------------------------	----	------	-----	--	--	---	---	---	---	--------------------

Large tree limbs were torn down by thunderstorm winds.

De Kalb County 8 E Atlanta	08	1545	EST			0	0	2	?	Thunderstorm Winds
--------------------------------------	----	------	-----	--	--	---	---	---	---	--------------------

Large tree limbs, torn down by the winds, destroyed a swingset in southern De Kalb County. The damages cost about \$150.

Laurens County Rockledge	08	1615	EST			0	0	4	?	Thunderstorm Winds
Southern Laurens County	08	1615	EST			0	0	?	?	Thunderstorm Winds

Thunderstorm winds took the roof off a home near Rockledge. Utility lines were blown down by the winds or torn down by falling trees across most of the southern portion of the county.

De Kalb County Doraville	08	1630	EST			0	0	4	?	Lightning Small Hail
------------------------------------	----	------	-----	--	--	---	---	---	---	-------------------------

Around 1630 EST, a water distribution plant was struck by lightning, knocking the power out and leaving about 5,000 customers in Chamblee, Dunwoody, and Tucker with little or no water pressure. Small hail developed at Lithonia at 1645 EST.

Fayette County Fayetteville	08	1645	EST			0	0	4	?	Thunderstorm Winds
---------------------------------------	----	------	-----	--	--	---	---	---	---	--------------------

The roof and front porch of a house were damaged by a large tree, uprooted by the winds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSSL	

GEORGIA Cont'd

Treutlen County
Lothair
1 NW Soperton

08	1645EST								
08	1700EST	0	0	3	?	Thunderstorm Winds			
		0	0	4	?	Thunderstorm Winds			

Scattered trees and power lines were blown down by thunderstorm winds over Treutlen County. The majority of the damage occurred from Lothair to just northwest of Soperton along a broken path. A tobacco shelter was stripped of its aluminum walls, while a trailer was toppled onto its side. Several wooden and tin roofs were damaged. One weather-induced phenomena resulted when a loose nail was picked up by the winds and driven into a tree. Heavy concrete blocks were hurled over 50 yards near one home.

Gwinnett County
Norcross

08	1705EST								
08	1715EST	0	0	4	?	Lightning			
		0	0	4	?	Heavy Rainfall			

Lightning caused considerable damage to the attic of a home. A wall collapsed at a home when water pooled against the wall and forced it to fall, severing a gas main. Lightning caused a power outage when it damaged a transformer.

De Kalb County
Decatur

08	1720EST								
		0	0	4	?	Lightning			

Lightning hit a large hardwood and sent limbs falling onto three parked cars.

Pierce County
10 NW Blackshear

08	1745EST								
		0	0	5	?	Lightning			

Lightning struck a house, starting a fire that completely destroyed it.

Whitfield County
2 E Dalton
Eastern Whitfield
County
Rocky Face

09	1940EST								
		0	0	?	?	Hail (1.75)			
09	1940EST	0	0	?	?	Hail (1.75)			
09	2000EST	0	0	4	?	Lightning			

Lightning destroyed a barn off Georgia Highway 201.

Cherokee County
5 N Canton
1 E Ball Ground

09	2002EST								
09	2020EST	0	0	?	?	Hail (1.75)			
		0	0	2	?	Thunderstorm Winds			
						Small Hail			

Several large tree limbs were blown down by thunderstorm winds east of Ball Ground.

Walker County
4 E Cooper
Heights

09	2025EST								
		0	0	3	?	Thunderstorm Winds			

Numerous trees and power lines were torn down by thunderstorm winds. Long power outages resulted, mainly between Rock Springs and Cooper Heights.

Catoosa County
Fort Oglethorpe

09	2115EST								
		0	0	?	?	Thunderstorm Winds			

Thunderstorm winds tore down power lines, resulting in scattered power outages.

Chattooga County
Lyerly
Countywide

09	2215EST								
09	2215EST	0	0	?	?	Hail (0.75)			
		0	0	?	?	Thunderstorm Winds			

Scattered trees were uprooted or broken by thunderstorm winds over Chattooga County.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Hall County
Gainesville 09 2230EST 0 0 ? ? **Thunderstorm Winds**

Power outages resulted after thunderstorm winds tore down utility lines.

Coweta County
1 N Newnan 10 0030EST 0 0 3 ? **Thunderstorm Winds**

Gusty thunderstorm winds uprooted a few trees around Newnan.

Fayette County
Peachtree City 10 0030EST 0 0 4 ? **Lightning
Small Hail**

A home was set afire by a lightning strike.

Whitfield County
Dalton 10 0050EST 0 0 4 ? **Lightning**

Lightning struck a pump house and destroyed the building. A cable receiving tower was damaged, knocking out eight channels. Each cable channel cost the company \$2,000 for the receiving equipment.

Cherokee County
Woodstock 10 0100EST 0 0 6 ? **Lightning**
Oak Grove 10 0100EST 0 0 3 ? **Lightning**
 10 0100EST 0 0 2 ? **Thunderstorm Winds**

An office complex building was set afire by a lightning strike and destroyed. Damages were estimated to cost around \$500,000. During the storm, lightning struck a home and blew up a video recorder and television. A tree was blown onto a power line by the winds, while a few large limbs were downed over Oak Grove.

Muscogee County
Columbus 14 1700EST 0 0 ? ? **Flash Flood**
 14 1700EST 0 0 2 ? **Thunderstorm Winds**

A few trees and scattered limbs were downed by winds in a thunderstorm that also produced flash flooding around Columbus.

Madison County
Northern Madison County 15 1745EST 0 0 ? ? **Thunderstorm Winds**

A few trees and scattered limbs were downed by winds in a thunderstorm that also produced flash flooding around Columbus.

Franklin County
Southwestern Franklin County 15 1745EST 0 0 ? ? **Thunderstorm Winds**

Many trees were uprooted and tore down utility lines over the southwestern part of the county, mainly near the Hudson River.

Houston County
Warner Robins 16 1715EST 0 0 ? ? **Flash Flood**

Lowndes County
Valdosta 17 1500EST 0 0 4 ? **Lightning**
 17 1500EST 0 0 3 ? **Thunderstorm Winds**
Valdosta 17 1515EST 0 0 4 ? **Heavy Rainfall**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K D Y L A N D	I N J U R Y	P R O P E R T Y	C R O S S	

GEORGIA Cont'd

A fire started by lightning destroyed a mobile home. Scattered power lines were torn down by trees, uprooted by the winds. Several businesses had minor water damage as heavy rainfall began seeping through the ceilings and flooding the area. Heavy rainfall caused a portion of a ceiling at one business to fail, resulting in damages estimated at nearly \$6,000.

Cobb County
3 NW Lithia Springs

20	1545EST				0	0	0	?	Hail (0.75)
20	1545EST				0	0	4	?	Thunderstorm Winds

Large trees were blown down and several others were damaged by thunderstorm winds. Structural damages occurred to a few homes in a subdivision due to falling trees and limbs.

Catoosa County
5 SW Ringgold

21	1430EST				0	0	3	?	Thunderstorm Winds
----	---------	--	--	--	---	---	---	---	--------------------

Scattered trees were uprooted by thunderstorm winds.

Chattooga County
Summerville

21	1625EST				0	0	?	?	Hail (1.50)
----	---------	--	--	--	---	---	---	---	-------------

Walker County
10 SW LaFayette Villanow

21	1640EST				0	0	3	?	Thunderstorm Winds
21	1640EST				0	0	3	?	Thunderstorm Winds

Scattered trees were blown down around the Lookout community and at Villanow as a thunderstorm moved across southern Walker County.

Polk County
Esom Hill Cedartown

21	1645EST				0	0	3	?	Thunderstorm Winds
21	1705EST				0	0	3	?	Thunderstorm Winds
21	1705EST				0	0	4	?	Lightning

Numerous trees and power lines were blown down over Polk County, resulting in blocked roadways and power outages at several locations. Several fires occurred from the lightning strikes.

Floyd County
Southern Floyd County Cave Springs

21	1700EST				0	0	4	?	Lightning
21	1730EST				0	0	3	?	Thunderstorm Winds

Several fires were set by lightning over southern Floyd County. Many large trees were uprooted by the winds over Cave Springs. Extensive power outages resulted when utility lines were downed by winds and falling trees.

Jefferson County
Wrens

21	1730EST				0	0	3	?	Thunderstorm Winds (G56)
----	---------	--	--	--	---	---	---	---	--------------------------

Several large trees and power lines were blown down by thunderstorm winds.

Clayton County
Riverdale

21	1745EST				0	0	3	?	Thunderstorm Winds
21	1745EST				0	0	?	?	Hail (0.75)

Several trees were snapped by thunderstorm winds.

Fayette County
4 SW Riverdale

21	1745EST				0	0	4	?	Thunderstorm Winds (G52)
21	1745EST				0	0	4	?	Hail (0.88)

Many large trees were blown down in a subdivision in northern Fayette County. One home had minor roof damage from a falling tree. Hail damaged the roof of another home and an automobile. A house under construction was destroyed by the winds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Carroll County

Carrollton									
4 S Carrollton	21	1750EST			0	0	3	?	Thunderstorm Winds
3 NE Bowdon	21	1750EST			0	0	2	?	Lightning
Roopville	21	1800EST			0	0	4	?	Thunderstorm Winds
Tyus	21	1810EST			0	0	4	?	Thunderstorm Winds
Mt. Zion									

Around Carrollton, many trees and large tree limbs were blown down by thunderstorm winds, tearing down many utility lines. Power outages resulted for about 2,500 customers. Near Bowdon, the winds destroyed a barn and fence and took down one tree on a farm. South of Carrollton, a lightning strike started a small barn fire at another farm, with the damages being very light. Many trees were downed south of Carrollton along U.S. Highway 27. Outages were also reported at Roopville and Tyus.

Fayette County

5 N Fayetteville	21	1807EST			0	0	0	0	Funnel Cloud
5 N Fayetteville	21	1807EST			0	0	3	?	Thunderstorm Winds

Several large trees were uprooted by thunderstorm winds, mainly near the intersection of Georgia Highways 314 and 279.

Clayton County

Forest Park	21	1810EST			0	0	5	?	Thunderstorm Winds
Riverdale									
Ellenwood									
3 E Riverdale	21	1815EST			0	0	3	?	Thunderstorm Winds

Numerous trees were uprooted or broken at several locations over the county. Several automobiles and about twenty-five homes were damaged due to falling trees. Among the damaged homes were three mobile homes in two separate parks that were severely damaged by trees. About 6,000 homes in Forest Park, Ellenwood, and Riverdale lost power due to lines being torn down. Many trees were downed just east of Riverdale.

Gwinnett County

Buford	21	1815EST			0	0	3	?	Thunderstorm Winds
Suwanee									
Lawrenceville	21	1820EST			0	0	4	?	Lightning
	21	1820EST			0	0	4	?	Thunderstorm Winds

Numerous trees were uprooted or broken at several locations over the county. High winds downed a 100-foot section of a security fence at a correctional facility and knocked down a portion of another fence onto a parked car. Scattered power lines were downed by the falling trees and winds. About 1,500 residents in Suwanee, Lawrenceville, and Buford were without power briefly. Lightning struck and damaged the jail's computer system, telephones, a radio antenna, and audio-visual equipment.

Haralson County

Tallapoosa	21	1818EST			0	0	3	?	Thunderstorm Winds
------------	----	---------	--	--	---	---	---	---	--------------------

Scattered power outages developed over southern Haralson County around Tallapoosa. Thunderstorm winds caused falling trees and large limbs to down utility lines.

Heard County

Countywide	21	1818EST			0	0	3	?	Thunderstorm Winds
------------	----	---------	--	--	---	---	---	---	--------------------

Scattered power outages developed over northern Heard County. Utility lines were torn down by trees and large limbs, mainly over southwestern Heard County along Georgia Highway 219. Several roads were blocked.

Habersham County

Countywide	21	1820EST			0	0	3	?	Thunderstorm Wind Small Hail
------------	----	---------	--	--	---	---	---	---	---------------------------------

Numerous trees were blown down across the county's roads.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Hall County									
Countywide	21	1820EST			0	0	3	?	Thunderstorm Wind
1 S Gainesville	21	1820EST			0	0	4	?	Lightning

Numerous trees were blown down across the county's roads. Lightning struck a church and started a small fire.

Clayton County									
3 E Riverdale	21	1830EST			0	0	3	?	Hail (1.00)
Riverdale	21	1845EST			0	0	4	?	Lightning

A Chow puppy was killed after lightning struck a tree and traveled through the ground. In the eastern portion of Riverdale, a supply shed was burned after being struck by lightning. Damage was reported to traffic lights and a satellite dish in the same area.

Troup County									
LaGrange	21	1900EST			0	0	3	?	Thunderstorm Winds

Thunderstorm winds pushed trees onto two houses.

Stephens County									
Toccoa	21	1900EST			0	0	3	?	Thunderstorm Winds
5 SE Toccoa	21	1900EST			0	0	4	?	Lightning
Southern Stephens County	21	1915EST			0	0	5	?	Thunderstorm Winds

Many large trees were blown down by the thunderstorm winds. Numerous power outages resulted when utility lines were torn down by the winds and falling trees. A house was set afire by a lightning strike. By 1935 EST, the whole city was without electricity. Strong winds ripped off part of the roof of a poultry food storage company and damaged about fifteen homes over the southern portion of the county.

Jackson County									
Countywide	21	1900EST			0	0	?	?	Thunderstorm Winds
4 S Commerce	21	1900EST			0	0	5	?	Thunderstorm Winds

Numerous trees were blown down by the winds across the roads. Strong winds totally destroyed a chicken house near U.S. Highway 441 between Nicholson and Commerce. The structure was valued at about \$55,000 and contained about 21,500 new chicks, many of which were killed. The feed bins, which were full, were also damaged. A television antenna was damaged, a few roof shingles were blown off, and a swing set was destroyed at the farmhouse.

Franklin County									
Countywide	21	1930EST			0	0	?	?	Thunderstorm Winds

Numerous trees were blown down over the county. Extensive power outages resulted when utility lines were torn down by the winds and trees. A fallen live line started a wood fire at 1930 EST.

Hart County									
Countywide	21	2015EST			0	0	?	?	Thunderstorm Winds

Numerous trees were uprooted across the county. Utility lines were downed by trees and winds, resulting in outages.

Oglethorpe County									
Countywide	21	2330EST			0	0	?	?	Thunderstorm Winds

Thunderstorm winds uprooted many trees. Power outages developed when trees and winds downed utility lines.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

**Richmond County
Augusta**

22 Morning 0 0 4 ? **Flash Flood**

Flash floods developed over Richmond County when around 2 inches of rain fell. Several automobiles were damaged by the flooding. A day-care center in Martinez had very minor flood damage. One subdivision had high waters throughout.

**Forsyth County
Cumming**

22 1715EST 0 0 ? ? **Hail (0.75)**
22 1715EST 0 0 3 ? **Thunderstorm Winds**

A few large tree limbs were blown down by the winds.

**Gwinnett County
Countywide**

22 1855EST 0 0 ? ? **Thunderstorm Wind
Lightning**

Lightning and strong winds caused power outages over the county.

**Barrow County
Southern Barrow
County**

22 1930EST 0 0 ? ? **Thunderstorm Winds**

Many large tree limbs were broken off by the winds, mainly near Georgia Highway 11.

**Walton County
Bold Springs**

22 1945EST 0 0 3 ? **Thunderstorm Winds**

Scattered trees were blown down by the winds over northwestern Walton County, mainly around Bold Springs.

**Gwinnett County
Lilburn
Lawrenceville
Norcross**

22 1945EST 0 0 4 ? **Lightning**
22 2005EST 0 0 4 ? **Lightning**
22 2115EST 0 0 3 ? **Thunderstorm Winds**

A home was struck by lightning at Lilburn and set afire. At Lawrenceville, several businesses along Georgia Highway 124 were shut down due to power outages; a county government building was struck by lightning. Several trees were uprooted by winds around Norcross. One home was damaged by a falling tree.

**Franklin County
1 N Carnesville
Carnesville
Lavonia**

22 2200EST 0 0 3 ? **Lightning**
22 2240EST 0 0 4 ? **Lightning**
22 2255EST 0 0 2 ? **Lightning**

Scattered power outages developed after thunderstorm winds uprooted trees and tore down power lines. Considerable damage occurred along Georgia Highway 59 outside Carnesville. Around 2240 EST, lightning set a garage afire. That fire later spread to the nearby house and caused additional damage. At Lavonia, lightning sparks began a few small fires on the roof of an old mill; however, the heavy rainfall extinguished the small fires and minimized the damages.

**Gwinnett County
Norcross**

22 2305EST 0 0 3 ? **Flash Flood**

Several roads, including some in residential areas, were impassable as flash floods developed. A few automobiles were damaged during the flooding.

**Atkinson County
6 NE Willacoochee**

23 1430EST 0 0 5 ? **Thunderstorm Wind**

Strong thunderstorm winds destroyed four chicken houses on a poultry farm. The houses had approximately 100,000 new chicks in them; most of which were killed. A large pecan tree was uprooted near the farmhouse.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL	STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Early County 2 N Blakely	23	1800EST		0	0	3	?	Thunderstorm Winds
Thunderstorm winds tore down many large tree limbs, along with power lines, resulting in a few outages along U.S. Highway 27.								
Grady County Whigham	23	1800EST		0	0	3	?	Lightning
Lightning struck a gas tank and caused a small fire.								
Baker County 2 W Milford	23	1810EST		0	0	2	?	Thunderstorm Winds
Thunderstorm winds tore down many large tree limbs, along with power lines, resulting in outages along Georgia Highway 216.								
Miller County 2 S Colquitt	23	1815EST		0	0	3	?	Thunderstorm Winds
Large trees were blown down across U.S. Highway 27. Power lines were torn down by the winds and falling trees, resulting in numerous outages.								
Mitchell County Camilla	23	1825EST		0	0	2	?	Thunderstorm Winds
Many large tree limbs were downed by thunderstorm winds. Numerous power outages resulted when power lines were torn down.								
Toombs County Vidalia Lyons	23	1825EST		0	0	2	?	Thunderstorm Winds
	23	1835EST		0	0	2	?	Thunderstorm Winds
	23	1855EST		0	0	4	?	Lightning
Strong thunderstorm winds tore down power lines near Vidalia and Lyons. A few small trees were blown down and several large tree limbs were snapped. Lightning caused a house fire in Lyons.								
Miller County Colquitt Colquitt	23	1830EST		0	0	4	3	Flash Flood
	23	1835EST		0	0	4	?	Lightning
	23	1905EST		0	0	5	?	Lightning
	23	1920EST		0	0	4	?	Lightning
Flash floods developed over Colquitt and damaged several homes and a plant nursery located on U.S. Highway 27. The nursery stock was damaged when the flood waters covered a large portion of the nursery area. Lightning struck an apartment at 1835 EST and caused extensive damages. A home was totally destroyed by a fire started by a lightning strike about 1905 EST. Around 1920 EST, a mobile home was set afire and heavily damaged when lightning struck a power pole outside the home and traveled into the home along an electrical line.								
Houston County Kathleen	23	1940EST		0	0	?	?	Thunderstorm Wind
Thunderstorm winds caused scattered power outages.								
Bibb County Macon 2 NE Macon	24	2000EST		0	0	?	?	Lightning
	24	2100EST		0	0	?	?	Flash Flood
Numerous power outages occurred during the storm around Macon.								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	
GEORGIA Cont'd									
Bacon County									
5 SE Alma	27	1730EST			0	0	4	?	Thunderstorm Winds
A barn was destroyed by thunderstorm winds outside of Alma.									
Thomas County									
Thomasville	27	2114EST			0	0	3	?	Lightning
	27	2114EST			0	0	2	?	Thunderstorm Winds
Lightning struck a pecan tree near a house and damaged the television set. Scattered tree limbs were downed by the winds.									
Thomas County									
Thomasville	28	1355EST			0	0	3	?	Thunderstorm Winds
	28	1355EST			0	0	2	?	Flash Flood
Thomasville	28	1453EST			0	0	2	?	Thunderstorm Winds
Thunderstorms uprooted trees, broke limbs, and tore down power lines around Thomasville. As a result of the storms, about 2,500 customers were left without power. Several signs were damaged. A fire station and a medical facility were briefly flooded.									
Grady County									
Countywide	28	1453EST			0	0	?	?	Thunderstorm Winds
Scattered trees were blown down by thunderstorm winds.									
Colquitt County									
Doerun	29	1600EST			0	0	3	?	Thunderstorm Winds Small Hail
A house trailer was blown over by thunderstorm winds near Doerun.									
Fannin County									
McCaysville	29	1735EST			0	0	3	?	Thunderstorm Winds
A thunderstorm produced strong winds that uprooted several trees in McCaysville.									
Union County									
Blairsville	29	1815EST			0	0	3	?	Thunderstorm Winds
5 NW Blairsville	29	1815EST			0	0	4	?	Thunderstorm Winds
Many large trees were blown down onto power lines and across the roads around Blairsville. Several docks and boats were damaged by falling trees northwest of Blairsville around Lake Nottely.									
Lumpkin County									
Southeastern Lumpkin County	29	1835EST			0	0	?	?	Thunderstorm Winds
Several trees were blown down along the Chestatee River, north of Georgia Highway 52.									
De Kalb County									
14 NNE Atlanta	29	1955EST			0	0	?	?	Thunderstorm Wind (G52)
North Atlanta	29	1955EST			0	0	3	?	Thunderstorm winds
Doraville									
Druid Hills									
14 NNE Atlanta	29	1955EST			0	0	?	?	Hail (1.00)
Stone Mountain	29	2005EST			0	0	?	?	Hail (1.00)
Strong thunderstorm winds were recorded at Peachtree-De Kalb Airport. Scattered trees and large limbs were torn down by the winds. Small hail developed at Lithonia around 2156 EST.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Gwinnett County

Duluth	29	2020EST			0	0	4	?	Lightning
Dacula	29	2040EST			0	0	?	?	Lightning

A lightning strike caused a fire that extensively damaged a house in Duluth. Lightning also struck a number of trees in Dacula. About 2,000 customers were left without power after lightning struck a substation in Norcross.

Fulton County Atlanta

Atlanta	29	2042EST			0	0	3	?	Lightning
---------	----	---------	--	--	---	---	---	---	-----------

Lightning struck an Eastern Airlines 727 being readied for takeoff and damaged the airplane's tail section.

Newton County Countywide

Countywide	29	2105EST			0	0	?	?	Thunderstorm Winds Lightning
Covington	29	2115EST			0	0	4	?	Lightning
	29	2115EST			0	0	3	?	Thunderstorm Winds

Several grass fires along Interstate 20 resulted from lightning strikes. Lightning struck five homes around Covington and a gas main. Mostly minor damages resulted. Numerous trees were blown down over the entire county, including Covington.

Putnam County Eatonton

Eatonton	29	2140EST			0	0	3	?	Thunderstorm Winds
----------	----	---------	--	--	---	---	---	---	--------------------

Scattered trees were blown down onto utility lines by the winds.

Clayton County Jonesboro Forest Park

Forest Park	29	2200EST			0	0	3	?	Thunderstorm Winds
-------------	----	---------	--	--	---	---	---	---	--------------------

Scattered trees and power lines were blown down by the winds over central and northeastern Clayton County.

Marion County 1 SE Doyle Putnam

1 SE Doyle	30	1125EST			0	0	2	?	Thunderstorm Winds
Putnam	30	1150EST			0	0	?	?	Hail (0.75)

Large tree limbs were torn down by the winds between Doyle and Putnam.

Bleckley County Cochran

Cochran	30	1225EST			0	0	3	?	Lightning
---------	----	---------	--	--	---	---	---	---	-----------

Lightning struck a home and caused minor fire damage in the attic. The resident was jolted by the lightning but had no visible injury.

Stewart County Louvale Troutman

Louvale	30	1225EST			0	0	2	?	Thunderstorm Winds
	30	1245EST			0	0	?	?	Hail (0.75)
Troutman	30	1315EST			0	0	2	?	Thunderstorm Winds Small Hail

Winds tore down large tree limbs around Louvale and Troutman.

Crisp County 4 SE Cordele

4 SE Cordele	30	1303EST			0	0	?	?	Hail (0.75)
--------------	----	---------	--	--	---	---	---	---	-------------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Morgan County
2 N Rutledge 30 1315EST 0 0 ? ? **Thunderstorm Winds**

A few trees were downed by thunderstorm winds. Scattered power outages occurred over the east-central portion of the county.

Turner County
Countywide 30 1330EST 0 0 ? ? **Thunderstorm Winds**

Numerous trees were blown across power lines in Turner County, resulting in many outages.

Dougherty County
4 S Pretoria 30 1330EST 0 0 ? ? **Thunderstorm Winds**
30 1330EST 0 0 ? ? **Hail (0.75)**

Two large trees were blown down onto power lines, resulting in an isolated outage.

Early County
Damascus 30 1400EST 0 0 3 ? **Thunderstorm Winds**

Numerous large trees were blown down around Damascus. A few power lines were pulled down by the winds and falling trees.

Miller County
Central Miller County 30 1400EST 0 0 ? ? **Thunderstorm Winds**

Large trees were uprooted by the thunderstorm winds. Power lines were torn down by the falling trees and the winds, resulting in scattered outages along Georgia Highway 45.

Worth County
3 N Sylvester 30 1420EST 0 0 4 ? **Lightning**

Lightning struck a house on Georgia Highway 112 and set it afire. Approximately 30% of the house was damaged.

Colquitt County
2 N Moultrie 30 1515EST 0 0 ? ? **Hail (1.00)**
Moultrie 30 1515EST 0 0 2 ? **Thunderstorm Winds**
Countywide

Major electrical outages developed around Moultrie and over the county due to lightning and strong winds. Large tree limbs were removed from power lines in several areas.

Lowndes County
Valdosta 30 1600EST 0 0 2 ? **Thunderstorm Winds**

Three large trees were downed in Valdosta, along with a few power lines. Several small fires started near the downed lines.

Hall County
Gillsville 30 1605EST 0 0 ? ? **Hail (1.75)**

Jackson County
2 S Jefferson 30 1745EST 0 0 3 ? **Thunderstorm Winds**
Small Hail

Numerous trees were blown down near Jefferson.

Taylor County
5 NE Butler 30 1815EST 0 0 ? ? **Hail (1.00)**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROD'S	

GEORGIA Cont'd

Heard County
2 SW Franklin 30 1815EST 0 0 ? ? Hail (1.75)

Large hail hampered traffic along Georgia Highway 34.

Coweta County
Grantville 30 1830EST 0 0 4 ? Lightning

Lightning struck a home and caused extensive fire damage to the back and the roof. The interior of the house was damaged by the heat of the fire.

Taylor County
7 N Butler 30 1825EST 0 0 3 ? Thunderstorm Winds
7 N Butler 30 1825EST 0 0 2 ? Lightning
30 1900EST 0 0 ? ? Hail (1.75)

Major electrical outages developed around the area surrounding the intersection of Georgia Highway 208 and U.S. Highway 19. The strong winds knocked down trees onto power lines. Additional outages resulted when a meter pole was broken by a lightning strike on a transformer.

Crawford County
Countywide 30 1925EST 0 0 ? ? Thunderstorm Winds

Many limbs and trees were blown down by thunderstorm winds across Crawford County. Power outages resulted when falling trees tore down utility lines.

Clayton County
Jonesboro 30 2130EST 0 0 ? ? Hail (0.75)

Henry County
Stockbridge 30 2145EST 0 0 ? ? Hail (0.75)

IDAHO

IDZ00C-OSW
Central &
Southwestern Idaho 08 1500MST-
2300MST 0 0 5 4 Lightning

High-based thunderstorms without precipitation, in a very unstable dry air mass, ignited 66 range and forest fires in an area of severe-to-extreme drought that had experienced several days of much hotter than normal temperatures and extremely low relative humidity. Winds drove the Castle Creek range fire, in Owyhee County 50 miles south of Boise, to 11,000 acres within 24 hours. The Indian Creek fire 15 miles southeast of Twin Falls "looked like a cyclone with black clouds and a wall of flame rising about a thousand feet in the air" as it spread to 13,000 acres within 48 hours, mainly during the afternoon and evening hours.

Minidoka County
Rupert 08 1700MST 0 0 4 0 Thunderstorm Winds

A microburst lifted the roof off a mobile home.

Gooding County 08 1900MST 0 0 4 4 Thunderstorm Winds (G50)

The arson-set Thorn Creek range fire in northeastern Gooding County was at 500 acres at 1600 MST. Microbursts from high-based late afternoon thunderstorms in very unstable dry air (Haines Index of 6) helped spread the fire to over 30,000 acres. The fire was contained on the 11th at 65,000 acres. A pall of smoke extended east 50 miles.

Oneida County 10 1400MST 0 0 0 4 Lightning

A lightning fire burned 2,700 acres that included a field of unharvested grain.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IDAHO Cont'd

Payette County Weiser Flat	10	2000MST			0	1	4	0	Lightning
Bingham County Idaho Falls	11	1900MST			0	0	5	0	Thunderstorm Winds

Winds damaged roofs and falling limbs cut power lines. Ten minutes of heavy rain (0.54-inch) flooded basements and streets.

Bonneville County Osgood	11	1900MST			0	0	0	5	Hail (0.75)
Bingham County Aberdeen	11	1900MST			0	0	5	0	Thunderstorm Winds
Oneida County Malad Valley	11	1900MST			0	0	0	0	Thunderstorm Winds

A microburst hit a contained range fire causing it to burn another 300 acres.

Cassia County 5 S Delco	15	1600MST			0	0	4	0	Flash Flood
----------------------------	----	---------	--	--	---	---	---	---	-------------

One and one-half feet of water coming down the side of Albion grade washed out 50 feet of road.

Boise County Valley County Twin Falls County	15	1600MST			0	0	4	0	Lightning
--	----	---------	--	--	---	---	---	---	-----------

Lightning ignited 30 forest fires. The Badger Creek fire twenty-five miles east of Boise reached 1,400 acres by the morning of the 16th.

Caribou County Bancroft	16	1300MST			0	0	3	0	Flash Flood
----------------------------	----	---------	--	--	---	---	---	---	-------------

Two inches of rain fell in 1 hour.

Power County Rockland	17	1212MST	0.1	100	0	0	0	0	Tornado (F0)
--------------------------	----	---------	-----	-----	---	---	---	---	--------------

Several funnel clouds were observed with a "large" tornado. Heavy rains and half-inch hailstones were also observed.

Power County Pocatello	17	1220MST	0.1	50	0	0	0	0	Tornado (F0)
Power County American Falls	17	1225MST	4	100	0	0	5	0	Tornado (F2)

A "large" tornado was on the ground for ten minutes along the south side of Interstate 86 between American Falls and Pocatello. Irrigation wheel-lines were carried into overhead power lines. Straws were embedded in posts. One inch of rain fell in 30 minutes.

Power County Pocatello 8 NW	17	1245MST			0	0	4	0	Heavy Rain
--------------------------------	----	---------	--	--	---	---	---	---	------------

Two and ninety-three-hundredths inches of rain in 1 hour ending at 1245 MST, caused urban flooding.

Kootenai County Coeur D'Alene	20	1500PST			0	0	4	0	Heavy Rain
----------------------------------	----	---------	--	--	---	---	---	---	------------

Two inches of rain in 45 minutes stalled automobiles in 1 foot of water that flooded Coeur d'Alene.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K	I	P	C	

IDAHO Cont'd

Shoshone County	20	1500PST			0	0	5	0	Heavy Rain
			Thunderstorm downpours of 1.36 inches caused urban flooding mud slides from Smelertville to Kellogg.						
Shoshone County Kellogg	20	1500PST			0	0	4	0	Hail (0.75)
			Hail pitted paint on vehicles.						
Kootenai County	20	1600PST			0	0	4	0	Thunderstorm Winds
			Six foot swells on Lake Coeur d'Alene set boats adrift. Downed trees throughout Kootenai County caused power outages.						
Boise County Lowman	20	1600MST- 2000MST			0	0	5	3	Flash Flood
			Thunderstorms dropped 1.50 inches of rain in less than an hour on mountains denuded by the 1989 Lowman forest fire. Rapid run-off caused numerous landslides in the Lowman area. Lick Creek was blocked by a large slide. Log jams formed on the South Fork Payette River near Lowman and Steep Creek 2 miles east of Lowman. Rapid run-off was attributed to the 46,000 acre Lowman fire of July 26-August 22, 1989.						
Owyhee County Homedale	20	1730MST			0	0	5	4	Flash Flood
			Thunderstorm downpours 1500-1700 MST in Malheur County, Oregon, as well as Owyhee County, flooded almost the entire length of Succor Creek damaging at least three homes, a railway bridge, and a diversion dam.						
Bannock County Pocatello	23	1500MST			0	0	4	0	Heavy Rain
			One inch of thunderstorm rain caused urban flooding.						
Washington County Weiser Flat	23	1930MST			0	0	4	4	Thunderstorm Winds Hail
			Trees fell across power lines between Payette and Weiser Flat.						
ILLINOIS									
Cook County	10	1900CST			0	0	4	0	Flash Flood
			There was widespread urban flooding of streets and basements in the southern part of Cook County. Numerous tree limbs were down and power outages occurred.						
ILZ001-002-003	19	1200CST			0	0	5	5	Flood
			Heavy thunderstorm rains that fell on the 18th, 19th, and 20th caused widespread floods. Rivers and streams were already high and soils were soaked from rains the previous two months. Rainfall amounts ranged mostly from 3 to 6 inches from successive waves of thunderstorms.						
Stephenson County Orangeville	19	1605CST			0	0	?	?	Thunderstorm Winds (G52)
Winnebago County 4 N RFD	19	1650CST			0	0	0	3	Thunderstorm Winds
			Large trees were uprooted in the southeastern part of Rockford.						

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ILLINOIS Cont'd

Grundy County
Gardner 19 1830CST 0 0 4 4 Hail (0.75)

Winnebago County
15 W RFD 28 1242CST 3.0 100 0 0 4 0 Tornado (F1)

A tornado touched down near Illinois State Police Post and moved south to the vicinity of Seward. Automobiles were lifted off the ground, cemetery stones lifted off the ground, and trees damaged.

Winnebago County
SE RFD 28 1308CST 0 0 ? ? Hail (1.75)

Winnebago County
RFD 28 1310CST 0 0 ? ? Hail (2.50)

De Kalb County
Sycamore 28 1345CST 0 0 ? ? Hail (1.00)

De Kalb County
1 N De Kalb 28 1354CST 0 0 ? ? Hail (1.75)

De Kalb, Kane,
Kendall Counties 28 1355CST 0 0 6 6 Thunderstorm Winds

A large area of crop land was damaged by thunderstorm winds that began in De Kalb County just southeast of De Kalb and continued across southwest Kane County into Kendall County to near Oswego where tornadic damage began. The area of damage was 10 to 12 miles wide by over 20 miles long, funneling to where the tornado began. Winds were from northwest to southeast, generally 80 to 100 mph according to damage patterns. Aerial survey revealed this large downburst had several embedded micro-vortices, one of which was 3.2 miles long. Large areas of corn were bent over and many strong healthy trees were toppled. Aurora Airport sustained heavy damage to hangars and aircraft.

Kane County
33 NE MMO 28 1400CST 0 0 ? ? Hail 90.75)

De Kalb County
De Kalb 28 1408CST 0 0 ? ? Hail (0.75)

Kane County
St. Charles 28 1417CST 0 0 ? ? Hail (0.75)

Kane County
Sugar Grove 28 1421CST 0 0 4 ? Thunderstorm Winds

Strong winds damaged large areas of corn, soy beans, and trees.

Kane County
Aurora 28 1423CST 0 0 ? ? Hail (1.25)

Kendall, Will
Counties
Oswego,
Plainfield, Joliet 28 1430CST 16.4 600 29 350 8 6 Tornado (F5)

A large, killer tornado spun a path of destruction across Kendall and Will counties late in the afternoon. This unusual, late August tornado killed 29 people and seriously injured at least 350. It caused an estimated \$165 million damage, including about \$100 million damage to private property, and at least 50 businesses were destroyed. Many homes, townhouses, and apartments were destroyed or damaged. It first touched down at Oswego at about 1430 CST and moved southeast, crossing the Kendall-Will County border 6 miles south of their north border, and lifted at about 1450 CST in Joliet. The damage path was 16.4 miles long and ranged from 200 yards to a half-mile wide.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ILLINOIS Cont'd

Aerial survey revealed the tornado first touched down at Oswego, damaged several buildings, and moved southeast across crop land roughly parallel to U.S. Route 30. The first 4 miles it was F1 and F2 across rural areas, then became F3 across Wheatland Plains where it destroyed 12 homes, damaged 50, and did more than \$9.2 million damage. As it approached Plainfield it reached maximum intensity F5 and destroyed two large steel electric transmission towers and damaged others. It then destroyed the Plainfield High School with F3 intensity, where double brick and concrete block walls were demolished, and 2,300-pound concrete blocks were toppled. The football team was practicing and took shelter just before the tornado struck. Also in Plainfield six people were killed, 55 homes were destroyed and 205 damaged, Grand Prairie Elementary School and District Administrative Center were destroyed, for a total estimated loss of \$60 million. At Saint Mary Immaculate, three people died, and \$6 million damage was done to the church, school, rectory, and convent.

For the next 4 miles the tornado continued at F3 and F4 intensity and along Illinois Route 59 several shopping malls were damaged for a loss of \$3.5 million. At Peerless Estates 75 homes were destroyed, 148 homes damaged for a loss of \$15.4 million. At Lily Cache one person died, 55 homes were destroyed, and 127 homes damaged for a loss of \$11.5 million. At Crystal Lawns two people died, 69 homes were destroyed and 324 damaged for a loss over \$15 million. At Warwick Estates the tornado was F3 to F2 intensity, killed two people, destroyed 50 homes, and damaged 31 homes for a loss of over \$6 million. At Crest Hill Lakes it killed eight people, some of whom were thrown into corn fields from their apartments, destroyed three buildings containing 100 apartments and did over \$5 million damage. On Cedarwood Drive two people were killed. At Colony West 12 homes were destroyed for a \$2.2 million loss and at Elizabeth Court three apartment buildings were destroyed for a \$300,000 loss. The tornado continued southeast into the west side of Joliet as F2 and F1; at Bridalwreath three homes were destroyed and 88 damaged for a \$2.7 million loss. The tornado weakened as it crossed Larkin Avenue just north of Glenwood Avenue and lifted within a half mile.

The surprise factor was great with this tornado because a powerful thunderstorm was in progress with low cloud bases, and its early stages were masked by the preceding downburst. Eyewitness accounts testify to abrupt and complete devastation; people were unable to communicate the danger to others until it was too late.

Kankakee County Manteno	28 1535CST	0	0	0	3	Thunderstorm Winds
-----------------------------------	------------	---	---	---	---	--------------------

Trees were uprooted by thunderstorm winds.

Kankakee County Momence	28 1545CST	0	0	0	3	Thunderstorm Winds
-----------------------------------	------------	---	---	---	---	--------------------

Trees were uprooted by thunderstorm winds.

Peoria County Princeville	29 0010CST	0	0	?	?	Hail (0.75)
-------------------------------------	------------	---	---	---	---	-------------

Peoria	29 0022CST	0	0	?	?	Hail (1.75)
--------	------------	---	---	---	---	-------------

Livingston County 39 SSE MMO	29 0035CST	0	0	5	5	Hail (2.75)
--	------------	---	---	---	---	-------------

Hail the size of golf balls to baseballs fell in an area from Cullom to just southeast of Emington.

Fulton County Canton	29 0051CST	0	0	4	0	Thunderstorm Winds
--------------------------------	------------	---	---	---	---	--------------------

There was widespread damage to trees and power lines.

Tazewell County	29 0100CST	0	0	?	4	Thunderstorm Winds
------------------------	------------	---	---	---	---	--------------------

Thunderstorm winds and hail damaged crops.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ILLINOIS Cont'd

McLean County Bloomington	29	0110CST			0	0	?	?	Hail (0.75)
DeWitt County Wapella	29	0125CST			0	0	?	?	Hail (1.75)
McLean County Bloomington	29	0130CST			0	0	5	5	Thunderstorm Winds (G78)

Heavy damage occurred to a concrete building from thunderstorm winds estimated at 85 to 90 mph; other damage to metal buildings, roofs, and trees was scattered throughout the county.

Hancock County Carthage	29	0345CST			0	0	?	?	Hail (2.00)
McDonough County Industry	29	0529CST			0	0	?	?	Hail (0.75)
White County Crossville	29	1200CST			1	0	0	0	Lightning

A 55-year-old man was killed by lightning as he was attaching siding to an outdoor building. The lightning evidently first hit two trees, then ricocheted to the building. The man was standing on a metal ladder. Nearby residents claimed there was only one clap of thunder, and no rain in the immediate area. Evansville weather radar indicated a thunderstorm to the north of Crossville. (M55?)

INDIANA

Starke County Hamlet	11	1200EST			0	0	5	0	Lightning
Lightning caused \$55,000 damage to a school.									
Wabash County LaFontaine	17	2052EST			0	0	?	?	Thunderstorm Winds
Trees and some power lines were blown down.									
Grant County	17	2130EST			0	0	?	?	Thunderstorm Winds
Trees and power lines were blown down in northern Grant County.									
LaPorte County	17	2340EST			0	0	?	?	Flooding
Rainfall of 4 inches or more caused flooding of streets and small streams throughout LaPorte County.									
Pulaski, Fulton, Kosciusko Counties	18	0030EST			0	0	?	?	Flooding
Rainfall of 4 to 7 inches fell over the area causing flooding of streets, highways, and streams which resulted in major flooding of the Tippecanoe and Kankakee Rivers in north-central Indiana.									
Howard County Kokomo	19	1845EST			0	1	?	0	Lightning
A man was struck by lightning while standing on his back porch.									
Madison County Elwood and Anderson	19	1940EST			0	0	?	?	Thunderstorm Winds
Numerous trees and power lines were blown down.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

**Henry County
Middletown** 19 2011EST 0 0 4 ? **Thunderstorm Winds**
 Numerous trees were blown down blocking roads. A 150-foot radio tower was blown down 1 mile south of Middletown.

**Elkhart County
Goshen** 20 0600EST-0730EST 0 0 5 ? **Thunderstorm Winds**
 Two houses were set on fire by lightning. Lightning and wind caused scattered power outages. Damage to the houses was estimated to be \$75,000. One personal injury accident occurred when a vehicle encountered high water and went out of control.

**Johnson County
Greenwood** 20 1335EST 0 0 ? ? **Thunderstorm Winds**
 Trees were uprooted and power lines were blown down.

**Marion County
E side of Indianapolis** 20 1354EST 0.5 30 0 0 4 0 **Tornado (F0)
Thunderstorm Winds**
 Downburst winds caused damage on the eastern side of Indianapolis. A mini-tornado or "gustnado" within the downburst was witnessed at 27th & Mithoefer Road. The roof was blown off a house and several homes were damaged between 25th and 30th Streets along Mithoefer Road. Also, several houses and buildings were set on fire by lightning. There was also roof damage at apartments in Cumberland.

**Clinton County
Kirklin** 20 1415EST 0 0 ? ? **Hail (1.50)**

Howard County 20 1415EST-1545EST 0 0 ? ? **Flash Flooding**
 Almost 3 inches of rain fell in one and one-half hours at Indiana Heights just south of Kokomo. Many streets flooded in the city and surrounding areas in Howard County.

**Warrick County
Stevenson Station** 20 1730EST-1732EST 0.25 25 0 0 0 ? **Tornado (F0)**
 A tornado briefly touched down in a corn field.

**Jennings County
North Vernon** 20 1735EST 0 0 3 ? **Thunderstorm Winds**
 Numerous trees were blown down and several power transformers were destroyed by lightning in the eastern half of Jennings County.

**Clinton County
Frankfort** 20 1759EST 0 0 ? ? **Flash Flooding**
 Heavy rains caused flooding of city streets.

**Randolph County
Losantville** 20 1852EST 0 0 ? ? **Hail (2.75)**

**Perry County
Tell City** 20 1911EST 0 0 3 ? **Thunderstorm Winds**
 Numerous trees were uprooted and a roof was blown off a factory.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Madison County Alexandria	20	2243EST			0	0	?	?	Flooding
									Heavy rainfall of 3 to 4 inches during the previous five hours flooded roads in and around Alexandria. Most creeks in Alexandria rose to bank full.
St. Joseph County 5 S South Bend	28	1418EST			1	1	5	?	Thunderstorm Winds
									A house under construction collapsed from thunderstorm winds at Whispering Hill Subdivision on Kern Road. One worker was killed and another worker was injured. (M270)
Elkhart County Nappanee	28	1440EST			0	0	?	?	Thunderstorm Winds
Goshen	28	1442EST			0	0	?	?	Thunderstorm Winds (G50)
Benton	28	1456EST			0	0	?	?	Thunderstorm Winds
									Several large trees were blown down at Nappanee. Wind gusts to 58 mph were reported at Goshen Airport. Also, a large tree was blown onto a house at Benton.
Noble County	28	1500EST			0	0	3	0	Thunderstorm Winds
									Trees and power lines were reported down in southwestern Noble County.
LaGrange County	28	1506EST			0	0	3	0	Thunderstorm Winds
									Trees and power lines were reported down in southern LaGrange County.
St. Joseph County 5 to 10 SSW South Bend	28	1507EST			0	0	?	?	Thunderstorm Winds
									Trees and power lines were blown down at Roosevelt and Myrtle Roads near SR 23.
Kosciusko County 5 S Nappanee	28	1511EST			0	0	?	?	Thunderstorm Winds
									Trees and power lines were blown down.
Elkhart County 1 1/2 SE Goshen Benton and Fairfield	28	1548EST			0	0	?	?	Hail (0.75)
	28	1612EST			0	0	?	?	Flooding
									Streets and basements were flooded from heavy thunderstorm rains.
Jasper County 2 S Demotte	28	1627EST			0	0	?	?	Hail (1.75)
Newton County Northern Newton	28	1700EST			0	0	?	?	Hail (0.88)
Fulton County	28	1700EST			0	0	?	?	Thunderstorm Winds
									Four- to 6-inch tree limbs were blown down on a county road near Nyona Lake. Scattered power outages were also reported across the county.
Whitley County 6 N Churbusco	28	1714EST			0	0	?	?	Hail (1.00)
Noble County 6 N Columbia City	28	1725EST			0	0	?	?	Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

White County Monon	28	1733EST			0	0	?	?	Thunderstorm Winds Trees were blown down by thunderstorm winds.
Kosciusko County 4 S Syracuse	28	1737EST			0	0	?	?	Flooding State Road 13 was closed due to high water from previous heavy rains.
Allen County Fort Wayne	28	1745EST			0	0	2	0	Thunderstorm Winds Trees were blown down on the northern side of the city.
Whitley County South Whitley	28	1745EST			0	0	3	0	Thunderstorm Winds
6 E Columbia City	28	1750EST			0	0	3	0	Thunderstorm Winds Trees, up to 2.5 feet in diameter, were blown down in South Whitley and 20- to 30-inch diameter trees were blown down 6 miles east of Columbia City.
Cass County Royal Center, Logansport	28	1752EST			0	0	?	?	Thunderstorm Winds Trees, limbs, and power lines were blown down.
St. Joseph County 2 S Mishawaka	28	1800EST			0	0	?	?	Thunderstorm Winds Two and one-half-foot diameter trees were blown down at Kern and Elm Roads.
Carroll County Camden	28	1803EST			0	0	?	?	Hail (0.88)
Miami County Peru	28	1816EST			0	1	5	?	Thunderstorm Winds Numerous trees, limbs, and power lines were blown down. Falling trees and tree limbs damaged homes in Peru. A plane and hangar were damaged at the Peru Airport. Windows were blown in by winds at a few businesses in Peru. A nurse was injured by flying glass at Dukes Memorial Hospital in Peru. A circus truck and a construction trailer were blown over.
Howard County	28	1820EST			0	0	?	?	Thunderstorm Winds Trees were blown down east of the Kokomo Airport.
Huntington County Huntington	28	1830EST			0	0	4	0	Thunderstorm Winds Approximately \$5,000 in damage was done to four mobile homes when a shed blew into them on the northern side of Huntington.
Grant County	28	1840EST			0	0	2	0	Thunderstorm Winds Trees were blown down 1 mile north of State Road 18.
Clinton County Frankfort	28	1845EST			0	0	?	?	Thunderstorm Winds
Circleville	28	1906EST			0	0	?	?	Flash Flooding Trees were blown down southeast of Frankfort. Water covered roads at Circleville.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Delaware County 2-5 E Muncie	28	1910EST			0	0	?	?	Thunderstorm Winds Trees were blown down.
Blackford County Hartford City	28	1912EST			0	0	3	0	Thunderstorm Winds There was minor wind damage to eight houses and a mobile home on the southwest side of Hartford City.
Madison County Summitville	28	1917EST			0	0	4	?	Thunderstorm Winds Winds ripped the roof off a mobile home.
Randolph County Union City and Harrisville	28	1930EST			0	0	?	?	Thunderstorm Winds
Northern Randolph County	28	1945EST			0	0	?	?	Thunderstorm Winds
Wayne County Fountain City and Economy	28	1955EST			0	0	?	?	Thunderstorm Winds Numerous trees and limbs were blown down.
Jay County Redkey and Portland	28	1950EST			0	0	4	0	Thunderstorm Winds Trees and power lines were down at Redkey. A tree blew down on a van in Portland causing major damage.
Grant County	28	2003EST			0	0	3	0	Thunderstorm Winds Trees and power lines were reported down along State Road 26 in southern Grant County.
Madison County 1 N Summitville	28	2000EST			0	0	?	?	Hail (1.75)
Delaware County Gaston	28	2024EST			0	0	?	?	Hail (0.75)
Randolph County Union City and Winchester	28	2035EST			0	0	?	?	Thunderstorm Winds Numerous trees were blown down.
Madison County Alexandria	28	2035EST			0	0	?	?	Thunderstorm Winds
Elwood	28	2035EST			0	0	?	?	Hail (0.88) Trees were blown down near Alexandria.
Fayette County Connersville	28	2049EST			0	0	?	?	Hail (0.75)
Madison County Alexandria and Anderson	28	2112EST			0	0	?	?	Hail (1.75)
Henry County Middletown	28	2120EST			0	0	?	?	Hail (0.75) Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Spiceland	28	2130EST			0	0	3	?	Thunderstorm Winds
Trees and limbs were blown down. A vehicle was reported to have driven into a tree that had been blown down across a road near Spiceland.									
Franklin County 6 N Brookville	28	2122EST			0	0	?	?	Hail (1.00)
Hamilton County	28	2130EST			0	0	?	?	Thunderstorm Winds
Trees and limbs were blown down across eastern Hamilton County.									
Wayne County Richmond	28	2138EST			0	0	?	?	Flash Flooding
Two to 3 inches of rain fell in one hour causing street flooding in Richmond.									
Rush County Rushville	28	2149EST			0	0	4	?	Thunderstorm Winds
Trees were blown down and one tree fell on a police car.									
Franklin County Brookville	28	2220EST			0	0	?	?	Thunderstorm Winds
Trees were blown down just west of Brookville.									
Fayette County	28	2225EST			0	0	4	?	Thunderstorm Winds
Large trees were blown down in southern Fayette County. One tree flattened a car.									
Hancock County	28	2245EST			0	0	?	?	Thunderstorm Winds
Several trees were blown down in northern Hancock County.									
Hamilton County Fishers	28	2245EST			0	0	?	?	Hail (0.75)
Ripley County S of Batesville	28	2254EST			0	0	?	?	Thunderstorm Winds
Trees were blown down.									
Dearborn County Lawrenceburg	28	2305EST			0	0	4	?	Thunderstorm Winds
Trees, large limbs, and utility poles were downed. Some trees were down on houses.									
Hancock County Eastern Hancock County	28	2340EST			0	0	?	?	Hail (0.75)
Vigo County Northern Vigo County	29	0410EST			0	0	?	?	Thunderstorm Winds (G56)
Terre Haute	29	0412EST			0	0	?	?	Thunderstorm Winds (G50)
Parke County Bloomington	29	0410EST			0	0	?	?	Thunderstorm Winds
5 ENE Marshall	29	0410EST			0	0	?	?	Thunderstorm Winds
Clay County Brazil	29	0416EST			0	0	4	?	Thunderstorm Winds
4 S Clay City	29	0430EST			0	0	?	?	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD				KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Putnam County Greencastle, Mount Meridian and Cloverdale	29	0430EST			0	0	6	?	Thunderstorm Winds
Greencastle	29	0430EST			0	0	6	0	Lightning
Owen County Spencer	29	0500EST			0	0	5	?	Thunderstorm Winds
Morgan County Emminence, Paragon and Martinsville	29	0505EST			0	0	5	?	Thunderstorm Winds
Greene County 3 N Bloomfield and 2 NW Worthington	29	0520EST			0	0	?	?	Thunderstorm Winds
4 E Worthington	29	0530EST			0	0	?	?	Thunderstorm Winds
Solsbery	29	0535EST			0	0	2	?	Thunderstorm Winds
Johnson County Ninevah and Trafalgar	29	0528EST			0	0	?	?	Thunderstorm Winds
Southern Johnson County	29	0540EST- 0630EST			0	0	?	?	Flash Flooding
Brown County Nashville and Bean Blossom	29	0530EST			0	0	?	?	Thunderstorm Winds
Bartholomew County Columbus	29	0535EST			0	0	?	?	Thunderstorm Winds
Martin County	29	0545EST			0	0	2	?	Thunderstorm Winds

A line of strong thunderstorms moved rapidly southeast from west-central to south-central Indiana in the early morning hours. Several intense downbursts occurred downing hundreds of trees and tree limbs and damaging vehicles and buildings.

In Vigo County, an amateur radio operator reported 65 mph winds and trees down in the northern part of the county. A 58 mph gust was recorded at the Terre Haute Airport. In Clay County, at Brazil, large trees were blown down. One fell on a house and one fell across S.R. 59. Trees also blocked S.R. 157 south of Clay City. In Owen County, winds caused extensive damage in Spencer. Trees and power poles were downed and roofs were damaged. Two mobile homes and one house were severely damaged. Parts of roofs were blown off a sawmill, a sewer plant, and a Farm Bureau Co-operative. Part of a car wash was blown three blocks away. In Greene County trees and tree limbs blocked roads at S.R. 157 and 48 northwest of Worthington, just west and a few miles east of Bloomfield and county roads in eastern Green County.

The most severe downburst produced about a 10-mile-wide swath of damage from northeastern Parke County through central Putnam County to southwestern Morgan County. Trees were down near Bloomingdale and northeast of Marshall. There was extensive damage in Greencastle. Trees were uprooted and snapped off. Windows were broken and roofs were damaged. Winds caused \$100,000 damage to the Church of the Nazarene and a lightning fire completely gutted the 111-year-old Presbyterian Church causing over \$500,000 in damage. A mobile home had its roof peeled off on the east side of Greencastle. Trees and limbs were down along U.S. 40 and I-70 from Putnamville to Mount Meridian and near Cloverdale. Trees were down at Eminence. At Paragon, winds tore up sheds, downed trees, broke windows in a school and damaged barns, tractors, cars, and grain bins. A radio station in Martinsville measured 97 mph winds. Trees were down on the west side of town and a plane, hangar, and grain silos were damaged south of town.

The downburst became more diffuse as it moved southeast. There were large tree limbs down near Nashville, a large tree down near Bean Blossom, and a few trees and limbs around Trafalgar and Columbus. Only a few small limbs were down when the storms reached Jackson and Jennings counties. Trees were downed by 60 mph winds in Martin County.

The winds were followed by locally heavy rain. Over 2 inches fell in southern Johnson County, which caused flooding. Some county roads near Ninevah and Trafalgar had 4 to 5 inches of standing water.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Spencer County
Hatfield 29 0855EST 0 0 3 ? Thunderstorm Winds

School windows were blown in.

Pike County
Winslow 29 1117EST 0 0 ? ? Hail (0.75)

IOWA

Cerro Gordo County
7 N Thornton
Clear Lake to
3 E Clear Lake 02 1626CST 0 0 0 0 Funnel Cloud

02 1626CST-1635CST 3.0 35 0 0 4 3 Tornado (F1)

Winnebago County
3 1/2 NE Woden
Woden 02 1646CST 0 0 4 3 Thunderstorm Winds (G50+)

02 1655CST 0 0 0 0 Funnel Cloud

1 N Crystal Lake
to Forest City 02 1704CST-1720CST 7.0 65 0 0 5 3 Tornado (F2)

Hancock County
2 N Britt 02 1935CST 0 0 0 0 Funnel Cloud

A narrow line of thunderstorms developed ahead of an upper-air disturbance. A few of the storms became severe over north-central Iowa, and produced several funnel clouds and a few tornadoes over Cerro Gordo and Winnebago counties. One tornado occurred at Clear Lake, where several cars were blown into ditches. A second tornado touched down in an industrial area just west of Forest City, stripping metal panels from a warehouse, twisting off trees, and downing power lines. High winds also destroyed an outbuilding and barn northeast of Woden. A second area of thunderstorms formed later in the evening and produced a funnel cloud near Britt, but the storm did not become severe.

Fremont County
Hamburg 02 1825CST 0 0 4 5 Hail (1.75)

Intense thunderstorms moved into west-central and southwestern Iowa. Numerous reports of pea-to marble-size hail were received. Golf ball-size hail fell in Hamburg, along with over 1.50 inches of rain in a half hour.

Scott County 03 1620CST-1720CST 0 0 4 2 Flash Flood

Thunderstorms moved across east-central Iowa. Two inches of rain fell in one hour over much of Scott County, causing some minor flash flooding.

Howard County
4 1/2 NW Schley
to 3 NW Schley 09 1930CST-1934CST 1.5 15 0 0 3 3 Tornado (F1)

Chickasaw County
Lawler 09 1936CST 0 0 5 4 Thunderstorm Winds (G70)

Hardin County
3 W Eldora 09 2107CST 0 0 4 3 Thunderstorm Winds (G50+)

09 2130CST 0 0 4 3 Thunderstorm Winds (G50+)

Story County
Gilbert 09 2214CST 0 0 4 3 Thunderstorm Winds (G50+)

09 2235CST 0 0 4 3 Thunderstorm Winds (G50+)

Thunderstorms developed over northern and northeastern Iowa, then developed southwest into the central counties. A few became severe along the southwestern flank of the system. A tornado touched down in Howard County. It was on the ground for about a mile and a half.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K ILL D E A T H	I N J U R Y	P R O P E R T Y	C R O P S	

IOWA Cont'd

Little damage was done, as it moved across farm fields and narrowly missed several farmsteads. In Chickasaw County, high winds caused considerable damage in Lawler. Trees were downed and the roofs were taken off several buildings. High winds downed trees in Hardin and Story counties. The reason for the double report at Gilbert was because the outflow boundary outran the thunderstorm area by about 10 miles. The second gust front was with the storm itself.

Dallas County		10 1414CST							
Perry				0	0	0	0		Funnel Cloud
1 S Minburn		10 1414CST		0	0	0	0		Funnel Cloud
Polk County									
Altoona		10 1501CST		0	0	0	0		Funnel Cloud
Floyd County									
Rockford		10 1555CST		0	0	4	5		Hail (1.50)
1 N Marble Rock		10 1625CST		0	0	4	5		Hail (1.50)
Marble Rock		10 1625CST		0	0	4	3		Thunderstorm Winds (G50+)

A narrow line of thunderstorms developed from north-central into central Iowa. Funnel clouds were observed in central Iowa in Dallas and Polk counties. Hail fell in Floyd County of north-central Iowa. The hail caused extensive crop damage in an area extending from Rockford to just north of Marble Rock. Some of the hail was still on the ground three hours later. High winds downed a few trees in Marble Rock.

Shelby County		10 2015CST-							
Harlan		2026CST		0	0	3	4		Hail (1.50)

An area of thunderstorms moved across Shelby County. Large hail was reported in the Harlan area. It lasted for over ten minutes, covering the ground.

Jasper County		11 1722CST							
3 E Newton				0	0	0	0		Funnel Cloud
Adams County									
Prescott		11 1740CST		0	0	0	0		Funnel Clouds

A narrow band of showers and thunderstorms developed along a convergence zone extending from east-central, through central, into southwestern Iowa. Several funnel clouds were observed. One was in Jasper County, while three were observed in Adams County at Prescott.

Mills, Montgomery Fremont, and Page Counties		12 0600CST-							
		1000CST		0	0	4	3		Flash Flood
IAZ012-NEZ010									
Southwestern Iowa		12 1130CST-		0	0	5	3		Flooding
		14 1630CST							

Heavy warm top convection developed on the northern edge of a mesoscale convective complex. Rainfall over southwestern Iowa was in excess of 2 inches in most areas, with some 3 to 5 inch amounts. Randolph recorded the greatest official amount with 5.05 inches. Street flooding was reported in many cities. The Nishnabotna River rose 7 to 8 feet over flood stage, but flooding was mostly to agricultural low lands, as some farm levees were overtopped.

IAZ008-011-ILZ004		17 1400CST-							
East-central and Northeastern Iowa		19 2400CST		0	0	6	5		Flooding

Heavy rains fell over east-central Iowa and parts of northeastern Iowa. Rainfall was generally in the 1.50- to 3-inch range. Reports of 3 to 5 inches were received from east of Cedar Rapids, north and east to Dubuque. Flooding occurred over that area with the most extensive flooding along the Wapsipinicon River and along Duck Creek.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

Osceola County Ocheyedan	18	1900CST			0	0	5	3	Thunderstorm Winds (G57)
Dickinson County Spirit Lake	18	1910CST			0	0	5	4	Thunderstorm Winds (G57)
2 E Lake Park to Arnolds Park	18	1910CST- 1933CST	8.5	65	0	0	6	3	Tornado (F2)
Fort Dodge Point	18	1915CST			0	0	4	2	Thunderstorm Winds (G50+)
Kossuth County Fenton	18	2015CST			0	0	4	2	Thunderstorm Winds (G55)
Bancroft	18	2020CST			0	0	4	3	Thunderstorm Winds (G50+)

A line of thunderstorms developed along a cold front in northern Iowa. Over the northwestern counties, a "bow echo" developed just below the crest of a "line echo" wave pattern. Heavy rains and high winds hit the area, with winds of 60 to 65 mph at Spirit Lake. A tornado touched down east of Lake Park and traveled to the Fort Dodge Point area, near Arnolds Park. A silo was taken down and a hog house destroyed east of Lake Park. Boats and boat hoists were destroyed at Fort Dodge Point. Several power poles were snapped off there and a plate glass window was sucked out. There were numerous trees twisted off. High winds also caused some damage in Kossuth County at Fenton. Rainfall amounts in Osceola and Dickinson Counties were in the 2- to 4-inch range, with Ocheyedan picking up nearly 4 inches in about an hour. As the storms moved east, they turned from severe storms to heavy rain producers. A cell merger took place north of Mason City, with Northwood receiving 6.65 inches of rain overnight. No major flooding occurred as the heavy rainfall was very localized.

Dubuque County

Key West	19	1000CST			0	0	4	0	Lightning
Dubuque	19	1430CST			0	0	2	0	Lightning

Thunderstorms rumbled across the Dubuque area through much of the day. Lightning struck a motel in Key West, knocking out air conditioning and electrical systems. Later, a house was struck in Dubuque. Little damage was evident.

Keokuk County Webster

19	1600CST	0.1	20	0	0	4	2	Tornado (F0)
----	---------	-----	----	---	---	---	---	--------------

An isolated thunderstorm developed over Keokuk County. A small tornado touched down briefly in Webster, and trees were knocked down onto cars in a small section of town.

Clinton County 3 S Maquoketa Charlotte

19	1600CST			0	0	4	3	Thunderstorm Winds (G50+)
19	1620CST			0	0	4	3	Thunderstorm Winds (G50+)

As thunderstorms moved through Clinton County, strong outflow winds occurred. Damage was reported in the Charlotte area, and also south of Maquoketa.

Scott County Bettendorf

19	1935CST	1.0	75	0	0	5	3	Tornado (F1)
19	1935CST			0	0	4	3	Thunderstorm Winds (G50+)

A line of thunderstorms moved through east-central Iowa. High winds blew through the Bettendorf area. Numerous trees were downed in the city. Examination of the damage in Bettendorf suggests a "gustnado" moved through the city. Trees were downed in a mile-long area. There was evidence of rotation. Winds in the area were strong enough to blow open the locked door on one house.

IAZ008-011-ILZ004 East-central Iowa

20	0000CST-			0	0	6	4	Flooding
23	2200CST							

Another round of heavy rainfall hit eastern Iowa. Rainfall of 2- to 5-inches occurred during the evening of the 19th and early morning of the 20th. This rain fell on already-saturated ground, causing several rivers to rise above flood stage. Most of the flooding was to agricultural lands, as rivers only rose a few feet above flood stage.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K I L L E D	I N J U R E D	P R O P E R T Y	C R O P S	

IOWA Cont'd

Harrison County									
2 NW Little Sioux	23	2010CST			0	0	3	4	Hail (1.00)
3 N Little Sioux	23	2015CST			0	1	4	4	Thunderstorm Winds (G50+)
Monona County									
Onawa	23	2017CST			0	0	4	5	Hail (1.75)
	23	2017CST			0	0	6	5	Thunderstorm Winds (G70+)
Harrison County									
Dunlap	23	2030CST			0	0	5	4	Thunderstorm Winds (G50+)
O'Brien County									
Paullina	23	2100CST			0	0	4	4	Thunderstorm Winds (G50+)
Clay County									
Peterson	23	2145CST			0	0	3	3	Thunderstorm Winds (G50)

Thunderstorms developed over west-central into northwestern Iowa. There were numerous reports of 40 to 50 mph winds and some small hail. Golf ball-size hail fell at Onawa, with inch-diameter hail northwest of Little Sioux. Severe wind damage occurred in Onawa. Roofs were blown off a few houses, a large grain bin was blown down, and numerous windows were blown out. The damage appeared to be straight-line wind damage and not a tornado. The combination of high winds and hail driven by the winds caused about \$1,200,000 in damage. A driver was injured in Harrison County while driving on U.S. Highway 75, as a tree blown over by the high winds fell on his vehicle. High winds downed trees, barns, and outbuildings in Harrison and O'Brien counties as well. Many crops were also flattened in these areas. High winds caused damage, though minor, at Peterson in Clay County.

Clay County									
10 E Spencer	24	1445CST	0.2	20	0	0	3	3	Tornado (F0)

Thunderstorms fired up over northwestern Iowa. One cell, on the southwest edge of the area, became severe. A small tornado touched down briefly in open country east of Spencer. No significant damage was reported.

Delaware County									
Oneida	24	1800CST			0	0	0	0	Funnel Cloud
Manchester	24	1805CST			0	0	0	0	Funnel Cloud

An area of thunderstorms moved across northeastern Iowa. No reports of severe weather were received; however, two funnel clouds were observed over Delaware County.

Crawford County									
3 WSW Manilla	24	1942CST-			0	0	4	3	Tornado (F1)
1 W Manilla		1949CST	2.3	30	0	0	0	0	Funnel Cloud
Manilla	24	1950CST			0	0	0	0	Funnel Cloud

An isolated intense thunderstorm developed over west-central Iowa, and produced a tornado west of Manilla. The tornado was on the ground intermittently for a little over 2 miles before it dissipated. The track was mainly across farm fields.

Poncahontas County									
2 W Fonda	24	2015CST			0	0	4	3	Thunderstorm Winds (G50+)

A line of thunderstorms moved through northwestern Iowa. One of the storms produced high winds at Fonda, downing a barn and a few trees.

IAZ002-003-006-007									
008-010-011-ILZ004									
Northeastern third									
and part of central									
Iowa	25	0400CST-			0	0	7	6	Flooding
	31	2400CST							

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

Thunderstorms developed over northern Iowa and moved into the east-central counties. The storms developed over the same areas repeatedly, resulting in heavy rainfalls of 2 to 6 inches. The highest official rainfall report came from St. Olaf, where 7.53 inches fell between 1600 CST on the 24th and 0500 CST on the 25th. The rainfall there was torrential, with 3.82 inches falling between midnight and 0100 CST, 2.16 inches of that fell between 1230 CST and 1245 CST. Unofficially, 11 inches fell at Waukoma. Most of the rivers in northeastern Iowa flooded, as the ground was already saturated from recent rains. A near-record flood crest occurred on the Wapsipinicon River at Independence and resulted in some highway closures. Major flooding was also reported along the Turkey River. Damage along these two rivers was in the millions of dollars. Flood waters from the Turkey River flooded a fish hatchery near Elkader, sweeping away about 300,000 trout. Damage was estimated at near \$300,000. Entire towns were engulfed by the floodwaters. Flooding in central Iowa was the result of waters flowing down the Iowa River. The river crested nearly 3 feet over flood stage in Marshalltown.

Webster County 2 N Fort Dodge Airport	26	0525CST			0	0	3	4	Hail (1.00)
---	----	---------	--	--	---	---	---	---	-------------

Wright County Eagle Grove	26	0547CST			0	0	2	4	Hail (0.75)
------------------------------	----	---------	--	--	---	---	---	---	-------------

A small cluster of thunderstorms formed over west-central Iowa. One cell became severe and produced hail. One-inch-diameter hail fell north of Fort Dodge, with dime-size hail at Eagle Grove. By the time the storm moved into Clarion, only pea- to marble-size hail was observed. Winds were gusty, but were only in the 40 to 45 mph range.

Allamakee County New Albin	26	0650CST			0	0	4	3	Thunderstorm Winds (G50+)
-------------------------------	----	---------	--	--	---	---	---	---	---------------------------

A "derecho" moving across Minnesota and Wisconsin, clipped the extreme northeastern corner of Iowa, producing high winds and tree damage in New Albin.

Muscatine County 3 SE Nichols	28	2211CST			0	0	4	5	Hail (2.00)
----------------------------------	----	---------	--	--	---	---	---	---	-------------

Mahaska County 2 N Oskaloosa	28	2258CST			0	0	4	5	Hail (1.75)
---------------------------------	----	---------	--	--	---	---	---	---	-------------

Henry County Olds	28	2308CST			0	0	4	5	Hail (1.00)
----------------------	----	---------	--	--	---	---	---	---	-------------

Mahaska County Freemont	28	2326CST			0	0	5	5	Hail (4.50)
----------------------------	----	---------	--	--	---	---	---	---	-------------

Henry County 1 NE Mt. Pleasant	28	2328CST			0	0	4	5	Hail (2.00)
-----------------------------------	----	---------	--	--	---	---	---	---	-------------

Van Buren County 2 N Douds	29	0007CST			0	0	4	5	Hail (2.00)
-------------------------------	----	---------	--	--	---	---	---	---	-------------

Van Buren County 1 W Birmingham	29	0020CST			0	0	3	4	Hail (0.75)
------------------------------------	----	---------	--	--	---	---	---	---	-------------

Wapello County Ottumwa Arpt	29	0015CST			0	0	3	4	Hail (0.75)
--------------------------------	----	---------	--	--	---	---	---	---	-------------

Wapello County Downtown	29	0031CST			0	0	4	3	Hail (0.875)
----------------------------	----	---------	--	--	---	---	---	---	--------------

Wapello County 2 NE Ottumwa	29	0035CST			0	0	4	5	Hail (2.00)
--------------------------------	----	---------	--	--	---	---	---	---	-------------

Des Moines County Burlington Arpt	29	0034CST			0	0	3	4	Hail (0.75)
--------------------------------------	----	---------	--	--	---	---	---	---	-------------

Thunderstorms erupted rapidly over east-central and southeastern Iowa. The first thunderstorms developed over east-central Iowa and moved southeast. These storms were a classic case of "back development" from a mesoscale convective system in Illinois. A short time later, severe thunderstorms developed farther to the west in Wapello and Mahaska counties. The main feature with them was the large hail. Reports of dime- to golf ball-size hail were numerous. Hardest hit was southeastern Mahaska County. The hail there ranged from baseball- to softball-size. Considerable damage to both crops and property occurred at Freemont. In addition, car windows were broken out by the hail at both Freemont and in Olds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

Buchanan County 1 W Independence	29	1400CST	0.1	15	0	0	0	2	Tornado (F0)
Johnson County Iowa City Arpt	29	1500CST			0	0	4	4	Thunderstorm Winds (G58)
Marion County Pella	29	1535CST			0	0	4	3	Thunderstorm Winds (G50+)

Thunderstorms developed over northwestern Iowa, and moved into north-central and northeastern Iowa. During the heating of the afternoon, this area developed toward the south. Many of the storms were near severe levels, with 40 to 50 mph winds common. There were numerous reports of small hail. One cell became severe over Buchanan County. Two funnel clouds were observed west of Independence. One touched down briefly in a farm field. Another cell produced high winds in Pella. The winds downed trees and a few power lines there. Thunderstorms also developed over east-central Iowa. One cell produced a 67 mph wind gust at the Iowa City Airport as the thunderstorm top collapsed.

KANSAS

Ellis County Hays	10	0045CST			0	0	3	3	Thunderstorm Wind (G61)
----------------------	----	---------	--	--	---	---	---	---	-------------------------

Downburst winds from severe thunderstorms blew tree limbs down.

Sedgwick County Mount Hope	10	1600CST			0	0	3	0	Hail (0.75)
Reno County 10 N Cheney	10	1609CST			0	0	3	0	Thunderstorm Wind (G60)

Thunderstorm winds blew a camper over at Cheney State Park.

Harvey County Newton	10	1700CST			0	0	3	0	Hail (2.00)
Pawnee County Larned	10	1834CST			0	0	4	0	Thunderstorm Wind (G52)

Thunderstorm winds knocked down a few trees and tore the shingles off roofs in the Larned area.

Butler County Whitewater	10	1740CST			0	0	3	0	Hail (2.00)
Marion County Hillsboro	10	1810CST			0	0	2	0	Hail (0.75)
Russell County Russell Airport	11	0035CST			0	0	3	3	Thunderstorm Wind (G56)
Ellsworth County Ellsworth	11	0112CST			0	0	3	3	Thunderstorm Wind (G52)

A severe thunderstorm developed just west of Russell and moved east-southeast into Ellsworth County causing wind gusts to 64 mph

Pawnee County Rozel	12	0330CST			0	0	4	0	Thunderstorm Wind (G55)
------------------------	----	---------	--	--	---	---	---	---	-------------------------

Two large trees were uprooted and there was damage to homes in the area. One of the trees fell close enough to a house to knock out the window air conditioner, but did minor damage to the house.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K I L L E D	I N J U R E D	P R O P E R T Y	C R O S S E S	

KANSAS Cont'd

Greenwood County 3 NE Virgil	12	0944CST			0	0	4	0	Lightning Lightning struck a home which was completely destroyed by fire.
Barton County 2 N Great Bend	14	1530CST			0	0	3	3	Hail (1.75) A severe thunderstorm dropped hail the size of golf balls two miles north of Great Bend.
Pawnee County Larned	14	1710CST			0	0	3	0	Thunderstorm Wind (G50) Minor damage occurred to homes and trees.
Stafford County St Johns	14	1728CST			0	0	0	0	Thunderstorm Wind (G50)
Reno County 1 W Turon	14	1830CST	0.5	50	0	0	0	0	Tornado (FO)
Barton County Dry Walnut Creek	15	2010CST			0	0	4	3	Flash Flood Rainfalls greater than 5 inches occurred northwest of Great Bend causing some flooding along Dry Walnut Creek between 2010 CST and midnight.
Clark County 12 N Ashland	20	1550CST			0	0	0	0	Hail (1.00)
Ford County Dodge City Arpt	21	1543CST			0	0	0	0	Thunderstorm Wind (G64) A wind gust to 64 kts (74 mph) was measured at the National Weather Service (NWS) office.
Ford County Spearville	21	1602CST			0	0	3	0	Thunderstorm Wind (G50) A small shed and some other outbuildings were blown over.
Ford County Bellefont	21	1613CST			0	0	4	0	Thunderstorm Wind (G52) Small trees and a few small storage buildings were blown over.
Harper County 5 S Anthony	21	1700CST			0	0	4	0	Thunderstorm Wind (G60) Thunderstorm wind knocked down 14 utility poles and lines, closing Kansas Highway 179 south of Anthony.
Summer County 5 E South Haven	21	1715CST			0	0	3	0	Thunderstorm Wind (G80)
Summer County Argonia	21	1740CST			0	0	0	0	Hail (0.75)
Sumner County Conway Springs	21	1815CST			0	0	0	0	Thunderstorm Wind (G60)
Barton County 1 W Albert-	24	1730CST			0	0	3	3	Hail (1.75)
Albert	24	1740CST			0	0	4	3	Thunderstorm Wind (G60) A severe thunderstorm moved southeast across western Barton County dropping hail the size of golf balls. High winds from the storms snapped six power poles at Albert.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD	EST			KILLED	INJURED	PROPERTY	CROPS	

KENTUCKY

Garrard County	10	1415EST		0	0	4	0	Lightning	
Lightning destroyed part of a boat plant six miles northeast of Lancaster. The fire destroyed a 15,000-square-foot aluminum building and heavily damaged a smaller metal-sided structure.									
Trigg County	13	1220CST		0	1	0	0	Lightning	
A 75-year-old Cadaz woman was injured when lightning entered her residence through a smoke detector, knocking her out of a chair.									
Fayette County	21	0010EST		0	0	4	0	Thunderstorm Wind	
Strong thunderstorm winds blew a large tree on a house in Lexington. The house sustained extensive damage. No injuries were reported.									
Taylor County	21	0015EST		0	0	4	0	Thunderstorm Wind	
Strong winds ripped loose a walkway at a boat dock. The wind also turned two pontoon boats upside down and sank another in about ten feet of water.									
Casey County	21	0200EST		0	0	5	0	Lightning	
The First Christian Church in Liberty was completely destroyed after lightning struck the church steeple. Damage was estimated around \$500.00.									
Kenton County	21	1630EST		0	0	3	0	Flash Flood	
Nearly two inches of rain fell in a short period of time, flooding several homes near Fort Wright.									
Knox County	21	1706EST		0	0	3	0	Thunderstorm Wind	
Several large trees were uprooted in Stinking Creek near Walker.									
Bell County	21	1908EST		0	0	4	0	Thunderstorm Wind	
A large tree was blown down on a house, damaging the back porch.									
Knox County	21	1920EST		0	0	4	0	Thunderstorm Wind	
Strong thunderstorm winds blew down trees and power lines in Barbourville.									
Bell County	21	1945EST		0	0	4	0	Thunderstorm Wind	
Trees and power lines were blown down in Middlesboro. In addition, some minor flooding was reported in the area.									
Campbell County	28	2230EST		0	0	3	0	Thunderstorm Wind	
A tree was blown across a house in Fort Thomas.									
Kenton County	28	2237EST- 2245EST		0	0	3	0	Hail (1.00) Thunderstorm Wind	
Strong thunderstorm winds downed nearly 100 trees across the county.									
Boone County	28	2315EST		0	0	3	0	Thunderstorm Wind	
Some trees were blown down, blocking roads and cutting power to many houses.									
Kenton County	28	2330EST		0	0	4	0	Hail (1.00) Thunderstorm Wind	
Thunderstorm winds blew the roof off a house and downed many trees and power lines in Covington.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

KENTUCKY Cont'd

Boone County	28	2355EST			0	0	2	0	Thunderstorm Wind
Several large trees were blown down between Bellevue and Burlington.									
Owen County	29	0001EST			0	0	3	0	Thunderstorm Wind
Grant County	Strong thunderstorm winds downed trees and power lines across the area.								
Gallatin County	29	0635EST			0	0	4	3	Thunderstorm Wind
Strong thunderstorm winds damaged a mobile home, several barns, and destroyed several tobacco crops around Bagdad.									
Daviess County	29	0800CST- 0803CST			0	0	2	2	Hail (2.00)
Monroe County	29	1330CST			0	0	4	2	Thunderstorm Wind
High winds damaged buildings, uprooted trees, and downed power lines in Tompkinsville.									
Lyon County	29	1525CST			0	0	0	2	Hail (0.75)

LOUISIANA

Quachita Parish Monroe	21	1750CST			0	0	2	0	Thunderstorm Wind
Thunderstorm wind gusts toppled several trees and blew down large tree branches. Numerous power lines were snapped by the falling tree limbs.									
Iberia Parish New Iberia	21	1600CST	0.30	15	0	0	2	0	Tornado (F0)
A weak tornado touched down in the northwestern part of New Iberia. A fence was heavily damaged along with damage to a storage building and trees.									
St. Martin Parish Breaux Bridge	22	1830CST			0	0	6	0	Lightning
An antebellum style mansion was destroyed by fire which was ignited by a lightning strike. The mansion was valued near \$3 million.									
St. Tammany Parish Covington	26	1600CST			0	0	4	0	Thunderstorm Wind
A thunderstorm produced a micro-downburst which ripped several large branches off trees. A house was virtually destroyed when thunderstorm wind gusts toppled a large tree onto the residence.									
Rapides Parish Northern portion	30	1555CST			0	0	2	0	Thunderstorm Wind
3 SE Kolin	30	1615CST			0	0	3	0	Thunderstorm Wind
St. Tammany Parish Mandeville	30	1625CST			0	0	3	0	Thunderstorm Wind
Jefferson Parish 10 N Metairie	30	1655CST			0	0	0	0	Thunderstorm Wind (G62)
10 N Metairie	30	1710CST			0	0	0	0	Thunderstorm Wind (G50)
Tangipahoa Parish Southern portion	30	1800CST			0	0	2	0	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	COSTS	

LOUISIANA Cont'd

St. Charles Parish Eastern portion	30	1815CST			0	0	2	0	Thunderstorm Wind
Vernon Parish 8 WSW Leesville	30	1910CST			0	0	2	0	Thunderstorm Wind
Burr Ferry	30	1910CST			0	0	3	0	Thunderstorm Wind
St. Martin Parish St. Martinville	30	1925CST			0	0	2	0	Thunderstorm Wind
Vermillion Parish Intracoastal City	30	2112CST			0	0	2	0	Thunderstorm Wind (G56)
Cameron Parish Cameron	30	2252CST			0	0	4	0	Thunderstorm Wind
Grand Chenier	30	2255CST			0	0	2	0	Thunderstorm Wind

A line of severe thunderstorms developed over central and east-central Louisiana during the late afternoon and spread south and southwest during the evening. There were scattered reports of damage to trees, power lines, and storage buildings in southern Louisiana. Wind gusts between 63 and 71 mph were recorded on the Lake Pontchartrain Causeway about 10 miles north of Metairie. Wind gusts of 50 to 55 mph and marble-size hail were recorded in the greater New Orleans area as the storms moved through. At a heliport in Cameron, a helicopter was overturned by the wind gusts, and a storage building was destroyed. A mobile home also sustained heavy damage in Cameron.

MAINE

Knox County	11	2300EST			0	1	3	0	Lightning
-------------	----	---------	--	--	---	---	---	---	-----------

A Camden man was knocked off his feet by a lightning bolt at 2300 EST on the 11th. The injured man remembers seeing lightning hit a pole and hearing a tremendous sound before he was thrown. The bolt caused a power outage on Limerick and Bayview Street.

Piscataquis County	13	Day			1	0	0	0	Lightning
--------------------	----	-----	--	--	---	---	---	---	-----------

A 36-year-old Orneville man was killed when struck by lightning. The man was driving his car at his campsite on Boyd Lake in Orneville when the bolt struck him and a small tree. The tree fell on him but his death was attributed to the lightning. (M360)

Aroostook County	27	1448EST			0	0	3	0	Lightning
------------------	----	---------	--	--	---	---	---	---	-----------

Thunderstorms with heavy rain and lightning passed through Presque Isle on the afternoon of the 27th. Lightning struck a barn in the town and burned it to the ground. Tools and farm equipment were lost in the blaze.

	27	1624EST			0	0	?	0	High Winds
--	----	---------	--	--	---	---	---	---	------------

A severe thunderstorm passed through Aroostook County with 50 knot winds in Houlton.

Piscataquis County	27	1500EST			1	1	0	0	Lightning
--------------------	----	---------	--	--	---	---	---	---	-----------

A lightning bolt killed one Boy Scout and seriously injured another when they were caught in a fast-moving thunderstorm along a narrow passage atop mile-high Mount Katahdin. One 14-year-old boy was killed when a bolt of lightning struck him as he was crossing the "Knife's Edge" trail. The other 14-year-old boy suffered burns to his head, neck, and legs. The storm prevented a Maine Army National Guard helicopter from immediately reaching the two scouts, and they spent the night at a park ranger's station at Chimney Pond. (M140)

Penobscot County	27	1800EST- 1900EST			0	0	?	0	High Winds
------------------	----	---------------------	--	--	---	---	---	---	------------

A severe thunderstorm rolled through parts of central and eastern Maine. The storm downed trees and power lines in Dexter. There were a few scattered power outages but no major problems.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MARYLAND and D.C.

Anne Arundel County	13	1718EST			0	0	0	0	Thunderstorm Wind
There were wind gusts to 46 knots at Baltimore-Washington International Airport (BWI)									
Prince Georges County Forestville	13	1930EST			0	0	0	0	Thunderstorm Wind
Trees were reported downed.									
Prince Georges County Bowie	13	2015EST			0	0	3	0	Thunderstorm Wind
Trees and power lines were downed.									
Queen Annes County Kent Island	13	2045EST			0	0	2	0	Lightning
An emergency base station in the southwestern part of the county was knocked out by lightning.									
Caroline County	13	2100EST			0	0	3	0	Thunderstorm Wind Flooding
Trees and power lines were downed; roads were flooded in the northern parts of the county.									
Kent County	13	2000EST- 2100EST			0	0	2	0	Thunderstorm Wind Lightning
Trees and power lines were reported down. A house was damaged by a lightning strike.									
Wicomico County 10 SW Wenona	16	1415EST			0	0	0	0	Waterspout
A waterspout was reported by a pilot 30 miles southwest of Salisbury, in the vicinity of South Marsh Island.									
Ann Arundel County	29	1730EST			0	0	3	0	Thunderstorm Wind
Trees were uprooted, power lines were downed, and some 1,200 homes were without power.									
Prince Georges County Dunkirk	29	1745EST			0	0	0	0	Thunderstorm Wind
Strong winds downed some trees. Reports of a tornado could not be confirmed.									
Calvert County	29	1755EST- 1925EST			0	0	3	0	Thunderstorm Wind
Power lines and utility poles were reported downed, resulting in several hundred homes left powerless in rural areas.									
Carroll County Union Mills	29	1805EST			0	0	3	0	Thunderstorm Wind Lightning
Trees and power lines were downed and a house was struck by lightning. A cooperative observer at Union Mills recorded a wind gust to 60 mph.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MARYLAND and D.C. Cont'd

Baltimore County
10 SE Parkton 29 1810EST 0 0 3 0 **Thunderstorm Wind Hail (0.75)**

Trees and power lines were reported down in the northern part of the county. Winds to 56 mph and three-quarter-inch hail occurred 10 miles southeast of Parkton.

Harford County
Fallston 29 1900EST 0 0 0 0 **Thunderstorm Wind**

Trees were downed in a few places.

Cecil County
Northeast 29 1900EST 0 0 3 0 **Thunderstorm Wind**

Trees and power lines were downed at scattered locations. Winds gusted to about 60 mph.

MASSACHUSETTS

Berkshire County
Pittsfield 06 1400EST-
07 0700EST 0 0 5 0 **Flash Flood**

Five and one-half inches of rain (5.65) fell at Pittsfield between 1700 EST August 5th and 1700 EST August 6th with most of that during the afternoon of the 6th. This was reported to be the heaviest 24-hour rain in 50 years. An additional 3.14 inches fell during the night/morning of the 6th and 7th bringing the two-day total to nearly 9 inches (8.79). Severe flooding of small streams and brooks as well as urban street flooding occurred in central Berkshire County both during the late afternoon of the 6th and the morning of the 7th. A number of washouts and cave-ins occurred along roads and in culverts. Many motorists were inconvenienced by stalled vehicles and closed streets. Homeowners experienced basement flooding.

Hampden County
Springfield 06-
07 0 0 ? 0 **Heavy Rain**

Up to 4 inches of rain fell during a 36-hour period in the Springfield area with many reports of street flooding during the afternoon of the 7th.

Worcester County
Gardner-
Ashburnham 10 1408EST 1.0 10 0 0 1 0 **Tornado (F0)**

A small tornado touched down near the western shore of Lake Wampanoag in Gardner overturning a metal storage shed and downing several trees. It then skipped north-northwest to Ashburnham where it touched down in a heavily wooded section along Route 12, near the Winchendon town line, and it knocked down some trees before dissipating.

MAZ004-007
Eastern
Massachusetts 11 1408EST-
1700EST 0 0 5 0 **Heavy Rain**

A series of thunderstorms produced downpours that brought from 2 to 6 inches of rain during a six-hour period. The heaviest amounts fell along an axis extending northeast from the Rhode Island state line in the Attleboro to Bellingham area to Boston. Considerable street and basement flooding occurred throughout the area. In Bellingham, an earthen dam burst during the heavy rain sending tons of water rushing into a local neighborhood resulting in massive flooding of the basements of several homes. A five mile stretch of Route 9 between Framingham and Wellesley was closed during the afternoon due to flooding. Flooding of major highways in Boston and Cambridge was reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROD'S	

MASSACHUSETTS Cont'd

Worcester County
Upton 11 1455EST 0 0 4 0 **Lightning**
 A bolt of lightning struck a tree and then jumped to a nearby house causing a television set to explode igniting a fire which resulted in \$30,000 damage. No injuries were reported.

Berkshire County
Pittsfield 28 2145EST 0 0 3 0 **Thunderstorm Wind**
 Trees were blown down.

MICHIGAN

Washtenaw County
Huron Metro Park 11 1500EST 0 6 0 0 **Lightning**
 Six picnickers were sent to the hospital when lightning struck near them. The lightning struck in the tennis and pool area, but the people hurt were not in the pool at the time.

Washtenaw County
Ypsilanti 11 1505EST 0 0 1 0 **Lightning**
 Lightning struck an attic in an apartment and set the attic ablaze. The fire was quickly extinguished with only minor damage.

Oakland County
Oxford 13 0459EST 0 0 3 0 **Lightning**
 Lightning struck a power line, which then fell on a parked car. The car was set ablaze by the arcing power line. The fire could not be extinguished until the power was turned off. By this time, the car was totally destroyed.

MIZ027-028-029
030 Southeast-Lower 19 0000EST 0 0 5 0 **Flooding**
 Heavy rain, with as much as 3.50 inches reported in Ann Arbor, caused considerable damage by flooding basements and causing significant water damage to property and cars. The flooding rains also undermined, at least partially, some homes. About \$50,000 in damage was done.

MIZ073
Lake Superior
Near Marquette 19 1730EST 0 0 0 0 **High Wind**
 A 20-year-old student, Todd Huddleston, drowned while wading in waist-deep water near Picnic Rock. A five-foot wave pulled him under. His friend, who was near him at the time, could not save him but did manage to save himself. (M200)

Ottawa County
Grand Haven 27 0200EST 0 1 4 0 **Thunderstorm Wind (G52)**
 A four-block area in the town of Grand Haven was hit by very strong winds. Three large trees were blown down by the winds. One of the trees hit a utility pole and knocked it down; a transformer on the pole was destroyed. Several small trees were blown down. One struck Theresa Smith, 18, on the head and shoulder, but she was not seriously injured. Several cars were damaged significantly. The utility company said repairs would be very expensive.

Schoolcraft County
5 N Manistique 27 1700EST 0 0 0 0 **Hail (2.75)**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROBABLY	CROPS	

MICHIGAN Cont'd

Alpena County
Partridge Ft. 27 1740EST 0 0 3 0 **Thunderstorm Wind**

Thunderstorm winds caused a 16-foot boat to overturn. The strong winds increased the waves to around six feet which then overturned the boat about 300 yards off shore. Two men in the boat were helped to shore by local residents.

Alpena County
2 South Lachine 27 1754EST 0 0 0 0 **Hail ((0.75)**

Montmorency County
near Atlanta 27 1832EST 0 0 0 0 **Thunderstorm Wind**

Several trees were blown across the road near the town of Atlanta.

Montmorency County
Atlanta 27 1835EST 0 0 0 0 **Hail (2.00)**

Montmorency County
1 S Hillman 27 1838EST 0 0 0 0 **Hail (1.00)**

Alpena County
2 NE Hubbard Lake 27 1850EST 0 0 3 0 **Thunderstorm Wind**

Many trees and power lines were blown down between 1850 and 2015 EST as the severe thunderstorm moved through the Hubbard Lake area.

Alpena County
Near Hubbard Lake 27 1900EST 0 0 0 0 **Hail (0.75)**

Sanilac County
Marlette 27 2000EST 0 0 3 0 **Lightning**

Lightning set a barn on fire; the livestock were removed, but an old pick-up truck and 75 bales of hay were lost to the fire.

Otsego County
Gaylord 27 1915EST 0 0 0 0 **Thunderstorm Wind (G52)**

Montmorency County
2 South of Hillman

Very strong winds blew down several 50-year-old trees, demolished a farm wagon, ripped off a tin roof on a barn, and bent a silo. A mobile home, several barns, crops, trees, and a few homes also suffered considerable damage.

Montmorency County
2 South of Hillman 27 1935EST 0 0 0 0 **Hail (2.50)**

Montmorency County
Lewiston 27 1940EST 0 0 3 0 **Thunderstorm Wind**

The sheriff reported numerous trees down near the city of Lewiston.

Alcona County
Sturgeon Point 27 1955EST 0 0 0 0 **Thunderstorm Wind (G64)**

The lighthouse at Sturgeon Point reported a wind gust to 64 knots.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Oscoda County Mio	27	1956EST			0	0	0	0	Thunderstorm Wind
The sheriff reported many power lines down in central Oscoda County near the city of Mio.									
Oscoda County 2 SW Luzerne	27	2000EST			0	0	0	0	Hail (0.75)
Alcona County 2 S Harrisville	27	2000EST			0	0	0	0	Hail (0.75)
Alcona County 2 S Harrisville	27	2000EST			0	0	3	0	Thunderstorm Wind
Many large tree limbs were blown down as the severe thunderstorms passed through the area near Harrisville.									
Crawford County	27	2000EST			0	0	5	0	Thunderstorm Wind
Many trees were uprooted across the northern half of the county. A mobile home park also suffered about \$100,000 in damage as very strong winds uprooted many trees, which then fell on several mobile homes and cars. The storms began around 2000 EST and ended about an hour later.									
Crawford County 12 E Grayling	27	2007EST			0	0	0	0	Hail (1.75)
Alcona County Barton City	27	2010EST			0	0	3	0	Thunderstorm Wind
A storm spotter in Barton City reported many 6- to 8-inch-diameter trees were blown down as the severe thunderstorms moved through.									
Arenac County	27	2038EST			0	0	3	0	Thunderstorm Wind
The sheriff reported that strong winds blew a tree across a county road. Small hail was also reported with this storm.									
Huron County Bad Axe	27	2100EST			0	0	4	4	Lightning
Lightning set fire to a barn near Bad Axe. Most of the contents of the barn and the barn itself were destroyed by the fire. No animals were injured.									
Iosco County Shoreline of Lake Tawas	27	2130EST			0	0	4	0	Thunderstorm Wind
Strong thunderstorm winds uprooted several trees. One tree fell on a 1988 Olds Cutlass and a nearby home. The home had major damage.									
Sanilac County Marion Township	27	2215EST			0	0	4	0	Lightning
Lightning struck an electrical box on a mobile home. Since the house was unoccupied at the time, the structure was destroyed.									
Midland County Midland	27	2249EST			0	0	0	0	Thunderstorm Wind (G61)
Dow Chemical Company reported a wind gust to 61 knots.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Huron County Elk Township	27	2342EST			0	0	4	0	Lightning
Lightning hit a barn which quickly burned to the ground. Crop damage in the barn was unknown.									
St. Clair County	27	2342EST			0	0	3	0	Thunderstorm Wind
Many trees were reported uprooted in the suburbs of Port Huron. An area of severe thunderstorms developed over northern lower Michigan during late Monday afternoon, then moved southeast to east-central lower Michigan by about midnight. Then the storms moved over Lake Huron and weakened. The storms caused considerable damage to farms and some crops. Many trees were blown down by very strong winds, but no tornadoes were reported. Lightning from the storms, which was described as an extravaganza by many reports, caused several fires to buildings (barns and homes). Forty-three thousand customers lost electrical power during the storms.									
Chippewa County Sault Ste. Marie	28	1145EST			0	0	0	0	Hail (1.75)
Golf ball-size hail was reported by the public from 10 to 13 miles southwest of Sault Ste. Marie.									
Chippewa County 13 SW Sault Ste. Marie	28	1145EST			0	0	0	0	Thunderstorm Wind
Several trees were blown down by very strong winds.									
Chippewa County 12 SW Sault Ste. Marie	28	1155EST			0	0	0	0	Hail (1.00)
A severe thunderstorm moving southeast across eastern upper Michigan resulted in several reports of downed trees and large hail. No significant damage was reported.									
Branch County California Corners	28	1545EST			0	0	4	0	Thunderstorm Wind
Strong winds blew down two trees; these in turn severely damaged a mobile home.									
Monroe County Maybee	28	1630EST			0	0	0	4	Hail (1.00)
Large hail fell for about half an hour on a farming community just west of Maybee. Seventy-five percent of the crop was damaged or ruined. The hail fell over a three-mile area. The crops that were damaged included soybeans, cabbage, lettuce, leeks, peppers, and vine crops like squash and zucchini.									
Lenawee County near Adrian	28	1635EST			0	0	3	0	Hail (0.75)
Lenawee County near Adrian	28	1640EST			0	0	4	0	Lightning
Lightning hit both of the Madison School's transformers. This caused \$8,000 in damage to food in the kitchen and about \$20,000 damage to the transformers. No injuries were reported.									
Lenawee County	28	1645EST			0	0	3	0	Thunderstorm Wind
Many trees and power lines were down across the county.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Monroe County
2 east of Deerfield
to 4 northeast of
Dundee

28 1650EST 15.0 30 0 0 3 0 Tornado (F1)

A tornado moved northeast along a 15-mile path from extreme western Monroe County to 4 miles northeast of Dundee. The tornado touched down occasionally, but did only minor damage to trees and power lines. No injuries or deaths occurred. Total distance on the ground was estimated at seven miles.

Monroe County	28	1715EST			0	0	0	0	Hail (0.75)
Monroe County	28	1715EST			0	0	0	0	Thunderstorm Wind (G52)
Lenawee County	28	1715EST			0	0	0	0	Hail (0.75)
Lenawee County	28	1745EST			0	0	0	0	Thunderstorm Wind (G52)
Wayne County Redford	28	1745EST			0	0	0	0	Hail (1.00)
Monroe County Carleton	28	1838EST			0	0	0	0	Thunderstorm Wind

Several large trees were uprooted by very strong winds. An area of severe thunderstorms moved east-to-northeast across the southern tier of Michigan's southeastern counties during the late afternoon and evening of Tuesday. This was just one day after the northern half of lower Michigan was hammered by an area of severe thunderstorms during the late afternoon and evening hours. Damage here was not as extensive. Mostly trees, power lines, and some crops were damaged.

MINNESOTA

Pipestone County
Pipestone

01 0800EST-1300CST 0 0 4 ? Flash Flood

Torrential rains fell from early morning until early afternoon causing flooded basements, roadway underpasses, and backyards. A city sanitary sewer system was inundated with water and backed up into the basements of nine new homes. Three late-model automobiles drove into a flooded Highway 30 underpass resulting in extensive vehicular damage.

Pipestone County

01 1030CST 0 0 3 0 Lightning

Lightning struck a rooftop CB antenna and followed into the home causing damage to several appliances and telephones.

Fillmore County
3 SW Etna

02 2250EST 0 0 3 ? Lightning

Strong winds toppled a windmill, ripped sheet metal from numerous outbuildings, and overturned a corn crib. Telephone and power lines were downed and numerous large trees were uprooted.

Ottertail County
7 SE Fergus Falls

03 1525CST 0 0 0 ? Hail (0.75)

Todd County
5 W Browerville

03 1631CST 1 50 0 0 3 ? Tornado (F0)

A small tornado formed over an open field and lifted a 2,200 lb. chopper box from the field into a farmer's backyard. The tornado traveled into a nearby cemetery resulting in some tree damage.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MINNESOTA Cont'd

**Polk County
Crookston** 08 1830CST ? ? 0 0 4 ? **Tornado (F0)**

Thunderstorm winds ripped through a mobile home park overturning two trailers, uprooting trees, and snapping power poles. One trailer was demolished and the other was moved four feet off its foundation. Several other mobile homes received minor damage.

**Winona County
Minneiska** 09 1752CST 0 0 ? ? **Hail (0.75)**
Utica 09 1820CST 0 0 0 ? **Thunderstorm Wind**
**Fillmore County
Preston** 09 1840CST 0 0 ? ? **Hail (1.75)**
Harmony 09 1845CST 0 0 ? ? **Hail (2.00)**

A squall line developed along a cold front which moved through southeastern Minnesota and western Wisconsin during the late afternoon and early evening hours. Several large pine trees were blown down near Utica along with numerous reports of large hail in Winona and Fillmore counties.

**Olmstead County
Rochester** 17 1400CST 0 1 0 0 **Lightning**

Three persons sought refuge from a thunderstorm in an empty silo at the Olmsted County Fairground. Lightning struck a metal pole on the silo and traveled to its base where it was grounded. One person suffered minor burns and bruises to the feet.

**Stearns County
Cold Spring** 17 2115CST 0 0 4 0 **Lightning**

A fire was ignited in a bedroom after lightning struck a television antenna atop a home. Fire and smoke damage was estimated between \$8,000 and \$10,000.

2.5 NE Richmond 18 0200CST 0 0 5 0 **Lightning**

Fire caused by a lightning strike smoldered for nearly five hours before igniting a bedroom in an eight-unit apartment building. Heat and smoke damage was sustained to the entire building with damage estimates placed at \$200,000.

**Winona County
Fillmore County
Houston County** 18 1700CST-
2000CST 0 0 ? ? **Flash Flood**

Torrential rains from another round in an almost daily succession of thunderstorms caused flash flooding in extreme southeastern Minnesota. Water flooded streets and roads in several areas including Pickwick (Winona County), Rushford, Lanesboro, and Preston (all in Fillmore County) and La Crescent (Houston County). Rainfall amounts around 3 inches were reported with 2 of Prestons 3.30 inches falling in one hour. A warning relayed by the sheriff's office allowed a Girl Scout camp near Rushford to be excavated before the bridge and campground were flooded.

**Faribault County
Blue Earth** 24 1530CST-
1730CST 0 0 4 0 **Flash Flood**

A downpour caused by slow-moving thunderstorms dumped more than 3 inches of rain in less than two hours, flooding many roads and basements in the city of Blue Earth. Water damage was sustained to the medical center. Numerous manhole covers "popped" due to the heavy volume of water flowing through the storm sewer system. At 1600 CST the volume of water flowing through the wastewater treatment plant was reported to be "off the recording chart."

**Olmsted County
Stewartville** 25 0000CST 0 0 ? ? **Lightning**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MINNESOTA Cont'd

Lightning struck a pine tree then caused considerable damage to a house by jumping to a television antenna. All of the windows on the north side of the house were blown out, the roof damaged, and the doors on the garage knocked off. The pine tree exploded, blowing ten-foot-long chunks up to 500 feet away.

Bigstone County Clinton	25	2135CST			0	0	4	?	Thunderstorm Winds (G65)
Wilkin County Breckenridge	25	2155CST			0	0	?	?	Thunderstorm Wind
Stevens County Chokio	25	2200CST			0	0	5	0	Thunderstorm Wind
Grant County Elbow Lake									
.5 N Elbow Lake	25	2210CST			0	0	5	0	Thunderstorm Wind
1 W Barret	25	2215CST			0	0	3	0	Thunderstorm Wind
Otter Tail County 3.5 N Underwood	25	2220CST			0	0	4	0	Thunderstorm Wind
Fergus Falls									
Turtle Lake	25	2225CST			0	0	4	0	Thunderstorm Wind
Grant County Hoffman									
Ashby	25	2225CST			0	0	4	?	Thunderstorm Wind
Otter Tail County 3 W Battle Lake	25	2230CST			0	0	3	?	Thunderstorm Wind
Douglas County Evansville	25	2230CST			0	0	2	?	Thunderstorm Wind
Brandon	25	2242CST			0	0	2	?	Thunderstorm Wind
Otter Tail County .5 W Henning	25	2245CST			0	0	3	?	Thunderstorm Wind
Douglas County Alexandria									
Airport	25	2246CST			0	0	0	0	Thunderstorm Wind (G65)
Pope County Glenwood	25	2247CST			0	0	0	?	Thunderstorm Wind
Douglas County 7 N Alexandria	25	2248CST			0	0	4	0	Thunderstorm Wind
Otter Tail County Henning	25	2250CST			0	0	5	?	Thunderstorm Wind Hail
Stearns County Sauk Centre	25	2300CST			0	0	?	?	Thunderstorm Wind
Kandiyohi County 5 N Willmar	25	2305CST			0	0	2	?	Thunderstorm Wind
Spicer	25	2307CST			0	0	0	?	Thunderstorm Wind
Atwater	25	2310CST			0	0	3	?	Hail (1.75)
Todd County Bertha	25	2310CST			0	0	0	?	Hail (1.75)

A large thunderstorm complex developed over the eastern Dakotas along a stationary front and traveled west-central into central Minnesota. Storm and damage characteristics resembled those of a "bow echo/derecho" type event with widespread reports of wind damage reported across a large area. Downburst winds estimated to be from 70 to 80 mph caused heavy damage to many farmsites in rural Clinton (Bigstone County). Eighty mph winds lifted a roof from an apartment building in Chokio (Stevens County) eventually landing in an alley on a truck. The northern half of Douglas County received an estimated \$500,000 damage as a 30-mile-wide path of 50 to 80 mph winds roared across the area. Two unconfirmed reports of funnel clouds were received from the Henning area (Otter Tail County) where a number of large trees were snapped or uprooted. Several rural Henning farmsites were also affected with outbuildings damaged as a result of strong winds. As the storms plowed through the Elbow Lake Vicinity (Grant County) two barns and several large trees were blown down. The town of Elbow Lake was without power for six hours. Numerous to widespread power outages occurred across Wilkin, Otter Tail, Grant, and Douglas counties.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MINNESOTA Cont'd

Aitkin County
Malmö 26 0100CST 0 0 3 ? **Thunderstorm Wind**
 Several large trees were snapped in half and fell on the roof of a lake home.

Pine County
Pine City 26 0100CST 0 0 4 ? **Thunderstorm Wind**
 Downburst winds struck a mobile home park and blew several mobile homes from their foundations. Half of the roof was torn from one trailer. A number of small sheds were destroyed and a large tree was uprooted.

Dakota County
Hampton
Miesville 26 0330CST 0 0 3 ? **Thunderstorm Wind**
 Two barns were lifted from their foundations. Siding and windows were damaged on a garage. Fifty to 100 trees were blown down cutting power and blocking roadways in the rural Miesville area.

Randolph County
Castle Rock 26 0340CST 0 0 3 ? **Thunderstorm Wind**
 A farmstead was hit by downburst winds near Castle Rock lifting a barn from its foundation and overturning three large empty grain bins. Several outbuildings were either damaged or destroyed in both rural Castle Rock and Randolph.

Olmstead County
Rochester 26 0426CST 0 0 ? 0 **Thunderstorm Wind**
 Winds gusted to 60 mph at the Rochester Airport. Twenty-five large trees were downed in the city knocking out power to more than 9,000 customers for up to eight hours.

Winona County
Houston County 26 0520CST-0545CST 0 0 ? ? **Thunderstorm Wind**
 Fast-moving thunderstorms with apparent downburst winds raced across the southeastern corner of Minnesota. Around 100 trees were reported uprooted, broken, or down, in the Nodine/Pickwick area of Winona County. In Houston County, the storm blocked Highway 76 between the towns of Houston and Caledonia for a time. And in the La Crescent area, apple orchards were hit hard with an estimated half of the crop knocked to the ground.

Kittson County
2 N Robbin 27 0810CST 0 1 4 ? **Hail (4.50)**
Donaldson 27 0825CST 0 0 ? ? **Hail (1.75)**

Softball-size hail pelted a resort near the Red River. Extensive building and window damage was received as well as broken windows to numerous automobiles. A fisherman received minor injuries when the storm struck while he was fishing. Sugar beet crops in the area were pounded nearly flat with 1- to 3-inch-diameter holes set in the field by the large hail.

Morrison County
3 E Royalton 27 1958CST 0 0 3 ? **Hail (1.75)**
Benton County
Rice 27 2016CST 0 2 2 ? **Hail (3.00)**
Foley 27 2037CST 0 0 5 ? **Hail (3.00)**
Sherburne County
3 NW Zimmerman 27 2107CST 0 0 2 ? **Hail (4.00)**
Mille Lacs County
Princeton 27 2118CST 0 0 3 0 **Hail (1.00)**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MINNESOTA Cont'd

Thunderstorms produced hail approaching the size of softballs south of Princeton and baseball-size near Foley and Rice. Forty to 50 vehicles were damaged at a car dealership in Foley. Windows on homes were broken within Princeton. Damage to area crops was reported in the Royalton and Rice vicinity.

St. Louis County
Floodwood

31 0600CST-0900CST 0 0 ? ? **Flash Flood**

Torrential rains from 5 to 7 inches fell over extreme southern St. Louis County in a short period of time. About four miles north of Floodwood, Highway 73 was washed out. Area fields were flooded and within Floodwood, many homeowners were awakened to flooded basements and roadways.

MISSISSIPPI

Lincoln County
Ruth

01 1555CST 0 0 0 0 **Thunderstorm Wind**

Several small trees were blown down.

Lauderdale County
Meridian

02 1445CST 0 0 ? 0 **Thunderstorm Wind**

Several trees and power lines were blown down in southeastern Meridian.

Forrest County
Hattiesburg

02 1730CST 0 0 ? 0 **Thunderstorm Wind
Hail (0.80)**

Several trees were blown down.

Lee County
Tupelo

20 1800CST 0 0 3 0 **Thunderstorm Wind
Hail (1.00)**

Several trees were blown down and a large sign was blown down.

Jones County
1 SE Moselle

22 1605CST 0 0 ? 0 **Thunderstorm Wind**

Several trees were blown down.

Marion County

22 1725CST 0 0 ? 0 **Thunderstorm Wind**

Several trees were blown down in the northeastern portion of the county.

Warren County

22 1745CST 0 0 ? 0 **Thunderstorm Wind**

Several trees were blown down in the southern portion of the county.

Simpson County
8 S Mendenhall

22 1810CST 0 0 0 0 **Thunderstorm Wind**

Around ten pine trees were blown down.

Hinds County
2 W Raymond

22 1930CST 0 0 4 0 **Thunderstorm Wind**

A roof was blown off a barn. Sheet metal was blown into a car. Numerous trees were blown down.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MISSISSIPPI Cont'd

Adams County	23	1710CST			0	0	?	0	Thunderstorm Wind Several trees were blown down in eastern Adams County along Liberty road.
Clarke County Pachuta	30	1145CST			0	0	?	0	Thunderstorm Wind Numerous trees and power lines were blown down.
Wayne County 2 N Waynesboro	30	1225CST			0	0	?	?	Thunderstorm Wind Several trees were blown down.
Wayne County 16 SW Waynesboro	30	1335CST			0	0	?	0	Thunderstorm Wind Several trees were blown down.
Lamar County Lumberton	30	1600CST			0	0	0	0	Hail (0.75)
Hancock County Bay St. Louis	30	1700CST			0	0	4	0	Thunderstorm Wind The roof of a business was blown off.

MISSOURI

Warren County Wright City	03	1452CST	0.25	50	0	0	5	0	Tornado (F1) A tornado touched down briefly and destroyed one mobile home. It also produced significant damage to two other mobile homes and to the roof of a Citgo service station. The storm was probably a "gustnado" as it was at the leading edge of the storm. Several eyewitnesses saw a funnel cloud.
Dunklin County Senath	29	1615CST			0	0	0	0	Hail (0.75) Hail to three-quarter-inch diameter reported.

MONTANA

Silver Bow County Butte	08	2011MDT			0	0	4	0	Thunderstorm Wind A fence at a ball field was knocked down along with some trees.
Deer Lodge County Anaconda	08	2047CST			0	0	3	0	Thunderstorm Wind Several trees were blown down.
Silver Bow County Butte	10	1730MDT- 1915MDT			0	0	3	0	Urban Flooding One inch of rain fell causing street flooding in Rocker and Crackerville. A railroad track was partially washed out.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MONTANA Cont'd

Ravalli County 4 S Stevensville	15	1830MDT	?	?	0	0	3	0	Tornado (F0)
A tornado briefly touched down breaking several trees and destroyed some outbuildings.									
Cascade County Great Falls	18	2000MDT			0	0	2	0	Urban Flooding
Brief heavy rain caused some street flooding in east Great Falls.									
Gallatin County 4 West Bozeman	18	1500MDT			0	0	0	3	Hail (0.75)
Standing wheat was damaged by hail.									
Lewis and Clark County Helena	18	1900MDT			0	0	3	0	Urban Flooding
There was local street flooding from brief heavy rain.									
Granite County Phillipsburg	19	1600MDT- 1700MDT			0	0	5	0	Flash Flood
Over one inch of rain fell flooding the high school and several other buildings.									
MTZ006	19	1900MDT- 2200MDT			0	0	5	4	Flash Flood
One and one-half to 3 inches of rain fell across most of the zone in a short time. U.S. Highway 12 was closed for 68 miles west of Roundup. A bridge was washed out 11 miles west of Roundup. Many rural areas were flooded from rapid runoff from the thunderstorms. Water was across the highway in Judith Gap.									
Stillwater County Absarokee	20	1500MDT			0	0	0	0	Hail (1.25)
Yellowstone County Billings	20	1704MDT			0	0	3	0	Funnel Cloud Thunderstorm Wind
Minor roof damage occurred.									
Cascade County Neihart	20	1620MDT			0	0	0	0	Hail (1.00)
Monarch	20	1625MDT			0	0	0	0	Hail (1.50)
Great Falls	20	1745MDT			0	0	3	0	Urban Flooding
Over one inch of rain fell in 30 minutes in East Great Falls causing minor street flooding.									
Flathead County Lakeside	20	1700MDT			0	0	4	3	Hail (1.00)
Very heavy rain was also observed, with 1 inch in 30 minutes.									
Bigfork	20	1725MDT			0	0	4	3	Thunderstorm Wind (G57)
Many trees were knocked down.									
Kalispell	20	1728MDT			0	0	5	3	Thunderstorm Wind (G60)
Floods from heavy rains caused roof damage and downed trees.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MONTANA Cont'd

Whitefish 20 1735MDT 0 0 4 3 **Thunderstorm Wind Hail (1.00)**

Many trees were down.

Lewis and Clark County Helena 20 2304MDT 0 0 4 0 **Hail (1.25) Urban Flooding**

Nearly 0.50 inch of rain fell in 15 minutes with as much as 3 feet of water in some streets.

Sweet Grass County Big Timber 24 1930MDT 0 0 0 0 **Hail (0.75)**
Chouteau County 30 W Fort Benton 26 1900MDT 0 0 3 3 **Hail (1.25) Thunderstorm Wind**

Several farm homes received damage.

MTZ003 Choteau 30 1521MDT 0 0 0 0 **High Winds (G73)**

NEBRASKA

Sheridan County Gordon 01 2024CST 0 0 ? ? **Hail (1.00)**

Adams County Hastings 02 1415CST-1700CST 0 0 4 0 **Flash Flood**

Thunderstorms produced very heavy rain across northern Adams County. Between 2 and 5.50 inches of rain fell in less than three hours in and around Hastings. The rain flooded several houses in the Hastings area and cars were stalled in the high water. Several people had to be evacuated from the cars.

Adams County Hastings 02 1420CST 0 0 4 0 **Lightning**

Lightning struck the television antenna on a house, causing a small insulation fire in the attic. The fire damaged the electrical system.

Clay County Harvard 02 1425CST 0 0 4 0 **Lightning**

Lightning struck a church steeple. The speaker system was damaged and bulbs were blown out inside the church.

Colfax County 4 SE Howells 02 1515CST 0.1 40 0 0 4 ? **Tornado (F0)**

A small tornado touched down briefly, destroying roofs on four outbuildings, killing one hog, and uprooting trees.

Washington County 2 E Fontanelle 02 1535CST 0.2 30 0 0 5 3 **Tornado (F0)**

A tornado touched down briefly destroying a farm two miles east of Fontanelle and moved southeast. It damaged a barn and grain bins and uprooted trees.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEBRASKA Cont'd

Washington County	02	1535CST-1615CST			0	0	3	3	Flash Flood
Three to 4 inches of rain fell approximately 9 miles west of Blair. Crops were eroded, the Little Bell Creek overflowed its banks, and a number of bridges along the creek were washed out.									
Adams County 2 SE Hastings- Roseland to Ayr	02	1545CST-1630CST			0	0	4	5	Hail (1.00)
Hail up to 1 inch in diameter caused extensive damage to corn and soybean crops and damaged some car roofs.									
Washington County 7 W Herman	02	1555CST			0	0	0	0	Funnel Cloud
7.5 N Arlington- 5.5 NE Arlington	02	1555CST-1615CST	2.5	200	0	0	6	4	Tornado (F1)
A tornado touched down north of Arlington and moved southeast two and one-half miles. A farm house was heavily damaged and pushed off its foundation. Two barns, three vehicles, grain bins, power lines, and irrigation systems were damaged. Trees were snapped and uprooted and crops were flattened.									
1 N Blair	02	1620CST			0	0	3	0	Thunderstorm Wind
Wind gusts damaged outbuildings.									
Cass County 2 N Plattsmouth	02	1730CST			0	0	5	2	Thunderstorm Wind
Strong winds destroyed a mobile home, overturned and damaged a pontoon boat, damaged trailers, and downed power lines at Buccaneer Bay.									
York County 1.5 SW York	03	1800CST			0	0	0	0	Funnel Cloud
Fire personnel and state police sighted a funnel cloud.									
Chase County Champion	03	2130CST			0	0	2	3	Hail (1.75)
Marble- to golf ball-size hail fell just south of Champion and damaged approximately 500 acres of corn and beans.									
Red Willow County Indianola	08	0520CST			0	0	?	0	Lightning
Lightning struck near the telephone company office and caused a service outage for four hours.									
Thomas County 1 E Thedford	10	1845CST			0	0	4	2	Hail (2.75)
Golf ball to occasional baseball-size hail fell and damaged a motel and cars at the fairgrounds.									
Lincoln County 8 NW North Platte	10	2017CST			0	0	0	0	Hail (2.75)
The deputy sheriff reported baseball-size hail in an open field with no damage.									
Lincoln County 2 E North Platte	10	2027CST			0	0	0	0	Thunderstorm Wind (G64)
A thunderstorm produced a 74 mph gust at the National Weather Service Office at Lee Bird Field.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEBRASKA Cont'd.

**Logan,
Lincoln Counties**
8 S Stapleton -
15 S Stapleton

10	2048CST			0	0	4	5	Thunderstorm Wind Hail (1.75)
----	---------	--	--	---	---	---	---	----------------------------------

Golf ball-size hail destroyed two pivot irrigators and caused 30 to 80% loss to 8,700 acres of corn, 1,200 acres of cane for hay, 1,500 acres of alfalfa, and 11,600 acres of pastureland along the Logan-Lincoln County border. Thunderstorm winds also uprooted trees and broke branches and the irrigation systems.

Adams County
Kenesay

10	2100CST			0	0	4	3	Thunderstorm Wind (G52)
----	---------	--	--	---	---	---	---	-------------------------

Thunderstorm winds gusting to 60 mph knocked down power lines and trees. Some crop damage was also reported.

Dawson County
5 SW Lexington

10	2145CST			0	0	4	0	Thunderstorm Wind (G52)
----	---------	--	--	---	---	---	---	-------------------------

Thunderstorm winds gusting to 60 mph uprooted trees at the northern end of Johnson Lake in extreme southern Dawson County.

Custer County
Arnold

11	2135CST			0	0	3	5	Hail (1.75)
----	---------	--	--	---	---	---	---	-------------

Golf ball-size hail damaged vehicles and crops around Arnold. Three and one-tenths inches of rain fell with 2 inches in less than 30 minutes.

Lincoln County
5 W North Platte

11	2135CST			0	0	3	5	Hail (1.75)
----	---------	--	--	---	---	---	---	-------------

Golf ball-size hail fell in open country with no damage.

Nuckolls County
Superior

12	Early Morning			0	0	3	0	Lightning
----	------------------	--	--	---	---	---	---	-----------

Lightning struck a tree and stripped off the bark. The heat from the bolt melted plastic gas lines to adjacent buildings. The charge damaged electrical equipment in a nearby business.

Kimball County
Bushnell

21	1430CST			0	0	0	0	Funnel Cloud
----	---------	--	--	---	---	---	---	--------------

A funnel cloud was reported by a pilot.

Box Butte County
5 W Alliance
3.5 E Hemingford
Lancaster County
Raymond

22	1318CST	?	?	0	0	?	?	Tornado (F0)
22	1338CST			0	0	0	0	Funnel Cloud
23	1800CST			0	0	5	2	Thunderstorm Wind (G78)

Strong winds, estimated at 90 mph, ripped off a section of the Raymond High School gymnasium roof, allowing rain to pour through a hole onto the gym floor. Damage was estimated at \$75,000. The wind also broke windows and knocked out power.

Saunders County
Swedeburg

23	1822CST			0	0	3	2	Thunderstorm Wind
----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts blew down trees.

Cedar County
Randolph

23	1855CST			0	0	4	0	Hail (1.75)
----	---------	--	--	---	---	---	---	-------------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEBRASKA Cont'd

Sarpy County
Bellevue 24 0930CST 0 0 3 0 **Thunderstorm Wind**
 Gusty wind from a thunderstorm downed trees.

Antelope County
Neligh 24 1700CST 0 0 3 0 **Hail (0.75)**

NEVADA

Washoe County 03 1640CST 0 0 0 0 **Funnel Cloud**
 A funnel cloud was observed 20 miles north of Reno, just west of Pyramid Lake. It lasted five minutes.

Clark County 07 1826CST 0 0 0 0 **High Winds**
 An observer at Cal Nev Ari Airport, 70 miles south-southeast of Las Vegas, reported winds gusting to more than 65 mph that caused a dust storm with zero visibility. The wind was the result of outflow from convective activity in the area. There was no report of rain or thunder.

Clark County 09 1530PST-
 1700PST 0 0 ? 0 **Flash Flood**
 Thunderstorms in the Las Vegas area produced heavy rainfall that resulted in flash flooding in southwestern Las Vegas. At 1608 PST running and standing water was reported near West Tropicana and Buffalo Streets.

Clark County 15 2300PST-
 16 0200PST 0 0 ? 0 **Flash Flood**
 A cluster of thunderstorms over east-central Clark County produced heavy rain that resulted in flash flooding. Automatic observing stations in the area indicated 1.00 to 2.50 inches of rainfall. Roadways in the Overton and Logandale areas were flooded. Several homes in the area were evacuated.

NEW HAMPSHIRE

002-003-004-005 07 **Early Morning**
 08 **Morning** 0 1 6 0 **Flood**

A nearly stationary area of low pressure over the northeast brought heavy rains to parts of central and western New Hampshire. Rain began falling early on the morning of the 7th. Reports from cooperative observers showed that two to three inches of rain had fallen over most of the affected region with a maximum rainfall of 3.18 inches reported in Glenciff. Rain continued to fall moderately to heavily all day on the 7th prompting a flood watch to be issued at 12:40 EST. The first flood warning was issued at 1800 EST and a second warning at 1853 EST. At 1900 EST additional reports for the previous 12 hours were received. Another 4 to 5 inches of rain had fallen during the day with Bradford reporting the highest amount at 5.53 inches. One to 2 more inches of rain fell on the night of the 7th, bringing rain totals as follows: Bristol 7.65 inches, Bradford 7.10 inches, and Plymouth 7.06 inches. Minor flooding was reported in Lincoln and Woodstock from high waters on the Pemigewasset River. Some damage was reported in Newfound from blocked culverts. At Pinkham Notch a 16-year-old female hiker had to be evacuated in the heavy rain storm. Two to 3 feet of water was reported in some houses in Bristol and Sutton.

Belknap County
Carroll County
Merrimack County 10 2100EST
Grafton County 11 1400EST 0 0 6 0 **Flash Flood**
Hillsborough County

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW HAMPSHIRE Cont'd

The second flood event in a week began with heavy rain during the day of August 10th. By 1900 EST cooperative observer reports showed about 2 inches of rain had fallen in the region which was slightly farther east of the first rain event. However, areas that had received 7 inches of rain three days before still got another 3 to 4 inches of rain. As of 0700 EST on the 11th, precipitation totals for the previous 24 hours were as follows: Tamworth 5.15 inches, Franklin Falls Dam 4.58 inches, Blackwater Dam 4.23 inches, Pinkham Notch 3.67 inches, Surry Mountain Dam 3.58 inches, and Bristol 3.16 inches. Flash flood watches were issued at 1500 EST on the 10th. The first flash flood warning was issued at 2130 EST on the 10th and a later one at 1225 EST on the 11th. A flood warning was issued on the Pemigewasset River at 1800 EST on the 11th. Rain continued to fall into the evening on the 11th. An additional 1 to 2 inches of rain fell for the 24-hour period ending at 0700 EST on the 12th. Fifteen hundred campers and residents were evacuated in the North Conway area. A half-million dollars in damage was done in Merideth due to washed out roads and clogged culverts. Other towns that had washed out roads included: Bristol, Holderness, Tamworth, Madison, Berlin, Alexandria, Moultonboro, and Whittier. Evacuations occurred at Camp Ossipee, Gitchee Gumees Campground, Red Fox Village, Eastern Slope Camping Area, Glen Ellis Campground, and in the towns of Whittier, Tamworth, and Bartlett. The Winnepesaukee Railroad Company had tracks washed out near Lake Waukeewan. The governor of New Hampshire announced that he had asked for \$1.2 million in federal funds for the repair and reconstruction of public roads and property. The five counties were declared a disaster area by the federal government. The following figures include damage estimates for both flood events:

Belknap	\$194,950
Carroll	\$159,700
Coos	\$ 31,000
Grafton	\$377,667
Merrimack	\$263,875
Sullivan	\$ 18,000
Cheshire	\$ 24,000
Hillsborough	\$130,800

Coos County 13 1835EST 0 0 ? 0 **High Winds**

An elongated area of low pressure through New Hampshire formed thunderstorms in Groveton. These storms were accompanied by winds which brought down large trees and power lines in the town.

Grafton County 13 1955EST 0 0 ? 0 **High Winds**

An elongated area of low pressure triggered the development of thunderstorms with damaging winds in Littleton and Sugar Hill. The winds brought down large trees. One fell on a car.

NEW JERSEY, Northern

Warren County Belvidere	13	1845EST	0	0	?	0	Thunderstorm Wind
Sussex County Newton	13	1905EST	0	0	?	0	Thunderstorm Wind
Passaic County West Milford	13	1930EST	0	0	?	0	Thunderstorm Wind
Union County Westfield	13	1940EST	0	0	?	0	Thunderstorm Wind (G52)
Bergen County Franklin Lakes	13	1945EST	0	0	?	0	Thunderstorm Wind

A squall line moving across northern New Jersey downed numerous trees and power lines. Frequent cloud-to-ground lightning accompanying these storms also generated a few house fires in Newton and Franklin Lakes.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW JERSEY, Northern Cont'd

Morris County Lincoln Park	27	1600EST			0	0	?	0	Thunderstorm Wind
Bergen County Lyndhurst	27	1615EST-			0	0	?	0	Thunderstorm Wind
Rutherford		1617EST			0	0	?	0	Thunderstorm Wind
Passaic County Wayne	27	1630EST			0	0	?	0	Thunderstorm Wind

A squall line moving through the area downed numerous trees and power lines.

Warren County	28	2300EST-			0	0	?	0	Thunderstorm Wind
Bergen County N. Arlington		2308EST			0	0	?	0	Thunderstorm Wind
Morris County	28	2315EST			0	0	?	0	Thunderstorm Wind
Essex County Bloomfield	28	2330EST			0	0	?	0	Thunderstorm Wind
Hunterdon County Clinton French Town	28	2333EST-			0	0	?	0	Thunderstorm Wind
		2340EST			0	0	?	0	Thunderstorm Wind

A very moist and unstable tropical air mass gave rise to numerous damaging thunderstorms. The squall line formed well ahead of a cold front during the evening hours over central Pennsylvania and upstate New York, moving across sections of northern New Jersey just before midnight.

NEW JERSEY, Southern

Burlington County	10	0530EST			0	0	?	0	Flooding
Atlantic County									

Heavy rain caused urban and small stream flooding in central Burlington County and northwestern Atlantic County. About 3 inches of rain (2.95) fell at McGuire AFB, Wrightstown in Burlington County and about 4.50 inches of rain fell at Hammonton in Atlantic County. The flooding occurred between 0530 and 1030 EST.

Cumberland County Fairton	19	1800EST			0	0	3	0	Thunderstorm Wind
------------------------------	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed trees on Route 553.

Cape May County North Cape May	19	1820EST			0	0	3	0	Thunderstorm Wind
-----------------------------------	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed large tree limbs which blocked traffic.

Burlington County Beverly	27	1800EST			0	0	3	0	Thunderstorm Wind
Willingboro	27	1800EST			0	0	3	0	Thunderstorm Wind

Burlington County 3 SE Tabernacle	27	1800EST			0	0	3	0	Thunderstorm Wind (G52)
--------------------------------------	----	---------	--	--	---	---	---	---	-------------------------

Thunderstorm wind gusts estimated at 60 mph downed large tree limbs.

Salem County 0.5 S Deepwater	29	1900EST			0	0	?	0	Thunderstorm Wind (G61)
Pennsville	29	1900EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees in Pennsville and were measured at 70 mph at Dupont which is just south of Deepwater.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW JERSEY, Southern Cont'd

Atlantic County
2 NE English Creek
Buena

27	1900EST			0	0	3	0	Thunderstorm Wind
	1945EST			0	0	3	0	Thunderstorm Wind (G56)

Thunderstorm wind gusts downed utility lines in Egg Harbor Township near English Creek and trees in Buena. Wind gusts were estimated at 60 to 65 mph in Buena. The downed utility lines in Egg Harbor Township occurred between 1900 and 2000 EST.

Cumberland County
Laurel Lake

29	1940EST			0	0	3	0	Thunderstorm Wind
----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed trees.

Burlington County
Willingboro
Jacksonville

29	1945EST			0	0	3	0	Thunderstorm Wind
	1945EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed utility lines.

Ocean County
Bayville

29	2000EST			0	0	3	0	Thunderstorm Wind
----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed utility lines.

Atlantic County
Minotola

29	2005EST			0	0	3	0	Thunderstorm Wind
----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed trees.

NEW MEXICO

Santa Fe County
Santa Fe

01	1800MST			1	0	0	0	Flash Flood
----	---------	--	--	---	---	---	---	-------------

Thunderstorms and heavy rains caused the Santa Fe River to rise 6 feet. An unidentified man apparently was swept down the river and drowned. Time is approximate. (M??O)

Lea County
1-2 SE Hobbs

01	1845MST			0	0	0	0	Flash Flood
	1915MST			0	0	0	0	Hail (1.00)
	1853MST			0	0	0	0	Hail (1.00)
	1858MST			0	0	0	0	Hail (1.00)

The Civil Defense Coordinator of Lea County reported 1-inch-size hail and flash flooding just southeast of Hobbs at 1953 MST and 1858 MST.

Chaves County
5NE Roswell

04	1940MST							Funnel
----	---------	--	--	--	--	--	--	--------

The Roswell Police Department reported a funnel cloud five miles northeast of Roswell.

Colfax County
Miami
Springer

04	1430MST-			0	0	3	0	Flash Flood
	1530MST							

Roads were reported under water at Miami, Springer, and northwest of Springer. Some fences were washed away.

Colfax County
Springer

12	1330MST-			0	0	2	0	Flash Flood
	1430MST							

Roads and highways were reported flooded to the west of Springer.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW MEXICO Cont'd

**Colfax County
Miami**

12 1500MST-1700MST 0 0 2 0 **Flash Flood**

Gravel roads and highways were reported washed out south of Miami, New Mexico.

**Bernalillo County
Albuquerque**

12 1510MST 0 0 0 0 **Hail (0.75)**

Dime-size hail was reported by the public.

**Sierra County
Hillsboro**

13 1830MST-1930MST 0 0 2 0 **Flash Flood**

Heavy rains caused flooding of roads from Hillsboro south to the Luna County border along State Route 27.

**Sierra County
Truth or Consequences**

13 1825MST-1915MST 0 0 2 0 **Flash Flood**

Heavy rains caused flooding and made roads impassable between Truth or Consequences and the Caballo Reservoir.

**San Miguel County
Near Tucumcari**

13 1848MST-1945MST 0 0 2 0 **Flash Flood**

Thunderstorm heavy rains produced flash flood waters 100-foot-wide and 10- to 15-foot-deep putting gravel roads underwater and producing flash flooding in normally dry arroyos and creek beds in the Conchas Lake area which is northwest of the city of Tucumcari.

**Harding County
Wagon Mound**

14 1625MST 0.2 10 0 0 0 0 **Tornado (F0)**

There was a brief tornado touchdown between Watrous and Wagon Mound.

**San Miguel County
22 N LVS**

14 1645MST 0.2 10 0 0 0 0 **Tornado (F0)**

A brief tornado touchdown was reported 22 miles north of Las Vegas, New Mexico Airport by the flight service station.

**Eddy County
19 N Artesia**

14 2015MST 0.2 10 0 0 0 0 **Tornado (F0)**

A brief tornado touchdown 19 miles northwest of Artesia was reported by a Roswell television station.

**Sandoval County
Rio Rancho**

15 1155MST **Funnel**

The public reported a funnel cloud over Rio Rancho.

**Sante Fe County
Santa Fe**

15 1613MST **Funnel**

A funnel cloud was reported 15 miles east of Santa Fe by the flight service station in Albuquerque.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW MEXICO Cont'd

**Santa Fe County
Galisteo**

15 1614MST 0.2 10 0 0 0 0 **Tornado (F0)**

A tornado was reported 10 to 15 miles east of Galisteo by both the county sheriff's office and a pilot in the area.

**Eddy County
Carlsbad Caverns**

15 1654MST 0.2 10 0 0 0 0 **Tornado (F0)**

A park ranger reported a tornado 15 miles west of Carlsbad Caverns.

**Chaves County
Picacho**

15 1845MST-1930MST 0 0 3 0 **Flash Flood**

At Joe Skeen Ranch Road in Casey Canyon just south of Picacho on the Rio Hondo, a woman tried to drive through flood waters and got stuck. A man in a pickup tried to tow her out and the pickup was washed up against a tree. No injuries were reported.

**Chaves County
Carlsbad Caverns**

15 1815MST 0.2 10 0 0 0 0 **Tornado (F0)**

At least six people witnessed a tornado west of Carlsbad Caverns. The tornado stayed in the foothills until it dissipated.

**Gibola County
Grants**

20 1315MST 0 0 0 0 **Hail (1.00)**

Heavy rains and nickel-size hail were reported in Grants.

**San Juan County
Shiprock**

20 1445MST-1530MST 0 0 4 3 **Flash Flood**

Thunderstorm heavy rains estimated at two inches caused crop and property damage. Strong winds toppled a tree onto a van causing total loss damage to the vehicle.

**San Juan County
Waterflow-Shiprock**

20 1800MST-1930MST 0 0 3 0 **Flash Flood**

Thunderstorm heavy rains and strong winds caused roof damage and power outages. Flash flood waters produced a 5-foot wall of water sweeping away cinder blocks, couches, boulders, and a vehicle east of Waterflow. Rainfall was estimated by the public at near 3 inches in a half-hour period.

**Chaves County
Roswell**

21 1500MST 0 0 0 0 **Hail (0.75)**

Three-quarter-inch hail was reported in Roswell by the Police Department.

**Eddy County
Carlsbad**

22 1700MST 0 0 0 0 **Thunderstorm Wind (G53)**

Wind gusts to 53 knots were reported in Carlsbad by flight service station observer.

**Eddy County
Lakewood**

22 1737MST **Funnel**

The public reported a funnel cloud 2 miles north of Lakewood, New Mexico.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW MEXICO Cont'd

Bernalillo County Albuquerque	27	1800MST			0	0	2	0	Urban Flooding Lightning
----------------------------------	----	---------	--	--	---	---	---	---	-----------------------------

Thunderstorm rains of 1.50 inches and frequent cloud-to-ground lightning caused power outages to homes, radio, and television stations and caused minor urban flooding problems.

NEW YORK, Central

Orange County Bear Mountain	06-	PM			0	0	4	0	Rock Slides
	07	PM			0	0	5	0	Small Stream Flooding
New Hampton	07	0107EST			0	0	4	0	Lightning
Wallkill	07	0450EST			0	0	5	3	Small Stream Flooding
Highland Falls	07	AM			0	0	4	4	Small Stream Flooding
Rensselaer County	07	AM			0	0	3	0	Flood
Town of Nassau	07	0622EST			0	0	3	4	Flood
Eagle Bridge	07	AM			0	0	5	5	Small Stream Flooding
Columbia County	07	0255EST			0	0	3	4	Small Stream Flooding
		0512EST							
Claverack	07	0300EST			0	0	4	1	Lightning
Orange County	07	0530EST			0	0	3	0	Mud Slide
Wawayanda	07	Unknown			0	0	3	0	Mud Slide
Putnam County	07	Unknown			0	0	3	0	High Wind
Kent Cliffs	07	Unknown			0	0	3	0	
Patterson	07	Unknown			0	0	3	0	
Dutchess County	07	1137EST			0	0	3	0	
Rhinebeck	07	1137EST			0	0	3	0	

Rainfall of 3 to 5 inches fell Monday evening until Tuesday morning. By early Tuesday morning streams and creeks had swollen to just over bank full. The Hoosic River and its tributaries crested just over bank full, resulting in some minor lowland flooding. Lightning in Orange County struck a transformer, then traveled through a service wire into a home, exploded a television, and out through a service line which broke and laid on a propane tank. The bolt also continued along a third service wire to an above-ground pool. It ripped several small holes in the side, and left a furrow 6 inches deep in the lawn, until coming to the roots of a 40-foot fir tree. The roots exploded and sent mud 8 to 10 feet into the air.

Putnam County Lake Secor	07	AM			0	0	6	?	Flood
	15	PM							

Heavy rain fell on Putnam County beginning on the 7th. By the 15th almost 10 inches of rain had fallen. During this time Lake Secor rose to capacity then spilled over, flooding low-lying areas to over 10-feet deep. County administrators declared a local state of emergency to deal with the flooding. During the flood the local sewage treatment plant was inundated and raw sewage polluted the lake.

Putnam County	10	Evening			0	0	3	0	Thunderstorm Wind
---------------	----	---------	--	--	---	---	---	---	-------------------

Tree limbs and power lines were downed.

Madison County I W Cazenovia	13	1530EST			0	2	5	0	Thunderstorm Wind
Herkimer County Big Moose Lake	13	1400EST			0	0	5	4	Thunderstorm Wind
Broome County Whitney Point	13	1525EST			0	0	2	2	Thunderstorm Wind
Chenango County Smithville Flats	13	1550EST			0	0	2	2	Thunderstorm Wind
Greene	13	1625EST			0	0	4	3	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Central Cont'd

Coventry	13	1625EST			0	0	3	2	Thunderstorm Wind
Delaware County									
Walton	13	1700EST- 1730EST			0	0	2	3	Thunderstorm Wind
Downsville	13	1700EST 1730EST			0	0	2	2	Thunderstorm Wind
Saratoga County									
Greenfield Center	13	1700EST- 1730EST			0	0	3	1	Thunderstorm Wind
Corinth	13	1700EST- 1730EST			0	0	3	3	Thunderstorm Wind
Warren County									
Queensbury	13	1715EST			0	0	3	1	Thunderstorm Wind
Sullivan County									
Monticello	13	1730EST- 1800EST			0	0	3	1	Thunderstorm Wind
Rock Hill	13	1730EST- 1800EST			0	0	4	3	Thunderstorm Wind
Wurtsburo	13	1740EST			0	0	0	0	Hail (0.75)
Washington County									
Argyle	13	1805EST			0	0	2	3	Thunderstorm Wind
Ulster County									
Wallkill	13	1812EST			0	0	3	1	Thunderstorm Wind
Dutchess County									
Hyde Park	13	1815EST- 1830EST			0	0	4	2	Thunderstorm Wind
Washington County									
Ft. Edward	13	1830EST			0	0	2	3	Thunderstorm Wind
Dutchess County									
Millbrook	13	1845EST			0	0	3	3	Thunderstorm Wind
Orange County									
Warwick	13	1900EST			0	0	5	4	Downburst
Otisville	13	1930EST			0	0	5	5	Lightning
Greenwood Lake	13	1940EST			0	0	6	2	Thunderstorm Wind
Dutchess County									
Poughkeepsie	13	1945EST			0	0	4	1	Thunderstorm Wind
Putnam County									
Mahopac	13	2000EST			0	0	3	0	Thunderstorm Wind
Putnam Valley	13	2035EST			0	0	3	0	Thunderstorm Wind

Thunderstorms produced considerable damage along the Hudson Valley. Most noticeable was a downburst in the town of Warwick, which pulled large trees out by their roots, blew lawn furniture several hundred yards down the road, and took out power lines.

Greene County									
Mosquito Point	24	Unknown			0	0	?	?	Flash Flood

A flash flood washed out a temporary bridge on a tributary of the Schoharie Creek.

Orange County									
Monroe	27	1300EST			0	0	3	1	Thunderstorm Wind
Northern Portion	27	1300EST			0	0	4	1	Thunderstorm Wind

Isolated thunderstorms brought down tree limbs and power lines.

Franklin County									
Malone	28	1830EST			0	0	1	1	Hail (0.75)
Oneida County									
Rome	28	1850EST			0	0	3	0	Lightning
I NE Griffis AFB	28	1909EST			0	0	5	5	Lightning
Tioga County									
Richford	28	1910EST			0	0	3	0	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Central Cont'd

Oneida County Rome	28	1911EST			0	0	4	0	Lightning
Broome County Point Dickerson	28	1920EST- 2000EST			0	0	2	2	Thunderstorm Wind
Chenango Forks	28	1920EST- 2000EST			0	0	3	1	Thunderstorm Wind
Union	28	1920EST- 2000EST			0	0	1	1	Thunderstorm Wind
Maine	28	1920EST- 2000EST			0	0	2	1	Thunderstorm Wind
Onieda County Utica	28	1920EST			0	0	3	0	Lightning
Herkimer County Warren	28	1940EST			0	0	2	0	Straight Line Winds
German Flatts	28	1940EST			0	0	4	0	Straight Line Winds
Columbia	28	1940EST			0	0	5	0	Straight Line Winds
Litchfield	28	1940EST			0	0	0	4	Straight Line Winds
3 N Cedar Lake	28	1920EST	2.0	55	0	3	6	4	Tornado (F1)
Parkers Corns.	28	1945EST							
Cortland County Cincinnatus	28	1926EST			0	0	3	2	Thunderstorm Wind
Broome County Binghamton	28	1930EST			0	0	4	0	Lightning
Cortland County Virgil	28	1930EST- 2000EST			0	0	3	3	Thunderstorm Wind
Blodgett Mills	28	1930EST- 2000EST			0	0	3	3	Thunderstorm Wind
Madison County Chittenango	28	1940EST			0	0	4	3	Thunderstorm Wind
Tioga County Newark Valley	28	1940EST			0	0	2	1	Thunderstorm Wind
Chenango County S. Otselic	28	1945EST- 2015EST			0	0	3	2	Thunderstorm Wind
Bainbridge	28	1945EST- 2015EST			0	0	4	2	Thunderstorm Wind
Fulton County	28	2000EST			0	0	3	2	Thunderstorm Wind
Herkimer County Southern Portion	28	1930EST- 2100EST			0	0	4	0	Lightning
W of Herkimer	28	1950EST- 2010EST			0	0	4	4	Thunderstorm Wind
	28	2000EST- 2100EST			0	0	2	0	Urban Flood
Ostego County Richland Springs	28	2000EST- 2030EST			0	0	3	3	Thunderstorm Wind
Cooperstown	28	2000EST- 2030EST			0	0	3	2	Thunderstorm Wind
Cooperstown	28	2000EST			0	0	3	0	Lightning
Montgomery County St. Johnsville	28	2000EST			0	2	5	0	Thunderstorm Wind
Southern Portion	28	2000EST			0	0	5	3	Thunderstorm Wind
Delaware County Somerset Lake	28	2000EST			0	0	3	0	Lightning
Sidney	28	2005EST- 2030EST			0	0	3	2	Thunderstorm Wind
Masonville	28	2005EST- 2030EST			0	0	4	0	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Central Cont'd

Stamford	28	2005EST-2030EST			0	0	3	1	Thunderstorm Wind
Walton	28	2005EST-2030EST			0	0	2	2	Thunderstorm Wind
Colchester	28	2005EST-2030EST			0	0	2	3	Thunderstorm Wind
Delhi	28	2005EST-2030EST			0	0	3	2	Thunderstorm Wind
Andes	28	2005EST-2030EST			0	0	3	3	Thunderstorm Wind
Fishes Eddy	28	2005EST-2030EST			0	0	4	3	Thunderstorm Wind
Oneida County									
Utica	28	2005EST			0	0	3	0	Lightning
Saratoga County									
Waterford	28	2030EST			0	0	3	0	Thunderstorm Wind
Montgomery County									
Burtonsville	28	2045EST			0	0	5	4	Thunderstorm Wind
Warren County									
5 N Glens Falls	28	2045EST			0	0	3	3	Thunderstorm Wind
Schoharie County									
Cobleskill	28	2040EST			0	0	2	0	Thunderstorm Wind
Middleburg	28	2045EST			0	0	3	3	Thunderstorm Wind
Middleburg	28	2050EST			0	0	4	0	Lightning
Schenectady County									
Schenectady	28	2045EST			0	0	4	2	Thunderstorm Wind
Glenville	28	2045EST			0	0	3	0	Thunderstorm Wind
Rotterdam	28	2045EST			0	0	3	0	Thunderstorm Wind
Albany County									
4 NW Altamont	28	2030EST-2033EST	0.3	5	0	0	5	0	Tornado (F0)
3.7 NW Altamont									
Cohoes	28	2055EST			0	0	5	0	Thunderstorm Wind
Rensselaer County									
N. Greenbush	28	2058EST			0	0	3	2	Thunderstorm Wind
Sand Lake	28	2058EST			0	0	3	1	Thunderstorm Wind
Nassua	28	2058EST			0	0	2	2	Thunderstorm Wind
Schodack	28	2058EST			0	0	2	1	Thunderstorm Wind
Albany County									
Albany	28	2100EST			0	0	2	0	Thunderstorm Wind
Greene County									
Windham	28	2100EST			0	0	2	2	Thunderstorm Wind
Washington County									
Salem	28	2100EST			0	0	2	2	Thunderstorm Wind
Sullivan County									
T of Callicoon	28	2104EST			0	0	4	3	Thunderstorm Wind
V of Woodridge	28	2107EST			0	0	4	4	Thunderstorm Wind
Fallsburg	28	2110EST			0	1	4	0	Thunderstorm Wind
Loch Sheldrake	28	2112EST			0	0	3	0	Lightning
Loch Sheldrake	28	2112EST			0	0	3	0	Thunderstorm Wind
Rockhill	28	2115EST			0	0	5	0	Lightning
Jeffersonville	28	2115EST			0	0	3	1	Thunderstorm Wind
Neversink	28	2125EST			0	0	4	2	Thunderstorm Wind
Rensselaer County									
Pittstown	28	2130EST			0	0	4	0	Thunderstorm Wind
Greene County									
Coxsackie	28	2130EST			0	0	4	3	Thunderstorm Wind
Athens	28	2145EST			0	0	4	0	Thunderstorm Wind
Catskill	28	2145EST-2150EST			0	0	0	0	Funnel Cloud
Catskill	28	2145EST			0	0	2	2	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Central Cont'd

Columbia County	28	2152EST			0	0	3	0	Thunderstorm Wind
Orange County	28	2238EST			0	0	5	3	Thunderstorm Wind
Middletown	28	2248EST			0	0	3	0	Lightning

A strong cold front moved across eastern New York. These thunderstorms had a history of tornadic development prior to entering eastern New York. Two tornados were reported by the public in the Mohawk River Valley. Vivid lightning which included: cloud-to-cloud, cloud-to-ground, and cloud-to-open-air was visible in all areas. Winds brought down trees, large tree limbs, and power lines in many communities.

NEW YORK, Coastal

Westchester County	07	0355EST			0	0	?	0	Flood
--------------------	----	---------	--	--	---	---	---	---	-------

Showers and thunderstorms during the overnight period dumped 1.50 to 2.50 inches of rain across southeastern New York. This was enough to push the Saw Mill and Hutchinson Rivers over their banks and flood their adjacent parkways. The culprit for this wet weather was a slow-moving cold front moving eastward into a very tropical air mass covering the tri-state region.

Westchester County	10	0755EST			0	0	?	0	Flood
--------------------	----	---------	--	--	---	---	---	---	-------

Localized early morning rains of over 2 inches in Westchester County added to the rains of previous days, causing considerable flooding along the Saw Mill River.

Richmond County Midland Beach New Dorp Grant City	10	1445EST- 1515EST	2	15	0	3	?	0	Tornado (F0)
--	----	---------------------	---	----	---	---	---	---	--------------

A tornado born of a waterspout swirling over lower New York Bay spun ashore in southeastern Staten Island. The skipping tornado moved ashore at Midland Beach, near Miller Field. It moved across New Dorp before entering Grant City. A one-block residential stretch of Fremont Avenue from Edison Street to Clawson Street suffered the brunt of the twister's damage. Fortunately, only three minor injuries were reported. One eyewitness said, "It was just like the one in the Wizard of Oz."

Westchester County	10	2000EST			0	0	?	0	Flood
--------------------	----	---------	--	--	---	---	---	---	-------

For the second time in the same day the Saw Mill River as well as the Hutchinson River overflowed their banks. The Saw Mill had receded back within its banks but more heavy showers and thunderstorms quickly presented more flooding along that river. There were many reports of people stranded on the adjacent parkways of both these rivers, standing on their stalled cars.

Rockland County West Nyack	10	2100EST			0	0	?	0	Flood
-------------------------------	----	---------	--	--	---	---	---	---	-------

Heavy rains of 1 to 2 inches in a period of only six hours pushed the Hackensack River at West Nyack over its bank.

Rockland County West Nyack	11	1900EST			0	0	?	0	Flood
-------------------------------	----	---------	--	--	---	---	---	---	-------

A stalled low pressure trough along the coast continued to generate heavy rains across the region. An additional 1.50 to 2.00 inches pushed the Hackensack River at West Nyack over its bank for the second time within 24 hours.

Rockland County Spring Valley	13	2005EST			0	0	?	0	Thunderstorm Wind
----------------------------------	----	---------	--	--	---	---	---	---	-------------------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Coastal Cont'd

**Westchester County
Peekskill** 13 2010EST 0 0 ? 0 **Thunderstorm Wind**

A squall line swept through southeastern New York downing numerous trees and power lines across Rockland and Westchester counties.

Nassau and Suffolk Counties 24 Morning 0 2 4 0 **Flood**

A disturbance moving northeastward along a trough of low pressure just offshore deluged parts of Long Island with 5 to nearly 7 inches of rain. Islip received the highest amount coming in at 6.83 inches. The heavy rains caused extensive flooding throughout Nassau and Suffolk counties. All major highways in the area experienced flooding and portions of many of these had to be closed. In Sayville, where the flooding was severe, a father and his son were sucked through a drain pipe after removing the pipe's cap to drain off the standing water.

Rockland County 27 1400EST 0 0 ? 0 **Thunderstorm Wind**
**Queens County
LaGuardia Airport** 27 1426EST 0 0 0 0 **Thunderstorm Wind (G53)**
**Queens County
Hollis** 27 1445EST 0 0 ? 0 **Thunderstorm Wind**
Kings County 27 1517EST 0 0 ? 0 **Thunderstorm Wind**
**Kings County
Gravesend Bay** 27 1517EST 0 3 0 0 **Lightning**
Nassau County 27 1530EST 0 12 ? 0 **Thunderstorm Wind**

A squall line developed during the afternoon hours. Thunderstorms produced damaging winds, torrential rains, and dangerous cloud-to-ground lightning. Winds overturned some boats just south of the beaches of Nassau County injuring 12 people. Elsewhere three people were injured by lightning strikes in Gravesend Bay.

**Bronx County
Pelham** 28 2326EST 0 0 ? 0 **Thunderstorm Wind**
**Westchester County
Yorktown** 28 2330EST 0 0 ? 0 **Thunderstorm Wind**
**Nassau County
Glen Cove** 28 2335EST 0 0 ? 0 **Thunderstorm Wind**
**Rockland County
West Nyack** 28 2337EST 0 0 ? 0 **Thunderstorm Wind**
Kings County 29 0000EST 0 0 ? 0 **Thunderstorm Wind**
Richmond County 29 0000EST 0 0 ? 0 **Thunderstorm Wind**
Suffolk County 29 0015EST 0 0 ? 0 **Thunderstorm Wind**

A very moist and unstable tropical air mass gave rise to numerous damaging thunderstorms. The squall line formed well ahead of a cold front during the evening hours over central Pennsylvania and upstate New York, moving through coastal sections of southeastern New York around midnight. These thunderstorms downed many trees and power lines as they swept through the area.

Richmond County 29 1845EST 0 0 ? 0 **Thunderstorm Wind**

An isolated thunderstorm moved across Staten Island during the evening hours downing a few trees. One of these trees damaged a roof and a car.

NEW YORK, Western

**Chemung County
Elmira** 13 1450EST 0 0 3 0 **Thunderstorm Wind**
**Tompkins County
Ithaca** 13 1515EST 0 0 3 0 **Thunderstorm Wind**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Western Cont'd

Cayuga Lake	13	1515EST			0	0	4	0	Thunderstorm Wind
-------------	----	---------	--	--	---	---	---	---	-------------------

Afternoon thunderstorms developed in moist, unstable air ahead of a cold front. The thunderstorm winds downed trees and limbs. Downed power lines caused scattered power outages across the area. On Cayuga Lake, boats were capsized by the strong winds.

Chautauqua County									
Sherman	28	0025EST			0	0	3	0	Thunderstorm Wind
Fredonia	28	0025EST			0	0	4	0	Thunderstorm Wind
Chautauqua	28	0025EST			0	0	4	0	Thunderstorm Wind
Mayville	28	0025EST			0	0	3	0	Thunderstorm Wind

Niagara County									
Niagara	28	0030EST			0	0	3	0	Thunderstorm Wind
Chautauqua County									
Magnolia	28	0035EST			0	0	3	0	Thunderstorm Wind
Bemus Point	28	0040EST			0	0	4	0	Thunderstorm Wind

Erie County									
Amherst	28	0030EST			0	0	3	0	Thunderstorm Wind
Chautauqua County									
Ashville	28	0055EST			0	0	3	0	Thunderstorm Wind
Busti	28	0055EST			0	0	3	0	Thunderstorm Wind

Cattaraugus County									
South Dayton	28	0100EST			0	0	4	3	Thunderstorm Wind
Leon	28	0100EST			0	0	4	0	Thunderstorm Wind
West Valley	28	0105EST			0	0	3	0	Thunderstorm Wind
East Randolph	28	0110EST			0	0	3	0	Thunderstorm Wind
Cattaraugus	28	0110EST			0	0	3	0	Thunderstorm Wind
Salamanca	28	0110EST			0	0	3	0	Thunderstorm Wind
Orleans County									
Medina	28	0115EST			0	0	4	0	Thunderstorm Wind

Allegany County									
Rushford	28	0145EST			0	0	3	0	Thunderstorm Wind

Thunderstorms roared across portions of western New York during the early morning hours. The strong winds, estimated to 75 mph, downed numerous trees and limbs, some with 2 to 3 foot diameters. The winds and falling trees downed power lines and widespread power outages were reported leaving over 13,000 customers without power. There were numerous reports of damage to homes and automobiles caused by falling trees. On Chautauqua Lake, the storm ripped out docks and overturned boats. In South Dayton, crops were knocked flat to the ground by the heavy rain and strong winds.

Yates County									
Himrod	28	1700EST			0	0	2	0	Hail (0.75)
Erie County									
Hamburg	28	1715EST			0	0	3	0	Thunderstorm Wind
Colden	28	1715EST			0	0	3	0	Thunderstorm Wind
Yates County									
Penn Yan	28	1720EST			0	0	3	0	Thunderstorm Wind
Chautauqua County									
Barcelona	28	1725EST			0	0	3	0	Thunderstorm Wind
Yates County									
Dundee	28	1750EST			0	0	3	0	Thunderstorm Wind
Chautauqua County									
Ross Mills	28	1750EST	4	100	0	0	5	0	Tornado (F0)
Seneca County									
Lodi	28	1755EST			0	0	4	0	Thunderstorm Wind
Covert	28	1800EST			0	0	4	0	Thunderstorm Wind
Covert	28	1800EST			0	0	3	0	Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Western Cont'd

Chautauqua County									
Ripley	28	1800EST			0	0	4	0	Thunderstorm Wind
Ashville	28	1800EST			0	0	4	0	Thunderstorm Wind
Westfield	28	1800EST			0	0	3	0	Thunderstorm Wind
Cattaraugus County									
Olean	28	1815EST			0	0	3	0	Thunderstorm Wind
Ellicottville	28	1815EST			0	0	4	0	Thunderstorm Wind
Allegany St. Park	28	1815EST	0.5	60	0	2	4	0	Tornado (F0)
Peth	28	1815EST			0	0	4	0	Thunderstorm Wind
Onondaga County									
Liverpool	28	1820EST			0	0	2	0	Hail (0.75)
Schuyler County									
Hector	28	1820EST	2.5	100	0	0	5	0	Tornado (F2)
Tompkins County									
Trumansburg	28	1825EST			0	0	4	0	Thunderstorm Wind
Steuben County									
Hornell	28	1830EST			0	0	3	0	Thunderstorm Wind
Oswego County									
Oswego	28	1830EST			0	0	3	0	Thunderstorm Wind (G50)
Schuyler County									
Mecklenburg	28	1837EST			0	0	5	0	Thunderstorm Wind
Onondaga County									
Cicero	28	1840EST			0	0	4	0	Thunderstorm Wind
Tompkins County									
Enfield	28	1842EST			0	0	4	0	Thunderstorm Wind
Allegany County									
Ceres	28	1845EST			0	0	4	0	Thunderstorm Wind
Angelica	28	1845EST			0	0	4	0	Thunderstorm Wind
Little Genesee	28	1850EST			0	0	4	0	Thunderstorm Wind
Tompkins County									
Ithaca	28	1850EST			0	0	5	0	Thunderstorm Wind
Dryden	28	1855EST			0	0	4	0	Thunderstorm Wind
Danby	28	1855EST			0	0	4	0	Thunderstorm Wind
Caroline	28	1855EST			0	0	4	0	Thunderstorm Wind
Onondaga County									
Syracuse	28	1901EST	0.25	35	0	0	4	0	Tornado (F0)
Steuben County									
Woodhull	28	1945EST			0	0	4	0	Thunderstorm Wind
Lindley	28	1945EST			0	0	3	0	Thunderstorm Wind
Painted Post	28	1945EST			0	0	4	0	Thunderstorm Wind

Severe thunderstorms and tornadoes developed in moist, unstable air ahead of a cold front. The strong thunderstorm wind downed numerous trees and power lines. Power outages were widespread in some areas.

The first tornado occurred in Chautauqua County. Damage was intermittent along an 8-mile-path. The tornado first touched down near Ross Mills where a barn was destroyed. Two horses in the barn were killed. Further east, the tornado destroyed a small shed and peeled portions of an aluminum roof off a tractor storage building. The tornado continued east and the final damage occurred near Kennedy where a mobile home was overturned.

The second tornado touched down at Allegany State Park in the southwestern corner of Cattaraugus County. Damage occurred intermittently along a 3-mile stretch. Because the tornado occurred in a state park most damage was to trees; however, one RV camper was smashed and another moved 100- to 200-feet and overturned. A restroom building also sustained damage as shingles were torn off the roof. Two persons sustained minor injuries at the camp site in Cain Hollow.

A third tornado occurred in the town of Hector in Schuyler County. The tornado first touched down and demolished two barns as well as downing numerous trees and power lines. Skipping further east, touchdown occurred again moving two trailers off their foundations and damaging the roofs of two houses. The final touchdown occurred near Mecklenburg where the second story and roof of a building were removed. The roof and steel supports were deposited 50 to 100 yards away.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW YORK, Western Cont'd

A tornado touched down in Onondaga County. The first touchdown was in the village of Lakeland where portions of three roofs were lifted off. The tornado then skipped to the New York State Fairgrounds where the State Fair was taking place. Portions of two roofs were torn off horse barns, a brick wall collapsed, and straw was imbedded and packed into the lamps of two streetlights. The storm also damaged parked cars and knocked down a handful of businesses along the midway. A final touchdown occurred in the city of Syracuse at Schiller Park where trees were uprooted and one house was damaged. Total path length was 6 miles though the tornado was on the ground about 20% of the time.

NORTH CAROLINA

Dare County Stumpy Point	09	1340EST			0	0	0	0	Waterspout
Pasquotank County Near Wade Point	09	1340EST			0	0	0	0	Waterspout
Johnston County Northern	09	1600EST			0	0	0	0	Flash Flood

Waterspouts were sighted off of Stumpy Point in the Pamlico Sound and off of Wade Point in the Albemarle Sound. Heavy thunderstorm rains produced flash flooding in northern Johnston County. Many major and secondary roads were flooded. Some bridges were damaged.

Carteret County Core Sound	10	1648EST			0	0	0	0	Waterspout
Carteret County near South River	10	1650EST			0	0	0	0	Waterspout
Onslow County Sneed's Ferry	10	2056EST			0	0	0	0	Funnel Cloud

A waterspout was sighted in Core Sound. Two were sighted in the Pamlico Sound near the South River. A funnel cloud was sighted by law enforcement officers at Sneed's Ferry.

Brunswick County 16 S Long Beach	11	0712EST			0	0	0	0	Waterspout
-------------------------------------	----	---------	--	--	---	---	---	---	------------

A waterspout was sighted in the coastal waters 16 miles south of Long Beach.

Hyde County Near Ocracoke Inlet	13	1257EST			0	0	0	0	Waterspout
Cartaret County 10 SSE Drum Inlet	13	1300EST			0	0	0	0	Waterspout

Waterspouts were sighted in the coastal waters near Ocracoke Inlet and 10 miles south of Drum Inlet.

Tyrrell County Columbia	14	1459EST			0	0	0	0	Funnel Cloud
Mecklenburg County Charlotte	14	1700EST			0	0	4	0	Thunderstorm Wind
Mecklenburg County Charlotte	14	1715EST			0	0	0	0	Thunderstorm Wind
Wayne County 7 NW Goldsboro	14	1825EST			0	0	4	0	Thunderstorm Wind

Isolated thunderstorms blew down trees and power lines over many areas of Charlotte and Mecklenburg County. Some homes were damaged by falling trees. In Johnston County falling trees destroyed a mobile home. A funnel cloud was sighted in Columbia.

Mecklenburg County Charlotte	15	1606EST			0	0	5	0	Hail (1.25) Lightning
---------------------------------	----	---------	--	--	---	---	---	---	--------------------------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NORTH CAROLINA Cont'd

Union County Marvin	15	1658EST			0	0	0	0	Thunderstorm Wind
Pitt County Western	15	2230EST			0	0	5	0	Flash Flood

Five houses in the Charlotte area were damaged by fire after being struck by lightning. Half-dollar-size hail also fell in Charlotte. Thunderstorm winds blew down trees and power lines in Marvin in Union County. A large isolated slow-moving cluster of thunderstorms produced heavy rains and flooding of many roads and bridges in western Pitt County.

Alamance County Snow Camp	16	1200EST			0	0	0	0	Hail (1.00)
Dare County Near Manteo	16	1215EST			0	0	0	0	Waterspout
Rockingham County Reidsville	16	1234EST			0	0	5	0	Lightning
Chatham County Moncure	16	1331EST			0	0	0	0	Hail (0.75)
Moore County Vass	16	1445EST			0	0	0	0	Hail (0.75)
Onslow County Belgrade	16	1700EST			0	0	3	0	Thunderstorm Wind
Wake County Southern	16	1840EST			0	0	0	0	Thunderstorm Wind
Wake County Raleigh	16	1900EST			0	0	0	0	Flash Flood
Orange County Chapel Hill	16	2010EST			0	0	0	0	Flash Flood

Severe thunderstorms over the piedmont produced nickel- to quarter-size hail in Alamance, Chatham, and Moore counties. Fire destroyed a house struck by lightning in Reidsville. Trees were blown down and a mobile home was damaged in Wake County. Heavy rain produced flash flooding in Chapel Hill. Five buildings were flooded in town. In the eastern part of the state, waterspouts were sighted near Manteo. A large equipment shed was destroyed by thunderstorm winds in Belgrade.

Onslow County 17 E Topsail Beach	17	1352EST			0	0	0	0	Waterspout
--	----	---------	--	--	---	---	---	---	------------

A waterspout was sighted 17 miles east of Topsail Beach.

Brunswick County 18 S Cape Fear River Inlet	18	0851EST			0	0	0	0	Waterspout
---	----	---------	--	--	---	---	---	---	------------

Three waterspouts were sighted by commercial fishermen 18 miles south of Cape Fear River Inlet.

New Hanover County 9 E Carolina Beach	20	0725EST			0	0	0	0	Waterspout
Mecklenburg County Charlotte	20	1613EST			0	1	0	0	Thunderstorm Wind (G67)
Lenior County 4 S Kinston	20	1745EST			0	0	0	0	Thunderstorm Wind

A waterspout was sighted 9 miles east of Carolina Beach. Two trees were blown on top of a house near Kinston. Thunderstorm winds of 67 mph were reported at Charlotte-Douglas International Airport. Three aircraft were overturned injuring one person. Two of the aircraft were destroyed.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NORTH CAROLINA Cont'd

McDowell County Northern	21	1400EST			0	0	0	0	Hail (0.75) Thunderstorm Wind
Cherokee County Cherokee	21	1420EST			0	0	4	0	Thunderstorm Wind
Burke County	21	1423EST			0	0	0	0	Thunderstorm Wind Hail (0.75)
Buncombe County Asheville Airport	21	1425EST			0	0	0	0	Hail (0.75)
Henderson County Hendersonville	21	1430EST			0	0	0	6	Hail (0.75)
Rutherford County	21	1430EST			0	0	0	0	Lightning
Polk County E of Columbus	21	1515EST			0	0	0	0	Thunderstorm Wind
Moore County Aberdeen	21	1530EST			0	0	5	0	Lightning
Gaston County Dallas	21	1602EST			0	1	0	0	Thunderstorm Wind
Gaston County Cherryville	21	1640EST			0	0	0	0	Thunderstorm Wind

In western North Carolina widespread severe thunderstorms produced large hail, damaging winds, and lightning. Wind damage was limited mostly to downed trees and power lines except in Dallas where trees fell on a mobile home injuring one person. Trees also fell on buildings and cars in Cherokee. Damage estimates were near \$42,000. Hail damage to vegetable crops in Henderson County was near \$1 million. Several houses in Rutherford County were damaged by fire after being struck by lightning.

Currituck County	24	1035EST			0	0	0	0	Waterspout
Cartaret County Near Cape Lookout	24	1113EST			0	0	0	0	Waterspout
Hyde County Near Ocracoke Village	24	1350EST			0	0	0	0	Waterspout

Waterspouts were spotted in Currituck Sound and in the Currituck County coastal waters. Waterspouts were sighted in the coastal waters near Cape Lookout and near Ocracoke Village.

McDowell County Old Fort	25	0400EST			0	0	0	0	Flash Flood
-----------------------------	----	---------	--	--	---	---	---	---	-------------

Heavy rains produced flash flooding in McDowell County. Five houses were flooded and three were damaged by mud slides. Numerous roads were flooded and two briges were washed out.

New Hanover County Off Carolina Beach	25	0945EST			0	0	0	0	Waterspout
Dare County Off Buxton and Avon	25	1050EST			0	0	0	0	Waterspout
Craven County New Bern	25	1421EST			0	0	0	0	Thunderstorm Wind (G61)

Waterspouts were sighted in the coastal waters off Carolina Beach and near Buxton and Avon. Strong thunderstorm winds were recorded at the Simmons Nott Airport in New Bern.

Rockingham County Southwest	29	1345EST			0	0	0	0	Hail (1.75)
Guilford County Southwest	29	1400EST			0	0	5	0	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NORTH CAROLINA Cont'd

Nash County									
Castalia									
Middlesex	29	1410EST			0	0	0	0	Thunderstorm Wind
Wake County									
Cary	29	1520EST			0	0	0	0	Hail (0.75)
Wake County									
North Raleigh	29	1535EST			0	0	0	0	Hail (0.75)
Franklin County									
Rocky Ford	29	1548EST			0	0	0	0	Thunderstorm Wind
Halifax County									
Enfield	29	1620EST			0	0	0	0	Thunderstorm Wind
Wilson County									
Elm City	29	1621EST			0	0	0	0	Thunderstorm Wind
Edgecombe County									
Rocky Mount	29	1632EST			0	0	0	0	Thunderstorm Wind
Wilson County									
Wilson	29	1640EST			0	0	0	0	Thunderstorm Wind
Johnston County									
Four Oaks	29	1700EST			1	0	0	0	Lightning
Johnston County									
Smithfield	29	1725EST			0	0	0	0	Hail (1.00)
Wilson County									
Northwest	29	1737EST			0	0	0	0	Thunderstorm Wind
Johnston County									
Clayton	29	1843EST			0	0	0	0	Hail (0.75)
Wayne County									
Mount Olive	29	2025EST			0	0	0	0	Thunderstorm Wind
Bladen County									
Bladenboro	29	2230EST			0	0	0	0	Hail (0.75)

The 29th was the most active severe weather day of the month. Severe thunderstorms produced widespread hail and wind damage over central and eastern parts of the state. Hail size was generally less than an inch except for golf ball-size reported in southwestern Rockingham County. Wind damage was to trees and power lines except in southwestern Guilford County where a large barn and a covered pavilion at a recreational park were destroyed. Damage estimates were near \$300,000. The roof was blown off a store building in White Oak in Halifax County. A 38-year-old man was killed by lightning in his front yard in Four Oaks in Johnston County. Lightning (M380)

Bertie County									
Republican	29	1725EST			0	0	0	0	Thunderstorm Wind
Currituck County									
Elizabeth City	29	1845EST			0	0	0	0	Thunderstorm Wind (G52)
Dare County									
Kitty Hawk Bay	29	1947EST			0	0	0	0	Waterspout
Robeson County									
Maxton	29	1955EST			0	0	0	0	Thunderstorm Wind
Robeson County									
Rowland	29	1955EST			0	0	0	0	Thunderstorm Wind
Robeson County									
Parkton	29	2000EST			0	0	0	0	Thunderstorm Wind
Bladen County									
Bladenboro	29	2313EST			0	0	0	0	Hail (1.00)
Bladen County									
Elizabethtown	29	2325EST			0	0	0	0	Hail (0.75)
Pender County									
Penderlea	29	2355EST			0	0	0	0	Hail (0.75)

In the eastern part of the state a waterspout was reported in Kitty Hawk Bay. Thunderstorm winds blew down trees and power lines near Republican in Bertie County and over much of Robeson County. Nickel- to quarter-size hail fell in Pender and Bladen counties.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NORTH CAROLINA Cont'd

**New Hanover
Wilmington** 30 1645EST 0 5 0 0 **Lightning**
A single stroke of lightning injured five workers at the port facility in Wilmington.

**Dare County
Near Avon** 31 1415EST 0 0 0 0 **Waterspout**
Waterspouts were sighted in the sound and the coastal waters near Avon.

NORTH DAKOTA

**Ramsey County
Devils Lake
5 NE Devils
Lake** 01 1755CST 0 0 4 4 **Thunderstorm Wind (G63)**
01 1800CST 0 0 4 4 **Thunderstorm Wind**

A five-minute burst of wind occurred in the city of Devils Lake, with one wind gust to 72 mph. The wind broke trees in the city, blew down barns, and damaged crops in outlying areas.

**Griggs County
2 NW
Cooperstown** 01 1850CST **50 8 0 0 3 0 **Tornado (F0)**
A tornado blew apart a pole barn and wrapped the metal around tree tops.

**Steele County
10 NE
Cooperstown** 01 1920CST 0 0 4 4 **Hail (1.00)**
**Mercer County
Golden Valley** 02 2000CST 0 0 4 0 **Thunderstorm Wind**
Winds threw a grain bin 60 yards and damaged other farm buildings.

**Ward County
Kenmare** 13 1525CST 0 0 0 0 **Thunderstorm Wind (G56)**
Donnybrook 13 1545CST 0 0 0 0 **Thunderstorm Wind (G50)**
**Renville County
5 NW Carpio** 13 1550CST 0 0 0 0 **Thunderstorm Wind (G50)**
**Bottineau County
Kramer** 22 1805CST 0 0 4 4 **Hail (1.00)**
**McHenry County
4 E Granville** 22 2050CST 0 0 4 4 **Hail (1.75)**
Bantry 22 2120CST 0 0 0 0 **Hail (0.75)**
**Mercer County
3 S Stanton** 24 1310CST **Funnel Cloud**
**Oliver County
2 N Center** 24 1310CST **Funnel Cloud**
**Dunn County
Halliday** 24 1315CST **Funnel Cloud**
**Ward County
Surrey** 24 1320CST 0 0 4 0 **Thunderstorm Wind**
Winds downed trees.

**Dunn County
25 NE Dickinson** 24 1355CST 0 0 4 4 **Hail (1.00)**
**Morton County
3 S New Salem** 24 1425CST 0 0 0 0 **Hail (1.00)**
**Mercer County
Beulah** 24 1450CST 0 0 4 0 **Thunderstorm Wind (G74)**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NORTH DAKOTA Cont'd

Ramsey County Devils Lake	24	1740CST			0	0	4	0	Thunderstorm Wind (G50)
Towner County Cando	24	1800CST			0	0	4	4	Hail (1.75)
Cando	24	1800CST			0	0	4	4	Thunderstorm Wind (G52)

The hail and high winds occurred with 3.50 inches of rain.

Walsh County Grafton	24	2000CST			0	0	3	0	Thunderstorm Wind
Grand Forks County 5 NW Grand Forks	24	2009CST			0	0	0	0	Thunderstorm Wind (G52)
Traill County Hatton	25	1620CST			0	0	4	4	Hail (1.75)
Adams County Hettinger	25	1815CST			0	0	4	4	Hail (1.75)
Grant County 22 S Leith	25	1910CST			0	0	3	3	Hail (1.00)
Logan County 12 NNE Wishek	25	2000CST			0	0	4	0	Thunderstorm Wind

Winds toppled trees, damaged barns, and flipped over cattle tractor-semitrailers.

Dickey County Oakes	25	2100CST			0	0	4	0	Thunderstorm Wind
------------------------	----	---------	--	--	---	---	---	---	-------------------

Winds uprooted trees, damaged outbuildings, and flipped over trailers in and around the town of Oakes.

Richland County Hankinson	25	2145CST			0	0	5	0	Thunderstorm Wind
10 SW Wahpeton	25	2152CST			0	0	4	0	Thunderstorm Wind (G52)
Barney	25	2210CST			0	0	4	0	Thunderstorm Wind (G52)

Winds uprooted trees, pulled cement chunks from the ground, downed signs and power lines, damaged farm buildings, and flipped a motor car off the railroad track. Most of the damage occurred in and around the town of Hankinson.

The combination of high winds and heavy rains also contributed to vehicle accidents.

Cass County Kindred	25	2230CST			0	0	0	0	Thunderstorm Wind
Benson County 8 W Minnewauken	26	0025CST			0	0	4	4	Hail (1.75)
5 W Minnewauken	26	0100CST			0	0	0	0	Hail (1.00)
Slope County 10 W New England	26	1945CST			0	0	4	4	Hail (1.75)
Hettinger County Mott	26	2012CST			0	0	4	4	Hail (1.50)
Cavalier County 1 W Walhalla	27	0715CST			0	0	6	6	Hail (1.75)
Pembina County Cavalier	27	0735CST			0	0	6	6	Hail (2.50)
3 N Drayton	27	0800CST			0	0	6	6	Hail (4.50)

A widespread hail storm damaged 100,000 acres of cropland in Pembina and northern Cavalier counties. Total crop damage was estimated at \$5 million. The storm cut a path of destruction 40 miles long and 2 to 4 miles wide, with spotty damage outside this path.

Hail stones were up to softball-size and occurred with up to 5 inches of rain.

The hail also killed farm animals and damaged many buildings and vehicles.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OHIO

Ashland, Wayne, Summit, Portage and Stark Counties 04 2200EST-05 0200EST 0 0 4 0 **Urban and Small Stream Flooding**

Heavy rain caused small streams and creeks to rise and flood low-lying areas. Widespread street flooding stranded many cars and people.

Lake and Ashtabula Counties 06 2300EST-07 0300EST 0 0 4 0 **Urban and Small Stream Flooding**

Heavy rain caused small streams and creeks to rise and flood low-lying areas in the northern part of these counties. Many underpasses were flooded in Ashtabula and Painesville.

Hocking County Logan 18 1830EST 0 0 4 0 **Thunderstorm Wind**

Washington County Marietta 18 2000EST 0 0 4 0 **Thunderstorm Wind**

A thunderstorm blew down trees in both counties. A barn and feed trough were damaged on State Route 180 in Logan.

Erie, Lorain, Medina, Cuyahoga, Stark, and Summit Counties 19 0000EST-0500EST 0 0 4 0 **Urban and Small Stream Flooding**

Thunderstorms dropped very heavy rain over northeastern Ohio causing many streams and creeks to flood. Basements and streets experienced widespread flooding. Cars and people were stranded by high water in some areas.

Ashland County 2 S Perryville 19 0325EST 0 0 4 0 **Thunderstorm Wind**

Crawford County Countywide 19 0340EST 0 0 4 0 **Thunderstorm Wind**

Thunderstorms blew down trees and power lines.

Wyandot County Carey 19 1235EST 0 0 4 0 **Thunderstorm Wind**

Crawford County Bucyrus 19 1250EST 0 0 4 0 **Thunderstorm Wind**

Wayne County Orville 19 1515EST 0 0 5 0 **Thunderstorm Wind**

Stark County Hartville 19 1530EST 0 0 4 0 **Thunderstorm Wind**

Holmes County Millersburg 19 1600EST 0 0 4 0 **Thunderstorm Wind**

Muskingum County Zanesville 19 1600EST 0 0 4 0 **Thunderstorm Wind**

Coshocton County Countywide 19 1610EST 0 0 ? ? **Hail (0.75)**

Tuscarawas County New Philadelphia 19 1615EST 0 0 4 0 **Thunderstorm Wind**

Guernsey County Old Washington 19 1620EST 0 0 4 0 **Thunderstorm Wind**

Morgan County 5 SE 19 1700EST 0 0 5 0 **Thunderstorm Wind**

Washington County Marietta 19 2000EST 0 0 4 0 **Thunderstorm Wind**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OHIO Cont'd

Thunderstorms developed over north-central Ohio and moved into the eastern and southeastern parts of the state. Trees and power lines were blown down in many areas and large hail fell. The roof was blown off a doctor's clinic in Orrville, and buildings were damaged in Zanesville and on State Route 376 south of McConnelsville.

**Butler County
Union Township** 20 1600EST 0 0 4 0 **Thunderstorm Wind**

A thunderstorm blew down trees and power lines.

**OHZ008-009
Southwest and
South Central** 21 1600EST-
22 0700EST 0 ? 6 5 **Urban and Small
Stream Flooding**

Thunderstorms moved into southwestern Ohio during the afternoon and evening of the 21st, and moved across southern Ohio with widespread 2 to 4 inch amounts of rain common. More thunderstorms developed during the early morning hours of the 22nd, with additional heavy rain falling in many areas. Water reached depths of 3 to 4 feet on many roads in and around Cincinnati and Middletown. Small streams and creeks flooded causing numerous sewer backups and flooded basements. Nearly 5 inches of rain fell over Highland and Pike counties causing significant rises in Rocky Fork, Pike, and White Lakes. White Lake rose about 40 inches overnight due to the excessive rainfall. Hundreds of homes and businesses around the lake were flooded and the rain came down so fast that numerous boats on the lake sunk. Many roads and bridges were washed out or damaged across southern Ohio.

Darke County 21 1800EST-
2100EST 0 0 4 0 **Urban and Small
Stream Flooding**

Preble County 21 2100EST-
2330EST 0 0 5 0 **Urban and Small
Stream Flooding**

Heavy rain of 2 to 3 inches flooded roads and basements across these counties. Many vehicles were trapped by high water.

**Ashtabula County
Countywide** 28 0020EST 0 0 4 0 **Thunderstorm Wind**

**Geauga County
Countywide** 28 0030EST 0 0 4 0 **Thunderstorm Wind**

**Trumbull County
2 W Bloomfield** 28 0100EST 0 0 4 0 **Thunderstorm Wind**

Thunderstorms blew down trees and power lines, and damaged buildings.

**Williams County
Montpelier** 28 1530EST 0 0 ? ? **Hail (0.75)**

Bryan 28 1530EST 0 0 ? ? **Hail (0.75)**

**Fulton County
5 S Swanton** 28 1705EST 0 0 4 0 **Thunderstorm Wind**

**Van Wert County
Van Wert** 28 1750EST 0 0 4 0 **Thunderstorm Wind**

**Allen County
Lima and
Bath Township** 28 1830EST 0 0 4 0 **Thunderstorm Wind**

**Auglaize County
Wapakoneta and
Waynesfield** 28 1900EST 0 0 5 0 **Thunderstorm Wind**

**Hardin County
Roundhead** 28 1905EST 0 0 4 0 **Thunderstorm Wind**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	ROBBS	

OHIO Cont'd

Darke County Ansonia Greenville	28	1923EST			0	0	5	0	Thunderstorm Wind
Logan County Lewiston	28	1935EST			0	0	4	0	Thunderstorm Wind
Ashtabula County Ashtabula	28	1950EST			0	0	4	0	Thunderstorm Wind
Miami County Countywide	28	1950EST			0	0	4	0	Thunderstorm Wind
Preble County Lewisburg	28	2010EST			0	0	4	0	Thunderstorm Wind
Clark County New Carlisle Springfield	28	2015EST			0	0	5	0	Thunderstorm Wind
Montgomery County Butler Township Harrison Township Kettering	28	2020EST			0	0	5	0	Thunderstorm Wind
Knox County Fredericktown	28	2035EST			0	0	4	0	Thunderstorm Wind
Franklin County Columbus	28	2052EST			0	0	4	0	Thunderstorm Wind
Darke County 2 SE Greenville	28	2055EST			0	0	4	0	Thunderstorm Wind
Madison County Countywide	28	2100EST			0	0	4	0	Thunderstorm Wind
Fairfield County Countywide	28	2108EST			0	0	4	0	Thunderstorm Wind
Licking County Summit Station	28	2110EST			0	0	4	0	Thunderstorm Wind
Trumbull County Farmington Township	28	2117EST			0	0	?	?	Hail (1.00)
Butler County Keester	28	2205EST			0	0	4	0	Thunderstorm Wind
Hamilton County Countywide	28	2245EST			0	0	4	0	Thunderstorm Wind
Clermont County Pierce Township	28	2315EST			0	0	4	0	Thunderstorm Wind
Butler County Fairfield Township	28	2343EST			0	0	4	0	Thunderstorm Wind

Thunderstorms moved across Ohio during the afternoon and evening blowing down trees and power lines in many areas, and large hail fell in a few spots. Buildings were damaged in Bryan. The Van Wert High School press box was destroyed and homes were damaged in Lima. Winds gusted to 96 mph in Ansonia, 75 mph in Greenville, and 61 mph at the Ashtabula Light House and in the northern part of Columbus. Airplanes were damaged in New Carlisle, mobile homes were damaged in Springfield, and awnings were blown off in Kettering. Winds gusted to between 60 and 65 mph in Summit Station and many buildings were damaged in Hamilton County.

Washington County 6 N Marietta	29	2010EST			0	0	4	0	Thunderstorm Wind Hail (1.00)
					0	0	?	?	

A thunderstorm dropped large hail and blew down trees north of Marietta.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K I L L E D	I N J U R E D	P R O P E R T Y	C R O S S	

OKLAHOMA Cont'd

Payne County 15 W Stillwater	18	1630CST			0	0	?	?	Hail (1.00)
Payne County 15 W Stillwater	18	1630CST			0	0	?	?	Thunderstorm Wind
Payne County 2 E Perkins	18	1710CST			0	0	?	?	Hail (0.75)
Oklahoma County Midwest City	18	1713CST			0	0	?	?	Hail (1.00)
Oklahoma County N Oklahoma City	18	1737CST			0	0	3	?	Thunderstorm Wind (G52)
Cleveland County Moore	18	1737CST			0	0	?	?	Hail (0.75)
Oklahoma County Oklahoma City	18	1741CST			0	0	?	?	Hail (1.00)
Oklahoma County Spencer	18	1744CST			0	0	?	?	Thunderstorm Wind
Payne County 5 N Langston	18	1800CST			0	0	?	?	Hail (0.75)
Cleveland County 2 N Stella	18	1830CST			0	0	?	?	Hail (0.75)
Lincoln County 4 S Chandler	18	1851CST			0	0	?	?	Thunderstorm Wind (G52)
Oklahoma County Near Newalla	18	1854CST			0	0	?	?	Thunderstorm Wind (G52)
Rogers County Talala	18	1920CST			0	0	4	?	Lightning
Rogers County 1 N Talala	18	2000CST			0	0	?	?	Hail (0.88)

Thunderstorms in northern and central Oklahoma produced quarter-size hail, damaging winds, and several lightning strikes. Large tree limbs were downed and an outbuilding was extensively damaged in Oklahoma City. In Payne County large tree limbs were downed 15 miles west of Stillwater and 5 miles north of Langston. In Ponca City, lightning struck a home and caused \$25,000 in damage. In Edmond, lightning struck a group of campers at Lake Arcadia. A 39-year-old man was killed and two others injured, one seriously. In Talala lightning struck a tractor, resulting in nearly \$20,000 in damage. (M390)

Cimarron County 10 W Felt	19	2145CST			0	0	4	?	Hail (1.00)
------------------------------	----	---------	--	--	---	---	---	---	-------------

Quarter-size hail and rains in excess of 3 inches resulted in the closing of Highway 56 west of Felt. Two vehicles were swept off the road by rapidly flowing waters; however, there were no injuries. Snowplows were required to remove the accumulated hail from the roads. Damage to the cars was estimated at \$20,000.

Blaine County 3 NW Geary	20	1530CST			0	0	?	?	Hail (1.00)
Comanche County Cache	20	1630EST			0	0	3	?	Lightning
Kingfisher County 2 S Kingfisher	20	2154CST			0	0	?	?	Thunderstorm Wind (G56)
Canadian County 4 W Okarche	20	2210CST			0	0	?	?	Thunderstorm Wind (G52)

Thunderstorms in northwestern and central Oklahoma produced strong winds and quarter-size hail. There were no reports of damage from the strong winds. In Cache, lightning struck a barn, and the resulting fire caused \$5,000 in damage.

Sequoyah County Sallisaw	21	1558CST			0	0	?	?	Thunderstorm Wind (G52)
Grant County 2 N Deer Creek	21	1640CST			0	0	?	?	Hail (0.88)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OKLAHOMA Cont'd

Grant County 2 N Deer Creek	21	1640CST			0	0	?	?	Thunderstorm Wind (G52)
Kingfisher County 10 E Hennessey	21	1835CST			0	0	?	?	Hail (0.75)
Logan County Marshall	21	1845CST			0	0	4	?	Hail (1.50)
Garfield County 9 SSW Covington	21	1847CST			0	0	?	?	Hail (1.25)
Garfield County Covington	21	1900CST			0	0	3	?	Thunderstorm Wind (G58)
Logan County Marshall	21	1900CST			0	0	4	?	Hail (0.75)

Thunderstorms produced large hail which covered the ground 2 miles north of Deer Creek. Large hail also resulted in damage estimated by the National Weather Service at \$15,000 in Marshall, mostly the result of roof, car, and window damage. Thunderstorm winds in Covington damaged outbuildings and resulted in \$5,000 in losses.

LeFlore County Wister	24	1555CST			0	0	?	?	Hail (0.75)
Payne County 5 N Stillwater	24	1600CST			0	0	?	?	Hail (0.75)
McClain County Purcell	27	Afternoon			1	0	?	?	Excessive Heat

An 80-year-old woman died of heart failure attributed to excessive heat in her non-air conditioned home. Afternoon high temperatures in Purcell were near 100°. (F80P)

OREGON

ORZ012

Northern Harney County	07	1840PST- 2045PST			0	0	0	0	Thunderstorm Wind
------------------------	----	---------------------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusted to 61 mph at the Burns Weather Office.

ORZ006

Northern Cascades Western Deschutes County Western Jefferson County	09	1530PST- 1742PST			0	0	?	0	Thunderstorm
---	----	---------------------	--	--	---	---	---	---	--------------

Numerous late-afternoon thunderstorms developed over the Cascade crest in the record August heat. Lightning caused numerous wildfires along the eastern slopes of the Cascades. Local radar indicated widespread VIP levels between five and six. Although radar indicated tops of the storms to be 40,000 feet, about 4,000 feet above the tropopause, there were no confirmed reports of weather-related damages.

All of Oregon 13

A scorching summer heat wave was peaking. Medford had ten straight days of maximum temperatures over 100° which pushed the total count for the summer to 23 days over 100°. Temperatures over 100° had occurred in different parts of the state since mid-July. Coastal temperatures were also about 20° above normal through this period.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OREGON Cont'd

ORZ004
Lane County
Creswell
Polk County
Monmouth

17

Thunderstorms produced 1.50 inches of rain in six hours at Monmouth. Also, 0.60 inch fell in Creswell within 58 minutes.

ORZ009
Klamath County
Klamath Falls

18

Funnel clouds were reported in a special surface observation at 0838PST.

ORZ012
Eastern Malheur
County

20 2100PST

0 0 4 5

Thunderstorm Wind
Flash Flood
Hail

Torrential thunderstorms and large hail caused widespread damage to this Oregon-Idaho border area. Onion crops were severely damaged in the Adrian-Nyssa-Vale area. The injuries sustained by the onions allowed a fungus to penetrate and likely cause further losses in storage. Bean pods were split open leaving beans on the ground. Sugar beet leaves were shredded by the hail. Alfalfa seed crops suffered extreme damage by hail and wind. Subsequent flooding of Sucker Creek flooded one house west of Homedale, ID with 1 foot of mud and water.

ORZ010
Morrow County
Heppner

21

A stationary low pressure system over eastern Oregon produced steady rainfall throughout the morning and afternoon hours. A flash flood watch extended east from Wasco and Jefferson counties, through the Columbia Basin, and into the northeastern mountains. Although Heppner, Morrow County, received 1.20 inches of rain in less than 12 hours, no flooding was reported within Oregon.

PENNSYLVANIA, Eastern

Bradford County
Ridgebury

13 1411EST

0 0 4 0

Thunderstorm Wind (G52)
Hail (0.75)

Canton

13 1415EST

0 0 ? ?

Thunderstorm Wind

Ulster

13 1425EST

0 0 3 0

Thunderstorm Wind

Sheshequin

13 1430EST

0 0 3 0

Thunderstorm Wind

Terrytown

13 1445EST

0 0 3 0

Thunderstorm Wind

Wyalusing

13 1450EST

0 0 3 0

Thunderstorm Wind

Thunderstorm wind gusts downed trees and utility lines. Some of the trees fell on roadways. In Ridgebury the roof was blown off a mobile home and a tree was downed that grazed a house. Wind gusts were estimated at 60 mph in Ridgebury and three-quarter-inch hail also fell there.

Lycoming County

Salladasburg

13 1425EST

0 0 3 0

Thunderstorm Wind

Jersey Shore

13 1425EST

0 0 3 0

Thunderstorm Wind

Williamsport

13 1426EST

0 0 3 0

Thunderstorm Wind

1.5 W Calvert

13 1430EST

0 0 5 0

Thunderstorm Wind

Proctor

13 1445EST

0 0 3 0

Thunderstorm Wind

2 N Tivoli

13 1450EST

0 0 3 0

Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Eastern Cont'd

Muncy	13	1455EST			0	0	3	0	Thunderstorm Wind
3 E Clarkstown	13	1500EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees and utility lines. The wind gusts destroyed a mobile home to the west of Calvert. A damage path of downed trees could be followed from west of Calvert for 14 miles to just north of Hillsgrove in Sullivan County. Most of the damage was in the first 4 to 5 miles with occasional patches of downed trees in the remainder of the track.

Lycoming County
1 W Calvert to
2.75 E Calvert

	13	1431EST- 1435EST	3.75	70	0	0	3	0	Tornado (F1)
--	----	---------------------	------	----	---	---	---	---	--------------

A tornado touched down briefly in two locations. The first was 1 mile west of Calvert and the second was 2.50 to 2.75 miles east of Calvert. Damage occurred mostly to trees, which were uprooted, broken off or twisted off. The path width averaged 100- to 200-feet wide, but was as wide as one-quarter mile at the second touchdown.

Sullivan County
1 N Hillsgrove
Forksville
Dushore

	13	1455EST			0	0	3	0	Thunderstorm Wind
	13	1500EST			0	0	3	0	Thunderstorm Wind
	13	1515EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees and utility lines.

Luzerne County
Harveys Lake
Dallas
Swoyersville
Exeter
Harding
Silkworth
Pittston
Wilkes-Barre

	13	1600EST			0	0	4	0	Thunderstorm Wind
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	4	0	Thunderstorm Wind (G80)
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	4	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees and utility lines. Some of the trees came down on houses, automobiles, and roadways. Large portions of the roof were blown off a building in Harveys Lake. A large signboard was blown down in Wilkes-Barre. Hundreds of trees were down and the area around Harding was particularly hard hit. Many huge trees were downed near a church in Harding and it was estimated that the winds would have to have been 80 to 100 mph.

Lackawanna County
Carbondale
Clarks Summit
Scranton

	13	1600EST			0	0	4	0	Thunderstorm Wind
	13	1600EST			0	0	3	0	Thunderstorm Wind
	13	1600EST			0	0	4	0	Thunderstorm Wind

Thunderstorm wind gusts downed many trees and utility lines. Falling trees blocked roadways and damaged houses. At least two houses received significant damage from falling trees in Carbondale.

Wayne County
Lakeville
Waymart
Honesdale
White Mills
Seelyville
Hawley

	13	1700EST			0	0	3	0	Thunderstorm Wind
	13	1700EST			0	0	3	0	Thunderstorm Wind
	13	1700EST			0	0	3	0	Thunderstorm Wind
	13	1700EST			0	0	3	0	Thunderstorm Wind
	13	1700EST			0	0	3	0	Thunderstorm Wind
	13	1700EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed many trees and utility lines.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLINGS	INJURIES	PROPERTY	CROPS	

PENNSYLVANIA, Eastern Cont'd

Carbon County

Lansford	13	1705EST			0	0	3	0	Thunderstorm Wind (G53)
Palmerton	13	1730EST			0	0	3	0	Thunderstorm Wind (G53)

Thunderstorm wind gusts downed trees, tree limbs, and utility lines. Wind gusts were estimated at over 60 mph.

Berks County

Rehlersburg	13	1707EST			0	0	3	0	Thunderstorm Wind
Fleetwood	13	1730EST			0	0	4	0	Thunderstorm Wind (G53)

Thunderstorm wind gusts downed trees, tree limbs, and utility lines. Part of the roof was blown off a house in Fleetwood where the winds were estimated to exceed 60 mph.

Northampton County

Danielsville	13	1736EST			0	0	4	0	Thunderstorm Wind
Roseto	13	1737EST			0	0	3	0	Thunderstorm Wind
Wilson	13	1737EST			0	0	3	0	Thunderstorm Wind
					0	2	0	0	Lightning
Martins Creek	13	1800EST			0	0	3	0	Thunderstorm Wind (G53)

Thunderstorm wind gusts downed trees, tree limbs, and utility lines. In Danielsville two houses had major roof damage from falling trees. The wind gusts were estimated to be in excess of 60 mph at Martins Creek. Two men were injured by lightning when it struck a tree they were standing under in Wilson.

Lancaster County Lancaster Airport (LNS)

Safe Harbor	13	1758EST			0	0	?	0	Thunderstorm Wind (G52)
	13	1800EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts reached 60 mph at Lancaster Airport (LNS) between 1758 and 1815 EST. Wind gusts brought a large tree down across a road near Safe Harbor. There were reports of trees and utility lines down across the county.

Lehigh County Limeport

	13	1800EST			0	0	3	0	Thunderstorm Wind
--	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts brought down large tree limbs.

Chester County Downingtown

	13	1845EST			0	0	?	?	Thunderstorm Wind (G56)
--	----	---------	--	--	---	---	---	---	-------------------------

Thunderstorm wind gusts were measured at 65 mph.

Delaware County Wayne

	13	1905EST			0	0	3	0	Thunderstorm Wind (G52)
--	----	---------	--	--	---	---	---	---	-------------------------

Thunderstorm wind gusts estimated at 60 mph brought down trees and tree limbs.

Montgomery County

Limerick	13	1910EST			0	0	4	0	Lightning
Centre Square	13	1915EST			0	0	3	0	Thunderstorm Wind
Abington	13	1920EST			0	0	3	0	Thunderstorm Wind (G52)
Hatboro	13	1925EST			0	0	?	0	Thunderstorm Wind (G52)
					0	0	?	?	Hail (0.75)
Norristown	13	1930EST			0	0	4	0	Thunderstorm Wind

Thunderstorm wind gusts estimated at 55 to 60 mph brought down large tree limbs in Abington. In Hatboro the wind was estimated at 60 mph and three-quarter-inch hail fell. Thunderstorm wind gusts downed many trees and utility lines from Centre Square south and east across the county. Lightning caused a fire in a house in Limerick. Trees were downed in Norristown and at least one of them came down on an automobile.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	COSTS	

PENNSYLVANIA, Eastern Cont'd

Philadelphia County

1 W NE Arpt Philadelphia (PNE)	13	1925EST			0	0	?	0	Thunderstorm Wind (G52)
2 N NE Arpt Philadelphia (PNE)	13	1928EST			0	0	?	0	Thunderstorm Wind (G52) Hail (0.75)

Thunderstorm wind gusts of 60 mph were reported to the north and west of the Northeast Airport. Three-quarter-inch hail was also reported north of the airport.

Bucks County

1 NW Buckingham Valley	13	1945EST			0	0	4	0	Lightning
------------------------	----	---------	--	--	---	---	---	---	-----------

A lightning-caused fire resulted in \$25,000 damage to a house in Buckingham Township.

Philadelphia County

2 SW Philadelphia	27	1820EST			0	0	?	0	Thunderstorm Wind (G52) Hail (0.75)
Philadelphia	27	1826EST			0	0	?	0	Thunderstorm Wind (G52)

Thunderstorm wind gusts to 60 mph were reported in South Philadelphia and in Center City. Three-quarter-inch hail fell in South Philadelphia.

Tioga County

Sabinsville	28	0244EST			0	0	3	0	Thunderstorm Wind
-------------	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed trees.

Lycoming County

Clinton County

4 NW Haneyville	28	0400EST			0	0	3	0	Thunderstorm Wind
-----------------	----	---------	--	--	---	---	---	---	-------------------

Several trees and limbs were blown down on, and on either side of Route 44. Route 44 is on the border between Clinton and Lycoming counties.

Tioga County

Westfield	28	1923EST			0	0	3	0	Thunderstorm Wind
Middlebury Center	28	1947EST			0	0	3	0	Thunderstorm Wind
10 NW Wellsboro	28	1955EST			0	0	3	0	Thunderstorm Wind
Wellsboro	28	2004EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees and utility lines.

Clinton County

2 W Westport	28	2010EST			0	0	3	0	Thunderstorm Wind
South Renovo	28	2015EST			0	0	3	0	Thunderstorm Wind
5 NW Salona	28	2032EST			0	0	?	0	Funnel Cloud
Lock Haven	28	2034EST			0	0	3	0	Thunderstorm Wind
Mill Hall	28	2035EST			0	0	3	0	Thunderstorm Wind
3 NW Lock Haven	28	2039EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts brought trees down on roads in South Renovo, in Mill Hall, west of Westport and northwest of Lock Haven. Trees and utility lines were downed in Lock Haven. A funnel cloud was reported northwest of Salona and wind gusts there were estimated at 50 mph.

Lycoming County

Jersey Mills	28	2014EST			0	0	3	0	Thunderstorm Wind
Trout Run	28	2032EST			0	0	3	0	Thunderstorm Wind
3 W Balls Mills	28	2034EST			0	0	3	0	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Eastern Cont'd

Balls Mills	28	2040EST			0	0	3	0	Thunderstorm Wind
Farragut	28	2044EST			0	0	3	0	Thunderstorm Wind
Antes Fort	28	2045EST			0	0	3	0	Thunderstorm Wind
Williamsport	28	2045EST			0	0	3	0	Thunderstorm Wind
Muncy	28	2047EST			0	0	3	0	Thunderstorm Wind
Nisbet	28	2050EST			0	0	3	0	Thunderstorm Wind
Collomsville	28	2050EST			0	0	3	0	Thunderstorm Wind
Montgomery	28	2055EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees, some of them on roadways. Utility lines were also down in Williamsport.

Columbia County Bloomsburg

	28	2045EST			0	0	5	0	Thunderstorm Wind
--	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed many trees and utility lines. There was substantial damage to three commercial buildings. The roof was blown off one building and the sides collapsed. The roof from this building flew through the air and crashed into other buildings and also a house. Part of a wall and part of the roof was destroyed on one building and part of the roof and windows on another building. A porch roof and windows were destroyed on the house. Two other dwellings also were heavily damaged. A double wide mobile home had the entire roof blown off and considerable roof damage was done to another one. Total damage in Bloomsburg was estimated at \$200,000. The damage occurred between 2045 and 2145 EST.

Union County 3 W Mifflinburg

	28	2057EST			0	0	3	0	Thunderstorm Wind
--	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed seven large trees across Route 45 between Mifflinburg and Hartleton.

Northumberland County 3 N Watsonstown

	28	2100EST			0	0	3	0	Thunderstorm Wind
--	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed large trees on Route 405 between Watsonstown and Montgomery.

Centre County Shingletown Rebersburg

	28	2108EST			0	0	3	0	Thunderstorm Wind
	28	2110EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees across Route 45 near Shingletown. Trees were down along Route 192 near Rebersburg between 2110 and 2115 EST.

Lackawanna County

Dalton	28	2135EST			0	0	3	0	Thunderstorm Wind
Clarks Summit	28	2135EST			0	0	3	0	Thunderstorm Wind
Dunmore	28	2135EST			0	0	3	0	Thunderstorm Wind
Scranton	28	2135EST			0	0	3	0	Thunderstorm Wind

Thunderstorm wind gusts downed trees or tree limbs and utility lines.

Luzerne County

Dallas	28	2135EST			0	0	3	0	Thunderstorm Wind
Forty Fort	28	2135EST			0	0	3	0	Thunderstorm Wind
Pittston	28	2135EST			0	0	3	0	Thunderstorm Wind
Shickshinny	28	2135EST			0	0	3	0	Thunderstorm Wind
Wilkes-Barre	28	2135EST			0	0	3	0	Thunderstorm Wind

Thunderstorms downed trees or tree limbs and utility lines.

Wayne County Equinunk

	28	2145EST			0	0	3	0	Thunderstorm Wind
--	----	---------	--	--	---	---	---	---	-------------------

Thunderstorm wind gusts downed trees along Route 191.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Eastern Cont'd

Adams County		29 1600EST				0	0	3	0	
Gettysburg		29 1715EST				0	0	4	0	Thunderstorm Wind
Littlestown										Thunderstorm Wind

Thunderstorm wind gusts downed numerous trees and utility lines in Gettysburg. Trees and numerous large tree limbs were down near Littlestown. Two of the trees came down on a house near Littlestown.

PENNSYLVANIA, Western

Allegheny County		11 1320EST				0	0	0	0	Flash Flood
21 E Pittsburgh										Streets were covered by several inches of water in Cheswick.
Indiana County		11 1400EST				0	0	0	0	Flash Flood
										There were a few flooded basements throughout the county.
Allegheny County		19 2100EST				0	0	0	0	Flash Flood
28 NE Pit										Basements flooded in Tarentum.
Westmoreland County		19 2100EST				0	0	0	0	Thunderstorm Wind
15 E Greensburg										Several trees and power lines were down in Ligonier and Fairfield townships.
Westmoreland County		19 2150EST				0	0	0	0	Flash Flood
22 NW Greensburg										Road and basement flooding occurred in Lower Burrell and New Kensington.
Erie County		28 0010EST				0	0	4	0	Thunderstorm Wind
14 NE Erie										A tree fell into a house in Northeast. Siding and gutters were torn from a house in Harborecreek; also a large tree was uprooted. A cement block garage was destroyed, and part of a house roof was ripped off east of Findley Lake.
Clarion County		28 0130EST				0	0	0	0	Thunderstorm Wind
9 NW Clarion										Three large pine trees were downed in Ashland Township.
Jefferson County		28 0148EST				0	0	0	0	Thunderstorm Wind
4 SW Brookville										Trees and power lines were downed in Summerville and Brookville.
15 NE Brookville		28 0150EST				0	0	0	0	Thunderstorm Wind
										Large trees and power lines were downed in Brockway.
Venango County		28 0200EST				0	0	3	0	Thunderstorm Wind
8 NE Franklin										
15 SW Franklin										
15 SE Franklin										

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

Several large trees fell into a home in Oil City. Large trees were downed in Barkeyville and Emlenton. Many power outages occurred throughout county.

Elk County
12 W Ridgway
7 SE Ridgway 28 0220EST 0 0 0 0 **Thunderstorm Wind**

Trees were downed in Hallton and Kersey.

Clearfield County
Clearfield 28 0226EST 0 0 0 0 **Thunderstorm Wind**

Power lines were downed in Clearfield. The wind blew a police car into a ditch with no injuries. Large trees were downed in Curwensville and Grampian.

Indiana County
10 S Indiana 28 0241EST 0 0 0 0 **Thunderstorm Wind**

Numerous trees and power lines were downed in Black Lick.

Erie County
5 S Erie 28 1726EST 0 0 0 0 **Funnel Cloud**

There was a funnel cloud at Poole Road and Interstate 90 south of Erie.

Erie County
5 NE Erie
2 N Erie 28 1730EST 0 0 0 0 **Hail (0.75)**

Three-quarter-inch hail was reported near Harborcreek. A waterspout was reported over Lake Erie.

Erie County
12 NE Erie 28 1737EST 0 0 0 0 **Thunderstorm Wind**

Large trees and power lines were downed in the Northeast.

Erie County
2 S Erie 28 1747EST 0 0 0 0 **Hail (1.75)**

Golf ball-size hail occurred at Belle Valley near the city of Erie.

Erie County
28 SE Erie 28 1800EST 0 0 0 0 **Hail (0.75)**

Dime-size hail was reported at Corry.

Erie County
6 SW Erie 28 1835EST 0 0 0 0 **Thunderstorm Wind**

Power lines were downed at Fairview.

Erie County
24 SW Erie 28 1845EST 0 0 0 0 **Thunderstorm Wind**

Estimated wind in excess of 60 mph was reported at West Springfield.

Erie County
24 SW Erie 28 1850EST 0 0 0 0 **Funnel Cloud**

A funnel cloud was reported near West Springfield.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

Crawford County 15 W Meadville Meadville	28	1855EST			0	0	0	0	Thunderstorm Wind Power lines were downed at Linesville, Saegertown, and Meadville.
Forest County	28	1905EST			0	0	0	0	Thunderstorm Wind Power lines and large trees were downed throughout the county.
Venango County	28	1905EST			0	0	0	0	Thunderstorm Wind Power lines and large trees were downed throughout the county.
Warren County	28	1905EST			0	0	0	0	Thunderstorm Wind Power lines and large trees were downed throughout the county.
Crawford County 15 W Meadville Meadville	28	1915EST			0	0	0	0	Thunderstorm Wind More power lines were downed at Linesville and Meadville.
Crawford County 3 S Meadville	28	1935EST			0	0	0	0	Thunderstorm Wind Power lines and large trees were downed 3 miles south of Meadville.
Erie County	28	1935EST			0	0	0	0	Hail (0.75) Thunderstorm Wind Three-quarter-inch hail was reported at Wattsburgh with power lines down.
Warren, Venango, Forest, Cameron, Elk, Potter, McKean Counties	28	1935EST			0	0	0	0	Thunderstorm Wind There were power outages due to power lines down in northwestern Pennsylvania.
Erie County 20 SW Erie	28	1940EST			0	0	0	0	Funnel Cloud A funnel cloud was spotted near Springfield and Lake City.
McKean County Bradford	28	1940EST			0	0	0	0	Hail (1.75) Golf ball-size hail was reported at Bradford flight service station.
Jefferson County Brookville 16 NE Brookville 8 N Brookville	28	1940EST			0	0	0	0	Thunderstorm Wind Large trees were downed in Brookville. Power lines were downed in Brockway and trees down in Sigel.
Erie County 21 SW Erie	28	1945EST			0	0	0	0	Thunderstorm Wind Wind in excess of 60 mph was reported at Albion.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

Forest County Tionesta	28	1949EST			0	0	0	0	Thunderstorm Wind Power lines were downed in Tionesta.
Armstrong County 14 NE Kittanning	28	1950EST			0	0	0	0	Thunderstorm Wind Trees were downed by thunderstorm wind in distant.
Potter County Coudersport	28	2005EST			0	0	0	0	Thunderstorm Wind Hail (0.75) Power lines were downed and dime-size hail fell near Coudersport.
Venango County Franklin	28	2010EST			0	0	0	0	Thunderstorm Wind Hail (0.75) Power lines were downed and three-quarter-inch hail was reported at Franklin.
Warren County Warren	28	2015EST			0	0	0	0	Thunderstorm Wind Hail (0.75) Power lines were downed and three-quarter-inch hail at Warren.
Crawford County 12 N Meadville	28	2045EST			0	0	0	0	Thunderstorm Wind Power lines were downed at Cambridge Springs.
Venango County 8 NE Franklin	28	2055EST			0	0	0	0	Thunderstorm Wind Power lines and large trees were downed near Oil City.
Mercer County Mercer	28	2114EST			0	0	0	0	Hail (0.75) Three-quarter-inch hail occurred in Mercer.
Butler County	28	2135EST			0	0	0	0	Thunderstorm Wind The EMA Director reported large trees down in the northern part of county.
Armstrong County 10 NE Kittanning	28	2130EST			0	0	3	0	Thunderstorm Wind Sixteen trees were damaged with two uprooted. The siding was loosened from a house by thunderstorm wind.
Indiana County	28	2215EST			0	0	0	0	Thunderstorm Wind Tree damage occurred throughout the county.
Cambria County 3 W Johnstown 12 N Johnstown	28	2245EST			0	0	0	0	Thunderstorm Wind Trees were downed in Westmont and Southmont as well as Nanty Glo with widespread power outages.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Lexington County

Pine Ridge	06	1500EST								
Edmund	06	1530EST			0	1	0	0		Lightning

A 26-year-old man was struck by lightning while working under his car at a garage off Beckman Road, in Edmund. A Pine Ridge home was destroyed by a lightning-caused fire. Lightning struck the attached garage and spread through the rest of the structure.

Marlboro County

3 NW McColl	06	1855EST-	0	0	0	0	0	0	0	Funnel Cloud
3 NW McColl to		1900EST	1	20	0	0	3	0		Tornado (F0)
2 NW McColl										

A small tornado blew a car in circular fashion 107 feet and damaged several buildings and cut a path through trees. A funnel cloud was observed by two residents.

Beaufort County

Beaufort	06	2200EST			0	0	?	0		Lightning
----------	----	---------	--	--	---	---	---	---	--	-----------

Lightning caused several power outages.

Beaufort County

Burton	07	1215EST			0	0	?	?		Flooding
Harbor Island										
Bridge	07	1230EST			0	0	?	?		Lightning
Beaufort	07	1245EST			0	0	?	0		Flooding
Near Calibogue										
Sound	07	1257EST			0	0	0	0		Waterspout

Charleston County

Charleston	07	1500EST			0	0	?	0		Flooding
------------	----	---------	--	--	---	---	---	---	--	----------

Heavy rains caused roads to flood, disrupting traffic. At the Harbor Island Bridge, lightning struck one of the power lines, disrupting power to the bridge. A waterspout was reported by the public near Calibogue Sound, along the coast near Harbourtown, south of Hilton Head Island.

Beaufort County

Hilton Head Island	07	2315EST			0	0	5	0		Lightning
Hilton Head Island	08	0100EST			0	0	5	0		Lightning
Hilton Head Island	08	0130EST			0	0	4	0		Lightning
Hilton Head Island	08	0750EST			0	0	5	0		Lightning
Port Royal Sound	08	0750EST			0	0	0	0		Waterspout

Several waterspouts were seen in and around Port Royal Sound. Lightning destroyed two homes and heavily damaged two others. Lightning also struck a tree, causing it to fall on a parked car.

Pickens County

Pickens & Vicinity	09	1900EST			0	0	?	?		Thunderstorm Winds
2 N Easley	09	1940EST			0	0	3	0		Thunderstorm Winds

Greenville County

Travelers Rest	09	1950EST			0	0	?	?		Thunderstorm Winds
West Greenville	09	2010EST			0	0	3	?		Thunderstorm Winds

A slow-moving severe thunderstorm expanded in area affecting people in the western part of the Greenville area. There were several reports of trees and large limbs blown down in the listed areas. Power was out to about 500 people for several hours in the evening.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

York County
Rock Hill 14 1900EST 0 0 ? 0 **Thunderstorm Winds**
Lightning

Thunderstorm winds and lightning downed trees and power lines, causing extensive damage and power outages.

Dorchester County
Summerville 16 2030EST 0 0 ? 0 **Hail (0.75)**
Summerville 16 2045EST 0 0 ? 0 **Hail (0.75)**

Charleston County
North Charleston 16 2100EST 0 0 ? 0 **Hail (0.75)**

One-half- to three-quarters-inch hail was reported west of the Charleston Air Force Base, and in the Summerville vicinity.

Bamberg County
Ehrhardt 16 2230EST 0 0 4 0 **Thunderstorm Winds**

Thunderstorm winds damaged a portion of the town of Ehrhardt, snapping tall pines and uprooting dozens of trees in the area. At least two homes were affected by the storm, when trees fell on them.

Dillon County
Little Rock 20 1410EST 0 0 4 0 **Thunderstorm Winds**

Thunderstorm winds felled a 100-year-old oak tree, damaging a pickup truck and car that were parked near it. The upper limbs also destroyed part of the house on the property. The root system of the tree was larger than a man.

Greenwood County
5 S Greenwood 20 1600EST 0 0 ? ? **Thunderstorm Winds**

A couple of trees were blown down during a briefly severe thunderstorm.

Chester County
Chester 21 1625EST 0 0 ? 0 **Hail (1.00)**

Fairfield County
Winnsboro 21 1640EST 0 0 ? 0 **Thunderstorm Winds**

Laurens County
Laurens 21 1640EST 0 0 3 0 **Urban Flooding**

Spartanburg County
Lyman/Wellford 21 1645EST 0 0 3 0 **Thunderstorm Winds**

Cherokee County
Gaffney 21 1647EST 0 0 ? 0 **Thunderstorm Winds**

Chester County
Western portions 21 1700EST 0 0 ? 0 **Lightning**

York County
Rock Hill 21 1700EST 0 0 ? 0 **Lightning**

York County
Northeastern
portions 21 1700EST 0 0 ? 0 **Lightning**

York County
Rock Hill vicinity 21 1715EST 0 0 ? 0 **Thunderstorm Winds**
Lightning

Lancaster County
Lancaster 21 1730EST 0 0 ? 0 **Thunderstorm winds**

Anderson County
Piedmont Area 21 1900EST 0 0 ? 0 **Thunderstorm Winds**
Lightning

Oconee County
Westminster 21 1900EST 0 0 ? 0 **Lightning**
Flooding

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K I L O M E T E R S	I N C H E S	P R O P E R T Y	C R O S S	

SOUTH CAROLINA Cont'd

Walhalla	21	1915EST			0	0	?	0	Thunderstorm Winds Lightning
Seneca	21	1939EST			0	0	?	0	Thunderstorm Winds Lightning
Anderson County Anderson	21	2025EST			0	0	?	0	Thunderstorm Winds Lightning
Aiken County Savannah River Site	21 22	Late PM to Early AM			0	0	?	0	Heavy Rain

Slow-moving severe thunderstorms caused scattered wind damage, and much lightning damage from frequent ground strikes. Utility crews were out most of the night repairing damage in western sections of the upstate. Oconee and Anderson counties seemed to be the hardest hit. Several communities were without power all night. Very heavy rain accompanied the storms. Some flooding occurred when several cars near the Wal-Mart store at Laurens were flooded up to the windows. Also, U.S. Highway 123 was closed in two locations in Westminster. Four feet of water crossed the highway at one point, forcing police to barricade the section to traffic. A fallen tree also blocked the highway. In York and Chester counties, lightning strikes knocked power out to about 5,000 customers. In York County, the emergency preparedness office reported high winds and some downed power lines. Also, one house had been struck by lightning and set ablaze. At the Park Terrace Villas, in Newport, York County, lightning started a fire in the pool house of the apartment complex. In Winnsboro and Lancaster, trees were blown down. At the Savannah River Site, rains of more than 8 inches caused the drainage system to back up, breaking open a waste container located on low-level burial ground. No release of radiation or contamination was detected.

Horry County Crescent Beach	27	1610EST			0	0	?	0	Thunderstorm Wind (G55)
North Myrtle Beach	27	1611EST			0	0	4	0	Thunderstorm Winds
Myrtle Beach	27	1630EST			0	0	?	?	Thunderstorm Winds
Loris	27	1645EST			0	0	4	0	Lightning

A thunderstorm over the Grand Strand briefly became severe. At the Grand Strand Airport, in North Myrtle Beach, five single-engine airplanes were damaged. In one instance, the winds picked up a plane, broke its ties, and turned it over onto another plane. The other damage occurred when four planes were blown over on a service ramp. Witnesses stated that the wind was so powerful, it was pushing waves out to sea. In Myrtle Beach, there were scattered power outages caused by tree limbs blown onto power lines. A second severe thunderstorm affected the northern part of the Grand Strand. At the Crescent Beach Airport, wind gusts to 55 knots were reported, along with one-quarter-inch hail. At Loris, lightning struck the Loris Presbyterian Church cross on the steeple, proceeded into the sanctuary, knocking a hole 18 inches in diameter in the sanctuary roof, and damaging the organ, before dissipating in the fuse box. Total damage to the church was estimated at \$10,000.

Greenville County 5 NW Tigerville	29	1530EST			0	0	?	0	Thunderstorm Winds
Spartanburg County Lake Bowen	29	1610EST			0	0	3	?	Thunderstorm Winds Hail (0.75)
Chesterfield County McBee	29	1718EST			0	0	?	?	Thunderstorm Winds Hail (1.75)
Kershaw County NE Portions	29	1800EST			0	0	?	?	Hail (0.75)
Darlington County Hartsville	29	1845EST			0	0	?	?	Hail (1.75)
Pickens County Clemson	29	1855EST			0	0	4	0	Thunderstorm Winds Hail (1.75) Lightning

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Lee County Countywide	29	1900EST			0	0	?	?	Thunderstorm Winds
Anderson County Pendleton	29	1902EST			0	0	?	0	Thunderstorm Winds Hail (1.00) Lightning
Sumter County 3 SW Sumter	29	1905EST			0	0	?	0	Thunderstorm Winds
Anderson County Anderson	29	1910EST			0	0	?	0	Thunderstorm Winds Lightning
Williamston	29	1920EST			0	0	?	0	Thunderstorm Winds Lightning
Pelzer	29	1920EST			0	0	?	0	Thunderstorm Winds
Sumter County Sumter	29	1920EST			0	0	4	0	Thunderstorm Winds Hail (1.25) Lightning
Clarendon County 1 N Alcolu	29	1945EST			0	0	5	0	Lightning
2 N Alcolu	29	2000EST			0	0	?	0	Thunderstorm Winds
Florence County 2 W Lake City	29	2010EST			0	0	?	0	Thunderstorm Winds
Williamsburg County Salters	29	2050EST			0	0	?	0	Thunderstorm Winds
Berkeley County Macedonia	29	2130EST			0	0	?	0	Thunderstorm Winds
5 NW Moncks Corner	29	2136EST			0	0	?	0	Thunderstorm Winds
Georgetown County Maryville	29	2200EST			0	0	4	0	Thunderstorm Winds
Berkeley County Bonneau to Moncks Corner	29	2215EST	8.0	100	0	0	?	?	Tornado (F1)

Severe weather developed in a warm, humid air mass, ahead of an inactive cold front, and affected many areas in the state. In the upstate, a severe thunderstorm developed along the North Carolina border near Caesar's Head. This thunderstorm moved east-southeast through northern Greenville and Spartanburg counties. The most intense damage occurred near Tigerville, where a microburst blew down 15 to 20 trees in a small area. Wind damage and some hail were reported in the New Prospect and Inman areas, in Spartanburg County. Around Lake Bowen, large hail was observed, a number of trees were down, and some boat docks were destroyed by the wind. Later that evening, a second batch of severe storms moved into the western parts of the upstate from the mountains of Georgia and North Carolina. A steady-state storm moved through western Pickens County and into northern Anderson County, where it gradually weakened. These storms caused frequent and intense lightning, disrupting power and communications over a broad area. Two other severe thunderstorms developed in the midlands. The storm over Sumter County produced widespread nickel-size hail in and around the city of Sumter. Roof damage was also reported on the west side of the city of Sumter by the Sumter County Emergency Preparedness Office. There were several lightning strikes that caused property damage associated with the midlands storms. In Sumter, lightning struck a chain-link fence before leaping to a house wall, striking bathroom plumbing. The owner of the house said that a latch on the fence was found blackened. Some bricks on the house were knocked out of place where the fence is attached to the house. Formica near a bathroom sink was chipped and blackened and a hand soap dispenser bottle was split. Lightning was suspected of starting a \$25,000 fire at a Clarendon County home, 1 mile north of Alcolu. The home was located on Secondary Road 601. The second severe thunderstorm in the midlands occurred over southern Florence County. At Lake City, the S.C. Highway Patrol reported trees down. In the coastal region, a thunderstorm moved from Williamsburg County to Georgetown County to Berkeley County. A tornado occurred between Bonneau and Moncks Corner, in Berkeley County. The tornado knocked down numerous power lines and trees. Power outages from the tornado extended into the late afternoon hours of August 30th. Damage at other locations listed was mainly to trees, roofs, and farms. More than 5,000 customers were without power for several hours as a result of the thunderstorm activity in the state.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Lexington County Lexington	30	1725EST			0	0	?	0	Heavy Rain Hail (1.00)
4 WSW Lexington	30	1830EST			0	0	?	0	Hail (0.25)

A severe thunderstorm produced one-half- to one-inch-size hail and heavy rains. Hail was reported 4 miles west-southwest of Lexington, size unknown.

Florence County Florence	30	2000EST			0	0	5	?	Thunderstorm Winds Hail (2.50)
Florence Airport	30	2026EST			0	0	?	?	Hail (1.75)
Lake City	30	2100EST			0	0	?	?	Thunderstorm Winds

A severe thunderstorm produced golf ball- to tennis ball-size hail. At the Florence Country Club, eight trees were downed in the storm and hail caused severe damage to greens. Golf ball-size hail was reported at the Florence Airport. Trees were downed at Lake City.

Greenville County Spartanburg County	30	2100EST-			0	0	?	?	Heavy Rain Lightning
	31	0300EST							
Bamberg County 5 E Ehrhardt	30	2230EST			0	0	4	0	Thunderstorm Winds Lightning
Spartanburg County Greer Jetport	30	2257EST			0	0	3	0	Thunderstorm Wind (G50) Lightning
Lyman	30	2325EST			0	0	3	0	Thunderstorm Winds

A thunderstorm briefly became severe as it moved across the Greenville-Spartanburg Airport. It produced gusts to 50 knots, felling trees and limbs around the airport. The wind tore down a roof from a fuel island at a truck stop near Lyman. Lightning caused the most problems across the area. Many computers were damaged in many facilities. Heavy rain of 3 to 5 inches occurred over parts of Greenville and Spartanburg counties. No flooding was reported from the event. In Bamberg County, thunderstorm winds demolished a 60-foot x 24-foot car shed and its large tin roof was blown several hundred yards away. A 6 foot x 6 foot beam from the shed was speared, at a 45° angle into the roof of a nearby building.

SOUTH DAKOTA

Hughes County 9 SE Canning	01	1415CST			0	0	0	0	Hail (1.75)
Pennington County Rapid City	01	1424CST			0	0	0	0	Hail (1.75)
Rapid City	01	1425CST			0	0	0	0	Hail (1.75)
Hughes County 9 SE Canning	01	1515CST			0	0	0	0	Hail (1.75)
Hughes County Pierre	01	1615CST			0	0	0	0	Hail (1.00)
Kingsbury County Near Hetland	11	1500CST			0	0	0	0	Hail (1.75)
Walworth County Glenham	17	1729CST			0	0	0	0	Hail (0.75)
Walworth County Selby	17	1758CST			0	0	0	0	Hail (1.00)
Potter County 10 W Gettysburg	17	1915CST			0	0	0	0	Thunderstorm Wind (G52)
Hughes County Pierre	17	2038CST			0	0	0	0	Thunderstorm Wind (G50)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH DAKOTA Cont'd

Meade County Piedmont and Sturgis	21	1410CST			0	0	0	0	Hail (1.00)
Meade County Piedmont	21	1523CST			0	0	0	0	Hail (1.50)
Pennington County Ellsworth AFB	22	1510CST			0	0	0	0	Hail (0.75)
Potter County 15 W 4 S Gettysburg	24	1840CST			0	0	0	0	Thunderstorm Wind (G56)
Sully County 3 N Agar	25	1722CST			0	0	0	0	Hail (0.75)
Sully County 3 N Agar	25	1733CST			0	0	0	0	Hail (1.75)
Edmunds County 6 W Roscoe	25	1927CST	0.5	10	0	0	0	0	Tornado (F0)

This tornado touched down briefly just west of Roscoe before dissipating. It then reappeared over the community as a funnel cloud.

Brown County Stratford	25	2010CST			0	0	0	0	Thunderstorm Wind (G52)
Brown County 4 N Aberdeen	25	2024CST			0	0	0	0	Thunderstorm Wind (G52)
Aurora County Plankinton	25	2030CST			0	0	?	0	Thunderstorm Wind (G58)

Strong thunderstorm winds blew over a tractor-semitrailer and other vehicles off a highway. A mobile home was flipped over and power lines were downed.

Gregory County 12 N Gregory	25	1840CST			0	0	?	0	Thunderstorm Winds
--------------------------------	----	---------	--	--	---	---	---	---	--------------------

Strong winds flipped over an airplane, destroyed two sheds, and knocked over power poles.

Gregory County Gregory	25	1913CST			0	0	0	0	Hail (1.75)
---------------------------	----	---------	--	--	---	---	---	---	-------------

Charles-Mix County Platte	25	1955CST			0	0	?	0	Thunderstorm Winds
------------------------------	----	---------	--	--	---	---	---	---	--------------------

Thunderstorm winds knocked over telephone poles and trees. Some outbuildings were destroyed.

Dewey County Isabel	26	0225CST			0	0	0	0	Hail (1.00)
Walworth County Mobridge	26	0325CST			0	0	0	0	Thunderstorm Wind (G50)
Dewey County Lantry	28	1055CST			0	0	0	0	Hail (1.25)
Pennington County Rapid City	28	1220CST			0	0	0	0	Hail (1.00)
Rapid City	28	1225CST			0	0	0	0	Hail (1.75)
Rapid City	28	1325CST			0	0	0	0	Hail (1.00)
Hyde County 11 N Highmore	28	1625CST			0	0	0	0	Hail (1.75)
Beadle County Huron	28	1815CST			0	0	0	0	Hail (0.75)
Hyde County 16 N Highmore	28	1826CST			0	0	0	0	Hail (1.00)
Buffalo County Fort Thompson	30	2230CST			0	0	0	0	Funnel Cloud

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TENNESSEE

Weakley County Martin	04	1100CST			0	0	3	0	Thunderstorm Winds
<p>Strong thunderstorm winds knocked down a few trees, damaged a church, and a fence in the New Home community.</p>									
Hamilton County Collegedale	04	1230CST			0	0	0	0	Thunderstorm Winds
Hamilton County SE Hamilton	05	1440CST			0	0	0	0	Thunderstorm Winds
Bradley County 2 S Charleston	05	1445CST			0	0	0	0	Hail (1.75) Thunderstorm Winds
McMinn County Athens	05	1515CST			0	0	0	0	Thunderstorm Winds
Rhea County	09	1730CST			0	0	3	0	Thunderstorm Winds
<p>Numerous trees were downed and road tiles washed out near Five Points and Blythe Ferry.</p>									
Hamilton County	09	1740CST 1825CST 1830CST			0 0 0	0 0 0	0 0 3	0 0 0	Hail (1.75) Hail (1.25) Thunderstorm Wind (G52)
<p>Golf ball-size hail occurred at Sale Creek and at Soddy Daisy. Numerous trees were downed in the Chattanooga vicinity causing extensive power outages.</p>									
Smith County	09	1800CST			0	0	0	2	Hail (1.75)
<p>A hail storm hit around Carthage damaging a number of tobacco fields.</p>									
Roane County	09	1900CST			0	0	0	2	Thunderstorm Winds Hail (0.75)
<p>Hail was reported in western sections of Oak Ridge along with trees downed from strong winds.</p>									
Bledsoe County	20	1205CST			0	0	2	0	Thunderstorm Winds Flash Flood Hail (1.75)
<p>Several trees were blown down in addition to some flooding reported in Pikeville. Also, golf ball-size hail and several trees were downed on Cumberland Mountain.</p>									
Marion County 1 E Jasper	20	1345CST			0	0	0	0	Hail (0.75)
Hamilton County	20	1415CST			0	0	2	0	Thunderstorm Winds Hail (0.75)
<p>Trees and power lines were blown down in Chattanooga by thunderstorm winds. Also, hail was reported at Red Bank.</p>									
Hamilton County Apison	21	1410CST			0	0	0	0	Hail (0.75)
Bradley County 5 SW Cleveland	21	1415CST			0	0	0	0	Hail (0.75)
<p>Hail was reported near the Weatherly Switch community in extreme southwestern Bradley County.</p>									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD				K DOLLARS	I MILLIONS	P PROPERTY	C CROPS	

TENNESSEE Cont'd

Smith County Carthage	21	1630CST- 1720CST				0	0	0	0	Hail (0.75) Thunderstorm Winds
--------------------------	----	---------------------	--	--	--	---	---	---	---	-----------------------------------

Overton County Southern Overton County	21	1815CST				0	0	0	0	Thunderstorm Winds
--	----	---------	--	--	--	---	---	---	---	--------------------

McMinn County	22	1315CST				0	0	2	0	Thunderstorm Winds
---------------	----	---------	--	--	--	---	---	---	---	--------------------

Thunderstorm winds blew down several power lines in Athens.

Bradley County	22	1425CST				0	0	0	0	Thunderstorm Winds
----------------	----	---------	--	--	--	---	---	---	---	--------------------

About 15 to 20 trees were blown down near the intersection of Highways 64 and 411 in the extreme eastern part of the county.

Smith County	28	1700CST				0	0	2	0	Thunderstorm Winds
--------------	----	---------	--	--	--	---	---	---	---	--------------------

Some large trees were downed in the Carthage, Elmwood, and McClure's Bend communities.

Putman County	29	1400CST				0	0	3	0	Thunderstorm Winds Hail (1.00)
---------------	----	---------	--	--	--	---	---	---	---	-----------------------------------

Roofs were blown off a few houses and mobile homes, with several trees down.

Dyer County	29	1600CST				0	0	3	0	Thunderstorm Winds
-------------	----	---------	--	--	--	---	---	---	---	--------------------

Numerous trees and power lines were downed in the western part of the county.

Davidson County	29	1612CST				0	0	2	0	Thunderstorm Wind (G61)
-----------------	----	---------	--	--	--	---	---	---	---	-------------------------

Part of the roof at the Weather Service contract observer building in Nashville was taken off by high winds.

Cumberland County	29	1420CST				0	11	7	5	Thunderstorm Winds Hail (1.75)
-------------------	----	---------	--	--	--	---	----	---	---	-----------------------------------

Morgan County	29	1455CST				0	0	3	0	Thunderstorm Winds
---------------	----	---------	--	--	--	---	---	---	---	--------------------

Roane County	29	1445CST				0	0	3	0	Thunderstorm Wind (G61)
--------------	----	---------	--	--	--	---	---	---	---	-------------------------

McMinn County Athens	29	1530CST				0	0	3	0	Thunderstorm Winds
-------------------------	----	---------	--	--	--	---	---	---	---	--------------------

Rhea County Yellow Creek	29	1515CST				0	0	3	4	Thunderstorm Winds
-----------------------------	----	---------	--	--	--	---	---	---	---	--------------------

Meigs County	29	1517CST				0	0	3	0	Thunderstorm Winds
--------------	----	---------	--	--	--	---	---	---	---	--------------------

Bradley County Cleveland	29	1605CST				0	0	3	0	Thunderstorm Winds
-----------------------------	----	---------	--	--	--	---	---	---	---	--------------------

Polk County Benton	29	1605CST				0	0	3	0	Hail (0.75)
-----------------------	----	---------	--	--	--	---	---	---	---	-------------

Hamilton County	29	1620CST				0	0	3	0	Thunderstorm Winds
-----------------	----	---------	--	--	--	---	---	---	---	--------------------

Sequatchie County Dunlop	29	1710CST				0	0	3	0	Hail (0.75) Thunderstorm Winds
-----------------------------	----	---------	--	--	--	---	---	---	---	-----------------------------------

Marion County	29	1730CST				0	0	0	0	Thunderstorm Winds
---------------	----	---------	--	--	--	---	---	---	---	--------------------

Thunderstorm winds blew down several large trees in the Snow Hill Community.

Grundy County Monteagle	29	1815CST				0	0	3	0	Hail (0.75)
----------------------------	----	---------	--	--	--	---	---	---	---	-------------

Marion County Whitwell	29	1830CST				0	0	3	0	Thunderstorm Winds
---------------------------	----	---------	--	--	--	---	---	---	---	--------------------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TENNESSEE Cont'd

Eastern Tennessee 29 Afternoon & Evening

Severe thunderstorms developed in conjunction with a deepening upper-level disturbance along a front in eastern Tennessee during the afternoon of the 29th. A powerful thunderstorm hit Cumberland County producing 75 mph winds and golf ball- to baseball-size hail. In Crossville, the worst storm in history resulted in a total of 11 injuries and widespread destruction. Windows were broken, roofs were ripped off trailers, and sides of houses were pitted with holes from the wind-driven hail. Large grain bins were toppled, and two well-constructed buildings were completely destroyed. Numerous automobiles sustained considerable hail damage. Over 15,000 acres of crops, including snap beans, corn, and tobacco were damaged. In addition to the direct weather-related injuries, another 25 people were injured (none seriously) from a bus wreck during the storm. The storm then moved into western Morgan County, continuing to down power lines and numerous trees. On Rockwood Mountain in Roane County, a wind gust measured over 70 mph. The line of storms continued to pummel through counties in southeastern Tennessee breaking power lines and downing trees, uprooting them in some cases. In Rhea County, several equipment sheds were flattened, and tobacco crops were destroyed by hail. Total property losses from the storm, including vehicle, crop and livestock damages, and cleanup costs, were estimated at over \$30 million.

TEXAS, Northern

**Harrison County
1 W Hallsville 01 1640CST 0 0 3 ? Thunderstorm Wind**

A downburst blew down several trees 1 mile west of Hallsville.

**Collin County
McKinney 02 2025CST 0 0 3 ? Lightning
McKinney 02 2045CST 0 0 2 ? Lightning
McKinney 02 2310CST 0 0 4 ? Lightning**

In McKinney, lightning ignited the roof of a two-story home at 2025 CST, set ablaze an outdoor shed at 2045 CST, and severely damaged a home at 2310 CST.

**Delta County
Cooper 03 1447CST 0 0 3 ? Thunderstorm Winds**

Strong winds lifted the roof off a barn in Cooper.

**Henderson County
Athens 04 1545CST 0 0 ? ? Thunderstorm Winds**

Strong winds broke the windows of a building in Athens.

**Tarrant County 05 1240CST-
1430CST 0 0 3 ? Flash Flooding**

A heavy downpour of 2 to 3 inches of rain in a two-hour period produced flash flooding over several portions of Tarrant County. High waters up to 3 to 4 feet in depth flooded several parked automobiles in the Stockyards portion of Fort Worth. Ten feet of water submerged a pickup truck beneath a railroad bridge in Fort Worth. Several residents of a Haltom City nursing home were also evacuated when high water flooded the lower floor of the building.

**Young County
Olney 09 1800CST 0 0 3 ? Thunderstorm Winds**

Strong winds lifted the roof and blew out the wall of a maintenance equipment building in Olney.

**Archer County
1 S Archer City 09 1910CST 0 0 ? ? Hail (1.00)**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TEXAS, Northern Cont'd

Hardeman County
Quanah 09 1915CST 0 0 4 ? **Thunderstorm Winds**
Hail (2.75)

In Quanah, strong winds uprooted several trees while baseball-size hail shattered car windshields and the windows of several homes. In addition, baseball-size hail damaged several automobiles, stripped the branches and bark of approximately 100 fruit trees, and severely damaged several golf carts and greens at a local golf course.

Bell County
1 SW Temple 17 1700CST 0 0 3 ? **Thunderstorm Winds**

A downburst blew down several trees onto power lines 1 mile southwest of Temple.

Rusk County
Henderson 21 1415CST 0 0 ? ? **Thunderstorm Wind (G54)**

Collin County
Princeton 21 1730CST 0 0 4 ? **Thunderstorm Wind (G52)**

In Princeton, strong winds of 72 mph damaged the roof and several air conditioning units of a school, uprooted trees, and heavily damaged the storage shed of a building supply company.

Denton County
Pilot Point 21 1915CST 0 0 3 ? **Thunderstorm Winds**

Strong wind blew down several trees at Pilot Point.

Lampasas County
1 NW Rumley 22 1700CST 0 0 5 ? **Thunderstorm Winds**

Strong winds lifted the roof off a storage building, feeding shed, and horse stable and blew down several trees 1 mile northwest of Rumley.

Johnson County
4 S Cleburne 23 1630CST 0 0 3 ? **Thunderstorm Winds**
Cleburne 23 1650CST 0 0 3 ? **Thunderstorm Winds**

Strong winds damaged a barn and blew power lines 4 miles south of Cleburne. In the city of Cleburne, a downburst destroyed a barn, a mobile home, and several outdoor buildings while damaging a playground and blowing down power lines.

Bell County
3 S Holland 28 1845CST 0 0 4 ? **Thunderstorm Winds**

A downburst blew the roof off a couple of buildings, uprooted trees, and blew down power lines 3 miles south of Holland.

Nacogdoches County
Nacogdoches 31 1400CST 0 0 3 ? **Thunderstorm Winds**

A downburst blew down two billboards, several trees, and power lines in Nacogdoches.

Angelina County
Lufkin 31 1440CST 0 0 3 ? **Thunderstorm Winds**

In Lufkin, a downburst blew down numerous trees and fences, damaged an antenna tower, and blew out several windows of businesses in the downtown area.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			K I L L E D	I N J U R E D	P R O P E R T Y	C R O P S	

TEXAS, Northern Cont'd

Anderson County
Palestine
Elkhart

31	1525CST					0	0	3	?	Thunderstorm Winds
31	1530CST					0	0	4	?	Thunderstorm Winds

Strong winds blew down several trees and produced \$1,500 worth of damage to a tractor in Palestine. A downburst destroyed a mobile home valued at \$10,000 in Elkhart.

Kaufman County
Terrell
Forney

31	1625CST					0	0	2	?	Thunderstorm Winds
31	1700CST					0	0	3	?	Thunderstorm Winds

Strong winds blew down trees in Terrell. A downburst damaged the roof of a bank and blew down utility poles and several trees in Forney.

TEXAS, Southern

Tyler County
4 N Woodville
Val Verde County

01	1705CST					0	0	?	?	Hail (1.75)
02	Morning					0	0	?	?	Flash Flooding

Heavy rains to the north of Val Verde County in Crockett and Sutton counties produced flooding along the Devils River. Several roads were closed from high water including FM 189.

Kerr County

02	0930CST					0	0	?	?	Flash Flooding
----	---------	--	--	--	--	---	---	---	---	----------------

Up to 5 inches of rain flooded some roads and low-water crossings in the western part of the county. The Guadalupe flooded and rose over Texas Highway 39 at Hunt.

Menard County

04- 08	1600CST					0	0	?	?	Flash Flooding
-----------	---------	--	--	--	--	---	---	---	---	----------------

Heavy rains in the county and run-off from counties to the west produced flooding and closed some roads. Some roads in the area were closed until the 8th. At Menard, the San Saba River crested at 15.5 feet which was 3 feet above bank full at 1990 CST on the 5th.

Val Verde County

05	1200CST					0	0	?	?	Flash Flooding
----	---------	--	--	--	--	---	---	---	---	----------------

Heavy rains in the northern part of the county, along with runoff from heavy rains in the adjacent counties to the north, produced flooding of low-water crossings. Highways across Howards Draw and the Devils River were closed. Roads were also closed in the Pandale area.

Jim Wells County
Alice

10	1335CST					0	0	?	?	Thunderstorm Winds (G55)
----	---------	--	--	--	--	---	---	---	---	--------------------------

Jim Wells County
Sandia

23	1705CST					0	0	?	?	Thunderstorm Winds (?)
----	---------	--	--	--	--	---	---	---	---	------------------------

High winds from a thunderstorm blew over trees and power lines near Sandia.

Colorado County
Altair

27	1700CST					0	0	5	?	Thunderstorm Winds (?)
----	---------	--	--	--	--	---	---	---	---	------------------------

High winds from a thunderstorm destroyed a mobile home and caused considerable damage to a service station in Altair. Other damage occurred to roofs and barns. One automobile had its windows blown out and a grocery store lost its roof.

Jackson County
Cordele

27	1826CST					0	0	?	?	Thunderstorm Winds
----	---------	--	--	--	--	---	---	---	---	--------------------

High winds from a thunderstorm damaged a barn near Cordele.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD	TIME			KILLED	INJURED	PROPERTY	COSTS	

TEXAS, Southern Cont'd

**Val Verde County
Del Rio** 28 1730CST 0 0 ? ? **Thunderstorm Winds (?)**
High winds from a thunderstorm rolled over and destroyed a mobile home in Del Rio.

**Jefferson County
Beaumont** 31 1430CST 0 0 ? ? **Hail (1.00)**
**Chambers County
Winnie** 31 1500CST 0 0 ? ? **Thunderstorm Wind (G52)**

**Harris County
Houston** 31 1500CST 0 0 ? ? **Thunderstorm Wind (G52)**
31 1500CST 0 1 ? ? **Lightning**
High winds from a thunderstorm caused scattered damage in the city of Houston; mostly on the northeast side. Trees were blown over and damage was reported to the roofs of some apartments. Houston Intercontinental Airport reported wind gusts to 60 mph. Lightning struck a 17-year-old boy and slightly injured him.

**Harris County
Seabrook** 31 1530CST 0 0 ? ? **Thunderstorm Wind (G62)**

**Brazoria County
Angleton** 31 1540CST 0 0 ? ? **Thunderstorm Wind (?)**
High winds from a thunderstorm toppled trees and power lines around Angleton.

**Matagorda County
Bay City** 31 1700CST 0 0 ? ? **Hail (1.75)**

**Calhoun County
Point Comfort** 31 1815CST 1 3 ? ? **Lightning**
31 1815CST 0 0 ? ? **Thunderstorm Wind (?)**
A lightning bolt struck some construction equipment and killed a 27-year-old man. Three other nearby construction workers were slightly injured. Winds from the thunderstorm caused some tree damage in the area. (M270)

**De Witt and Lavaca
Counties** 31 1830CST 0 0 ? ? **Thunderstorm Wind (?)**

High winds from a thunderstorm toppled trees and caused roof damage in and around Yoakum. At least one barn and one pick-up was damaged. Other damage was reported 5 miles southwest of Yoakum in De Witt County.

**Bexar County
15 S San Antonio** 31 2039CST 0 0 ? ? **Thunderstorm Wind (G52)**

TEXAS, Western

**Southern Crockett,
Schleicher, and
Sutton Counties** 01 0030CST 0 0 4 2 **Flash Flood
Flood**

Runoff from heavy rains resulted in flooding of rural areas in the southern Concho Valley. No injuries resulted from the flooding, but damage was done to fencing at several area ranches. The floodwaters persisted until late afternoon on the second.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TEXAS, Western Cont'd

Ector County
1 N Odessa
1 N Odessa

13	1735CST								
	1750CST								

A SKYWARN spotter reported dime-size hail on the northern side of Odessa at 1735 CST. Fifteen minutes later, the spotter reported dime-size hail again falling on the north side of Odessa. No damage was reported with either hail event.

Ector County
7 S Odessa

14	1612CST								
----	---------	--	--	--	--	--	--	--	--

The public observed dime-size hail in southern Ector County at 1612 CST. No damage resulted.

Midland County
Midland

14	1710CST								
----	---------	--	--	--	--	--	--	--	--

An off-duty National Weather Service employee reported downburst winds to 60 mph at 1710 CST. Minor roof damage resulted.

Jeff Davis County
2 SW Fort Davis

15	0400CST								
----	---------	--	--	--	--	--	--	--	--

Lightning struck a house southwest of Fort Davis at 0400 CST. The resulting fire heavily damaged the building.

Lubbock County
1 E Slaton

15	1915CST								
----	---------	--	--	--	--	--	--	--	--

Abundant marble-size hail, driven by wind gusts to 45 mph, damaged cotton crops in southeastern Lubbock County.

Midland County
4 E Midland
3 S Midland

16	1726CST								
	1735CST								

The public reported downburst winds to 80 mph east of Midland at 1726 CST. Nine minutes later, the public reported downburst winds over 60 mph south of Midland. The winds caused minor roof damage and uprooted trees in eastern Midland.

Lubbock County
Reese AFB

16	1925CST								
----	---------	--	--	--	--	--	--	--	--

Thunderstorm winds gusted to 62 mph at Reese Air Force Base in western Lubbock County. No damage was reported.

Lamb County
Olton

18	1545CST								
----	---------	--	--	--	--	--	--	--	--

The Lamb County Sheriff's Office reported downburst winds to 64 mph in Olton. The winds caused minor building damage in and near Olton.

Carson County
White Deer
White Deer
White Deer

18	1624CST								
	1648CST								
	1658CST								

A SKYWARN spotter observed dime-size hail in White Deer at 1624 CST. Downburst winds damaged a railroad crossing gate at 1648 CST. Ten minutes later, the SKYWARN observer reported quarter-size hail in White Deer. Only minor damage resulted from the hail events.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TEXAS, Western Cont'd

Hale County
3 N Abernathy 18 1655CST 0 0 4 2 **Thunderstorm Wind (G56)**

Downburst winds estimated to 65 mph damaged buildings north of Abernathy.

Gray County
Alanreed 18 1805CST 0 0 0 0 **Hail (0.75)**

The McLean Fire Department observed dime-size hail in Alanreed at 1805 CST. No damage was noted.

Randall County
6 NE Canyon 18 1807CST 0 0 2 1 **Hail (1.00)**
4 S Amarillo 18 1810CST 0 0 3 0 **Thunderstorm Wind (G52)**
6 NE Canyon 18 1816CST 0 0 1 1 **Hail (1.25)**
6 NE Canyon 18 1816CST 0 0 2 2 **Flash Flood**

The public reported quarter-size hail in northeastern Randall County at 1807 CST and again at 1816 CST. No significant damage resulted. Downburst winds damaged a large metal sign in northern Randall County, according to the Department of Public Safety. Flash flooding was observed in northeastern Randall County by the Sheriff's Office.

Armstrong County
7 W Claude 18 1813CST 0 0 0 0 **Hail (0.75)**
7 W Claude 18 1813CST 0 0 2 2 **Thunderstorm Wind (G61)**

The Armstrong County Sheriff's Office reported dime-size hail and 70 mph wind gusts in western Armstrong County at 1813 CST. No significant damage resulted.

Hansford County
5 NE Morse 18 1822CST 0 0 0 0 **Hail (0.75)**

The Hansford County Sheriff's Office observed dime-size hail northeast of Morse at 1822 CST. No damage was noted.

Moore County
Dumas 18 1843CST 0 0 4 1 **Thunderstorm Wind (G57)**
Dumas 18 1843CST 0 0 0 0 **Hail (0.88)**

The Dumas Police Department reported downburst wind damage and nickel-size hail in Dumas at 1843 CST. The winds blew the roof off an apartment building. No damage was noted from the hail.

Gray County
3 W McLean 18 1900CST 0 0 0 3 **Thunderstorm Wind (G52)**

The McLean Police Department reported that downburst winds downed large tree limbs west of McLean at 1900 CST.

Hansford County
8 SW Spearman 18 1918CST 0 0 0 0 **Hail (0.75)**

A SKYWARN spotter observed dime-size hail 8 miles southwest of Spearman at 1918 CST. No damage resulted.

Hemphill County
Glazier 18 1920CST 0 0 4 2 **Thunderstorm Wind (G58)**
Glazier 18 1920CST 0 0 0 0 **Hail (0.75)**
5 S Canadian 18 1950CST 0 0 0 0 **Hail (0.75)**

The Lipscomb County Sheriff's Office reported dime-size hail and downburst winds in Glazier at 1920 CST. The winds downed power lines in Glazier. Thirty minutes later, the Hemphill County Sheriff's Office observed dime-size hail 5 miles south of Canadian.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TEXAS, Western Cont'd

Lipscomb County
4 NE Lipscomb

20 1310CST 0 0 2 1 Hail (1.00)

Quarter-size hail fell in northeastern Lipscomb County at 1310 CST. No significant damage resulted.

Potter County
Amarillo
2 E Amarillo

20 1742CST 0 0 0 0 Thunderstorm Wind (G52)
20 1815CST 0 0 0 0 Hail (0.88)

Downburst winds gusted to 64 mph at the National Weather Service Office at Amarillo International Airport at 1742. At 1815 CST, a SKYWARN spotter observed nickel-size hail in southeastern Potter County. No damage resulted.

Carson County
Conway

20 1905CST 0 0 2 2 Hail (1.75)

The Carson County Sheriff's Office reported golf ball-size hail in Conway at 1905 CST. No significant damage was noted.

Presidio and
Brewster Counties

Entire Month 0 0 4 4 Flood

Heavy rain from thunderstorms caused a large runoff of water into Rio Grande River. The heavy rains, along with discharge from dams in northern Mexico down the Rio Conchos, caused flooding of the Rio Grande from Presidio through the Big Bend National Park. High water in the Big Bend National Park area closed and washed out many secondary roads in the park, and periodically closed Texas Highway 170 between Presidio and Lajitas. Crops were damaged along the river just downstream of Presidio.

UTAH

Duchesne County
Blue Lake

07 1315MST 0 1 0 0 Lightning

A 34-year-old male was hit by a lightning bolt and seriously injured. He was on a mountain top near Blue Lake in the Uinta Mountains. Lightning was occurring at an estimated distance of 20 miles from the location a few minutes before the event occurred. The group this man was in had started to leave the area shortly after the observed distant lightning. The lightning threw him about 15 feet, and down an incline. The man was in an unconscious state for a short period for time.

Wasatch County
Heber

09 1700MST 0 0 2 0 Thunderstorm Winds

Strong microburst winds estimated at 60 to 70 mph knocked down several trees 12 miles east of Heber.

Utah County
Provo
Tooele County
Wendover

10 1515MST 0 0 0 0 Thunderstorm Wind (G50)
11 1728MST 0 0 0 0 Thunderstorm Wind (G51)

Washington County

16 0240MST 0 0 2 0 Flash Flood

A large thunderstorm complex moving eastward into Utah produced locally heavy rains over a two-hour period in southwestern Utah. One report from the town of La Verkin noted 1.30 inches of rain falling in a 30-minute period. Water and mud covered portions of Interstate 15 near the Arizona border.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

UTAH Cont'd

Salt Lake County
2 N Magna 16 1410MST Short 5 0 0 0 0 Tornado (F0)

A tornado was sighted along Interstate 80 in Magna by a motorist. It briefly touched down then dissipated. There were no injuries or damage.

Box Elder County 23 1805MST 0 0 0 0 Thunderstorm Wind (G60)

Salt Lake County
West Kearns 24 1738MST 0 0 0 0 Thunderstorm Wind (G54)

Uintah County
Vernal 30 1630MST 0 0 0 0 Thunderstorm Wind (G50)

VERMONT

Rutland County
Pittsford 13 1720EST 0 0 2 2 Thunderstorm Winds

Orleans County
Greensboro 13 1745EST 0 0 3 1 Thunderstorm Winds

Orange County
Washington 13 1800EST 0 0 2 1 Thunderstorm Winds

Caledonia County
Lyndonville 13 1800EST 0 0 3 3 Thunderstorm Winds

Lyndon 13 1800EST 0 0 3 3 Hail (1.50)

Lyndon 13 1810EST 0 0 5 4 Thunderstorm Winds

Walden 13 1820EST 0 0 2 0 Thunderstorm Winds

Essex County
Concord 13 1846EST 0 0 3 1 Thunderstorm Winds

Rutland County
Clarendon 13 1850EST 0 0 3 2 Thunderstorm Winds

Bennington County
Sunderland 13 1900EST 0 0 4 3 Thunderstorm Winds

Arlington 13 1900EST 0 0 4 4 Thunderstorm Winds

Windsor County
15 SSW Leb 13 1905EST 0 0 2 3 Thunderstorm Winds

Springfield 13 1915EST 0 0 4 2 Lightning

Ascutney 13 1930EST 0 0 5 1 Lightning

Windham County
Brookline
Grassy Brook 13 2200EST 0 0 5 4 Flash Flood

Washington County
Plainfield 13 2347EST 0 0 5 0 Lightning

Strong thunderstorm wind at times exceeded 70 mph. Trees, tree limbs, and power lines were blown down. Torrential rain also accompanied the storms with resulting high water and one flash flood.

Windsor County
Sharon 07 0100EST 0 2 6 ? Flash Flood

A beaver pond is suspected as having overflowed. This spilling caused a washout of a Central Vermont Railway freight train. Three to 5 inches of rain had fallen in the area since Sunday evening.

Bennington County
North Pownal 07 0600EST 0 1 5 4 Flash Flood
(Res. Hollow Br.)

Torrential rains during the early morning hours swelled the Reservoir Hollow Brook, in North Pownal. The flooding washed out a private log and timber bridge, as well as a portion of Woods Road. The current bridge replaced a weaker steel bridge which was washed out four years ago.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	
Washington County Worcester	07	Afternoon			0	0	4	?	Small Stream Flood
Addison County S. Lincoln Cornwall	13	1655EST 1712EST			0	0	1 3	0 3	Hail (0.75) Thunderstorm Winds
Washington County Calais Marshfield	13	1720EST 1720EST			0	0	6 5	5 5	Thunderstorm Winds Thunderstorm Wind (G60)
VIRGINIA									
Loudoun County Philomont Aldie	05	1930EST- 2030EST			0	0	0	0	Thunderstorm Winds
Loudoun County Leesburg	05	1930EST- 2030EST			0	0	0	0	Lightning
Fairfax County Reston	05	2130EST			0	0	3	0	Lightning
Surry County 1 SW Dendron	06	0000EST- 0600EST			0	0	3	0	Flood
Fauquier County Rectortown Broad Run The Plains Marshall 1 SE New Baltimore	13	1500EST- 1600EST			0	0	0	0	Thunderstorm Winds
Augusta County Annex	13	1800EST			0	0	3	0	Lightning
Culpeper County Rixeyville	13	1835EST			0	0	0	0	Thunderstorm Winds

VERMONT Cont'd

Washington County
Worcester

07 Afternoon 0 0 4 ? Small Stream Flood

The Winooski's North Fork overflowed onto Vermont Route 12 during the afternoon, forcing the road to be closed for a short time. The Minister Brook also caused some localized flooding during the same time period.

Addison County
S. Lincoln
Cornwall

13 1655EST 0 0 1 0 Hail (0.75)
13 1712EST 0 0 3 3 Thunderstorm Winds

Washington County
Calais
Marshfield

13 1720EST 0 0 6 5 Thunderstorm Winds
13 1720EST 0 0 5 5 Thunderstorm Wind (G60)

VIRGINIA

Loudoun County
Philomont
Aldie

05 1930EST-
2030EST 0 0 0 0 Thunderstorm Winds

The Sheriff's Department reported trees down and roads blocked at both Philomont and Aldie.

Loudoun County
Leesburg

05 1930EST-
2030EST 0 0 0 0 Lightning

Numerous power outages were reported around Leesburg due to lightning strikes.

Fairfax County
Reston

05 2130EST 0 0 3 0 Lightning

Lightning caused \$15,000 damage to a house.

Surry County
1 SW Dendron

06 0000EST-
0600EST 0 0 3 0 Flood

Up to 10 inches of rain overnight caused a flood that washed out two farm ponds. The water also washed out a portion of a state highway which closed for several days for repairs.

Fauquier County
Rectortown
Broad Run
The Plains
Marshall
1 SE New
Baltimore

13 1500EST-
1600EST 0 0 0 0 Thunderstorm Winds

Trees were reported downed in the vicinities of Rectortown, Broad Run, The Plains, Marshall, and Broken Hill (1 mile southeast of New Baltimore).

Augusta County
Annex

13 1800EST 0 0 3 0 Lightning

Lightning struck a house and set it afire causing about \$30,000 damage.

Culpeper County
Rixeyville

13 1835EST 0 0 0 0 Thunderstorm Winds

Trees were reported downed.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

VIRGINIA Cont'd

Prince William County	13	1925EST			0	0	0	0	Thunderstorm Winds
									County police reported trees downed at several locations. About 2,000 homes lost power from the thunderstorms.
Albemarle County 1 N Hatton	14	1600EST- 1630EST			0	0	0	0	Thunderstorm Winds
									About 30 trees were uprooted or downed along a 1-mile stretch of a road.
Mecklenburg County South Hill	14	Afternoon			0	0	0	0	Thunderstorm Winds
									A large oak tree was snapped in two by thunderstorm winds which were said to be "tornado like".
Cities of Norfolk and Portsmouth	15	1500EST- 1700EST			0	0	4	0	Flooding
									Two inches of rain in two hours caused flooding up to car-door-handle depth, with many motorists stranded by stalled cars.
City of Portsmouth	15	1600EST			0	0	3	0	Hail (0.75) Thunderstorm Winds
									Trees were downed near the center of the city; also hail reportedly broke windows and damaged several cars at a car dealership.
Greene County Ruckersville	16	0130EST			0	0	4	0	Lightning
									Lightning struck a radio station's transmitter tower, destroying the transmitter.
Albemarle County 1 NE Rivanna	16	0145EST			0	0	4	0	Lightning
									Lightning struck a building at the Charlottesville-Albemarle County Airport (CHO) causing about \$50,000 damage.
Middlesex County 2 E Deltaville	16	1230EST			0	0	0	0	Waterspout
									A short-lived waterspout was reported in the area of Stringray Point.
Mecklenburg County Clarksville	16	1600EST- 2000EST			0	0	3	0	Flooding Lightning Thunderstorm Winds
									A thunderstorm dumped more than 3 inches of rain in the Clarksville area in a short time, causing widespread ponding and flooding. Several businesses reported water damage. Lightning and power lines downed by trees, caused power outages to about 500 residences.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

VIRGINIA Cont'd

City of Petersburg 24 0100EST-0700EST 0 0 4 0 **Flooding**

More than 3 inches of rain overnight caused flooding on many streets as water accumulated in many low-lying areas.

Nottoway County
Crewe
Burkeville 29 1445EST 0 0 4 3 **Hail (0.75)**
Thunderstorm Winds

In Crewe, large trees were downed across roadways; a tree fell onto a house; large plate-glass windows were blown out of stores; and several large utility buildings were destroyed. In Burkeville, a restaurant was unroofed; large tree limbs were downed; and the hail destroyed some tobacco and corn crops.

Lee County
Jonesville 29 1500EST 0 0 3 0 **Thunderstorm Winds**

High winds from a thunderstorm downed large trees and power lines in the Jonesville area.

Fairfax County
Stratford Landing 29 1730EST 0 0 0 0 **Thunderstorm Winds**

Several trees were downed.

Cities of Hampton and Newport News 29 1845EST 0 0 5 0 **Thunderstorm Winds**

Strong thunderstorm winds blew a boat house from a marina onto 25 sailboats and three powerboats in Menchville, in the northern part of Newport News. Damage to the boats and the marina had been estimated at \$1 million. Trees and power lines were also downed in the northern part of Newport News. Several homes were damaged by large trees falling onto them. Winds gusted to 52 knots (58 mph) at Langley AFB in Hampton.

Northampton County
3 NE Cape Charles
Cheriton
Chesapeake 29 1930EST 0 0 4 0 **Thunderstorm Winds**

A house was partially unroofed, several homes and outbuildings were damaged, and 1,200 people were without power. Trees and branches were downed across roads. Most damage was done in the Cheriton and Cherrystone (3 NE Cape Charles) areas. A historic site, Eyre Hall, suffered extensive damage to the house's roof and chimneys and to trees on the grounds. Trees were downed onto cars in Chesapeake along with some damage to chimneys and outbuildings. Reports of a tornado were not confirmed; the damage was investigated and was determined to have been caused by a microburst coming off the water.

Powhatan County **Summer** 0 0 0 5 **Drought**

Drought resulted in estimated reduction of crop yields in Powhatan County costing about \$2 million. Corn and soybeans were the hardest hit. County officials petitioned the Governor to declare the county a disaster area.

WASHINGTON

Washington
WAZ007-009
North-Central and Central Basin 20 1800PST 0 0 4 0 **Thunderstorm Winds**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

WASHINGTON Cont'd

A nearly stationary upper-level weather disturbance over north-central Oregon circulated abundant high-level moisture over eastern Washington through the day. Convection developed in the unstable air mass during the evening with brief, heavy rain showers and periods of gusty winds. In the town of Odessa, in Lincoln County, a small hangar at the local airport was completely destroyed by wind gusts during one of the showers. Except for scattered power outages and small mudslides reported in Ferry and Okanogan counties, no other major damage was reported.

WAZ008-012
East Slopes,
Cascades and
South-Central

21	0200PST-1000PST	0	0	5	0	Flooding
----	-----------------	---	---	---	---	----------

Widespread convection continuing from the previous evening across eastern Washington dumped rainfall amounts ranging from 1- to 3-inches over the eastern Cascade slopes and Columbia Basin. No serious flash flooding occurred; however, roads and highways around the region were covered with up to 2 feet of water at times. The hardest hit areas were Omak, Kittitas, and towns southeast of Yakima. Irrigation systems in the Wenatchee, Ellensburg, and Yakima areas were also damaged when the runoff washed out irrigation ditches in places.

WAZ010-013
Southeast and
South-Central

29	1900PST	0	0	0	0	High Winds
----	---------	---	---	---	---	------------

An upper-level weather system moved across eastern Washington during the evening causing thunderstorms and a surface low pressure area to develop. Strong winds accompanied the thunderstorms causing areas of blowing dust in the Tri-Cities and Palouse area. Peak wind gusts were 67 mph at Wanapum Dam, 30 miles southeast of Ellensburg, and 48 mph at Walla Walla. No major damage was reported, but visibilities near zero forced the closure of State Highway 26 west of Colfax for about one hour.

WEST VIRGINIA

Fayette County
Smithers

10	1815EST-2000EST	0	0	3	0	Flash Flood
----	-----------------	---	---	---	---	-------------

Raleigh County
Arnett

10	1815EST-2000EST	0	0	2	0	Flash Flood
----	-----------------	---	---	---	---	-------------

One to 2 inches of rain fell in an hour. Homes and businesses flooded in Smithers. Sandlick Creek and Marsh Fork flooded and washed debris onto roads in the Arnett-Dameron vicinity.

Wood County
Murphytown
Dallison
Tallyho

18	2300EST-	0	0	6	?	Flash Flood
19	0300EST					

A localized cloudburst of 5.05 inches was measured between 2000 and 2330 EST over the headwaters of Laurel Fork. Training thunderstorms produced the downpour. Laurel Fork, Stillwell Creek, and Worthington Creek flooded. A 23-year-old man and a 19-year-old woman had to be rescued by county emergency teams using a boat and ropes. The truck they were driving was swept away by a 15-foot wall of water along Old St. Mary's Pike. They abandoned the vehicle and were stranded in a tree near the intersection of Interstate 79 and Worthington Creek. Several businesses received water damage, the most severe a sheet metal and roofing shop. Damage statistics include four or five mobile homes destroyed, 27 homes with major damage, and 25 to 30 other homes had minor damage. Pleasant Valley School and Methodist Church had 2 to 3 feet of water inside. The Federal Small Business Administration took around 40 applications for relief through its Disaster Loan Program. Damage was estimated at \$750,000.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

WEST VIRGINIA Cont'd

Fayette County Smithers	19 1445EST	0 0 2 0	Thunderstorm Winds
Several trees were blown down along Route 2.			
Ohio County Wheeling	19 1723EST	0 0 0 0	Thunderstorm Winds
Several large trees were blown down along Laidly Run.			
Wood County Parkersburg Murphytown	19 1800EST- 2000EST	0 0 2 0	Flash Flooding
Streams affected during the previous night rose again and flooded roads and covered small bridges. No dwellings were affected.			
Wood County Parkersburg Wadeville	22 0400EST- 0900EST	0 0 4 0	Flash Flood
Several small streams overflowed and blocked roads. One woman was rescued from a stranded car. Telephone service was lost to 1,500 dwellings when water seeped into phone cables.			
Wood County Murphytown	22 1330EST- 1430EST	0 0 2 0	Flash Flood
Laurel Fork, Worthington Creek, and Stillwell Creeks overflowed. Roads and bridges were blocked.			
Wayne County East Lynn	22 1300EST- 1600EST	0 0 5 ?	Flash Flood
Training of thunderstorms caused flooding along Laurel Creek and Route 37. Richard Fry Road (County Route 37/25) was flooded by Twelvepole Creek. Headwaters of Two-Mile Creek flooded homes along County Route 37/11. Damage statistics include one house and one mobile home destroyed, four houses and three mobile homes with major damage, four houses and five mobile homes with minor damage. Damage estimated at \$150,000.			
Lincoln County Ranger-Cuzzie Harts	22 1400EST- 1600EST	0 0 3 0	Flash Flood
Red River Fork and McClarity Branch flooded. Ten Mile Creek in the Cussie-Ranger area, plus Frances Creek near Harts also flooded. Private bridges were damaged.			
Harrison County Salem Clarksburg	22 1830EST- 23 0200EST	0 0 ? 0	Flash Flood
Salem Fork had flooded roads with street flooding around Clarksburg and Anmoore.			
Doddridge County Blandville Center Point	23 0200EST- 0300EST	0 0 ? 0	Flash Flood
Meathouse Fork flooded Route 18 near Blandville. Route 23 was covered by one-half foot of water near Center Point.			

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD				KILLED	INJURED	PROPERTY	CROPS	

WEST VIRGINIA Cont'd

Pocahontas County
 Campbelltown 23 2200EST-
 Woodrow 24 0300EST

0 0 5 0

Flash Flood

Stony, Dry Creek, and Indian Draft were flooded. Thirty-five homes had 3-inches to 1-foot of water in living areas. One house and one mobile home were moved off foundations. The EDRAV Fish Hatchery, the Department of Highways garage, a building supply store, and a motel also received water damage. One private bridge over Stony Creek was damaged. Two rainfall reports were in the affected region. Near the Handley Public Hunting & Fishing area in the headwaters of the Willimas River, 3.30 inches was measured between 2100 and 2300 EST. Along Stony Creek near Woodrow, 2.55 inches fell between 2130 and 2300 EST. Damage was estimated at \$125,000.

WISCONSIN

Oneida County
 Minocqua 09 1500CDT 0 0 ? ? Hail (1.00)
 Harshaw 09 1540CDT 0 0 ? ? Hail (0.75)

Rusk County
 4 W Ladysmith 09 1510CDT 0 0 ? ? Thunderstorm Winds

Buffalo County
 1 E Alma 09 1810CDT 0 0 ? ? Hail (0.75)

Monroe County
 Fort McCoy 09 2030CDT 0 13 ? 0 Lightning

Scattered severe thunderstorms dropped hail up to 1-inch in diameter and knocked down some trees and power lines. Lightning struck two separate areas of Fort McCoy injuring 13 Army reservists.

Washington County
 Germantown 11 2015CDT 0 0 ? ? Thunderstorm Wind (G53)

A severe thunderstorm packing winds up to 61 mph occurred at Germantown.

WIZ003-004-010-011-012-014-018-
 Barron, Lincoln, Chippewa, Monroe, Juneau, Winnebago, Vernon, LaFayette Counties

17 Evening into
 18 Afternoon

0 0 6 ?

Flooding

Widespread rainfall of 1- to 4-inches with local amounts of 5- to 8-inches over Wisconsin caused numerous bridges and roads to be washed out and basements to flood. In LaFayette County \$200,000 in damage occurred to recently repaired roads and abutments. The hardest hit area was Tomah in Monroe County. A combination of 8 inches of rain and stuck flood gates caused Lake Tomah to run out of its banks. In all, over 1,000 residents were evacuated, 250 homes seriously damaged, several cars swept away by the waters; and the lower portion of Tomah Memorial Hospital was flooded. Over \$3.7 million in damage resulted including several washed out roadways.

Grant County
 Boscobel 17 2110CDT 0 0 ? ? Thunderstorm Wind

A severe thunderstorm toppled a barn and trees near Boscobel.

Waukesha County
 Pewaukee 18 0008CDT 0 0 ? ? Thunderstorm Wind (G50)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

WISCONSIN Cont'd

Racine County Burlington	18	0130CDT			0	0	?	?	Thunderstorm Winds
A severe thunderstorm with winds gusting to 58 mph was observed in Pewaukee. Another severe thunderstorm damaged a house in Burlington.									
Green Lake County Berlin	18	1710CDT			0	0	?	?	Thunderstorm Wind (G54)
Waushara County Wautoma	18	1831CDT			0	0	?	?	Thunderstorm Winds
Scattered severe thunderstorms with winds up to 61 mph downed trees and power lines.									
Oneida County Rhineland	26	0415CDT			0	0	?	?	Thunderstorm Winds
Clark County Loyal	26	0415CDT			0	0	5	5	Thunderstorm Wind (G79)
Clark County Neilsville	26	0420CDT			0	0	?	?	Thunderstorm Winds
Marathon County Stratford	26	0435CDT			0	0	?	?	Thunderstorm Wind
St. Croix County 3 S Baldwin	26	0500CDT			0	0	5	?	Thunderstorm Winds
Pierce County Beldenville	26	0500CDT			0	0	5	?	Thunderstorm Winds
Forest County Crandon	26	0530CDT			0	0	?	?	Thunderstorm Winds
Langlade County Bryant	26	0545CDT			0	0	4	0	Thunderstorm Winds
Trempealeau County Arcadia	26	0615CDT			0	0	?	?	Hail (0.75)
Trempealeau County Osseo	26	0625CDT			0	0	?	?	Thunderstorm Winds
Trempealeau County Galesville	26	0625CDT			0	0	?	?	Thunderstorm Winds
Trempealeau County Arcadia	26	0625CDT			0	0	?	?	Thunderstorm Winds
Portage County Stevens Point	26	0625CDT			0	0	?	?	Thunderstorm Winds
LaCrosse County LaCrosse	26	0650CDT			0	0	5	?	Thunderstorm Wind (G66)
Jackson County Melrose	26	0700CDT			0	0	?	?	Thunderstorm Winds
Monroe County Sparta	26	0710CDT			0	0	?	?	Hail (0.75)
Monroe County Sparta	26	0710CDT			0	0	?	?	Thunderstorm Winds
Vernon County Viroqua	26	0720CDT			0	0	5	4	Thunderstorm Winds
Vernon County Hillsboro	26	0730CDT			0	0	?	?	Thunderstorm Winds
Crawford County Wauzeka	26	0800CDT			0	0	?	?	Thunderstorm Winds
Dane County Deforest	26	0835CDT			0	0	?	?	Thunderstorm Winds
Washington County Kewaskum	26	0935CDT			0	0	?	?	Thunderstorm Wind (G56)
Manitowoc County Manitowoc	26	1000CDT			0	1	3	?	Thunderstorm Winds

Severe morning thunderstorms raced across the Badger state generating gusty winds between 60 and 91 mph, dropping hail up to three-quarter-inch in diameter, and causing scattered property damage. A man was injured when hit in the back by a collapsing tent pole blown down by severe thunderstorm winds in Manitowoc. In the Loyal area of Clark County over \$145,000 in farm and property damage occurred as well as \$135,000 in crop damage. Several homes were damaged in the Pierce County town of Beldenville by intense winds. In the city of Lacrosse winds gusting to 76 mph downed over 50 trees, damaged 10 cars, and 5 homes. The roof of a grandstand was ripped off by strong winds in Viroqua (Vernon County).

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD	TIME			KILLED	INJURED	PROPERTY	CROPS	

WYOMING

Sweetwater County Near Rock Springs	01	1407MST- 1440MST				0	0	2	0	Thunderstorm Wind (G55)
Severe thunderstorms produced wind gusts up to 65 mph between 1407 and 1440 MST at Rock Springs and Superior.										
Carbon County Near Rawlins	01	1618MST- 1630MST				0	0	2	0	Thunderstorm Wind (G50)
Thunderstorm winds of nearly 60 mph blew through the Rawlins area between 1618 and 1630 MST.										
Albany County 2 NE Laramie	03	1529MST- 1535MST	0.1	10		0	0	0	0	Tornado (F0)
A weak short-lived tornado touched down about 2 miles northeast of Laramie between 1529 and 1535 MST.										
Laramie County 25 NNW Cheyenne To Near Cheyenne	03	1612MST- 1700MST				0	0	2	0	Thunderstorm Wind (G52)
Thunderstorm winds of up to 60 mph occurred over much of the western half of Laramie County between lines.										
Sweetwater County 15 W Farson	04	1430MST	0.1	10		0	0	0	0	Tornado (F0)
One, and possibly two, weak, short-lived tornados were sighted 15 miles west of Farson at 1430 MST over open country.										
Natrona County Near Casper	04	1455MST- 1500MST				0	0	0	0	Funnel Clouds
Several short-lived funnel clouds were sighted in and near Casper between 1455 and 1505 MST.										
Converse County 10 NW Douglas	04	1900MST				0	0	3	0	Lightning
Lightning struck a house near old Fort Fetterman causing extensive damage.										
Platte County	04	1800MST- 2100MST				0	0	0	0	Flooding
Thunderstorm dropped 1- to 2-inches of rain on parts of Platte County between 1800 and 2100 MST. Water was reported over some roads, mainly near Glendo and Southwest of Wheatland.										
Natrona County Casper to Midwest	07	1830MST- 2030MST				0	0	3	0	Thunderstorm Wind (G60)
Thunderstorm winds of 50 to 60 mph, with a few reports of up to 70 mph, occurred across central and northern Natrona County from 1830 to 2030 MST. Some damage to roofs was reported around Midwest.										
Sheridan County 35 W Sheridan	07	1910MST				0	0	0	0	Funnel Cloud
A brief funnel cloud was sighted by a pilot flying 35 miles west of Sheridan at 1910 MST.										

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

WYOMING Cont'd

Platte County Near Chugwater	11	1325MST- 1330MST			0	0	3	0	Hail (2.00)
									Hail up to 2 inches in diameter fell in the Chugwater area from 1325 to 1330 MST.
Fremont County NW of Riverton	11	1400MST- 1415MST			0	0	3	5	Hail (1.00)
									A hailstorm of 1-inch stones pelted an area northwest of Riverton between 1400 and 1415 MST. Damage was primarily to crops.
Carbon County Near Saratoga	11	1800MST- 2000MST			0	0	3	0	Flash Floods
									Heavy thunderstorm rains of 1- to 3-inches caused flash flooding mainly in the snow range 15 to 20 miles east of Saratoga. Two campgrounds in the Snowies had to be evacuated due to high water on creeks and streams.
Lincoln County Near Opal	16	1600MST- 1800MST			0	0	4	0	Flash Flood
									A thunderstorm dropped up to 5 inches of rain in the area around Opal from 1600 to 1800 MST. A flash flood resulted, with water 2- to 4-feet deep across Highway 30 at one time. Several ranches received minor damage, with one ranch losing 200 tons of cut hay.
Albany/Platte Counties 25 SW Wheatland	20	1330MST- 1630MST			0	0	4	0	Flash Flood
									A small but intense thunderstorm dumped up to 4 inches of rain and small hail just east of the Sybille Research Center. Water filled normally dry creeks, with Highway 34 covered with up to 4 to 5 feet of water in some spots. Some bridges and corrals were washed out on ranches.
Laramie County Cheyenne	30	1630MST- 1640MST			0	0	3	0	Thunderstorm Winds (?)
									A small but intense dust devil roared through a parking lot on the east side of Cheyenne from 1630 to 1640 MST. Sand and debris damaged about 12 cars, with the windows of one car blown out.

ALASKA, Southeastern

None reported.

ALASKA, Southern

Aleutians	03- 04	N/A							High Winds
------------------	-----------	-----	--	--	--	--	--	--	------------

An intense 968-mb low moved northeastward into the western Bering Sea then weakened north of the western Aleutians. Sheyma reported southwest winds 50 to 55 mph with gusts to 69 mph during the night. Adak had west winds to 46 mph on the 4th. This storm had a tropical origin as western North Pacific Tropical Storm "Steve".

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	
ALASKA, Southern Cont'd									
Yukon-Kuskokwim Delta									
Bristol Bay Coast	17	N/A			0	0	5	?	Surge
<p>A strong low moved northward across the eastern Aleutians and into the northeast Bering Sea. South winds to 50 mph and high tides caused coastal flooding along the lower Kuskokwim River, Kuskokwim Bay, and Bristol Bay. Communities affected included Bethel, Tuntutuliak, Napakiak, Kwigillingok, Nunapitchuk, Goodnews Bay, Eek, and Togiak. The worst damage was to private property such as subsistence food, boats, motors, fishing nets, fishing camps, and homes. Also several roads and boardwalks were washed out, and a school and clinic in Kwigillingok were damaged. Total state aid needed was estimated at \$295,000.</p>									
Kuskokwim Valley									
	27-28	N/A			0	0	?	?	Flood
<p>Heavy rains in the Kuskokwim River Basin over the weekend of the 25th caused flooding on the 27th and 28th. One to 2 inches of rain fell from Bethel to McGrath with unofficial reports of more than 2 inches. Houses were flooded at Nikolai on the 28th. This was the first rain-caused flood in that area in 20 years.</p>									
HAWAII									
None reported.									
PACIFIC									
None reported.									
PUERTO RICO									
Puerto Rico Rio Grande									
	02	Afternoon			2	0	0	0	Heavy Rain
<p>A three-year-old boy and his two-year-old brother drowned as they were swept away by a surge of the Rio Espiritu Santo in Rio Grande near El Yunque. They were two of a family of six who were carried off by a huge wave while picnicking on a river flat boulder in Barrio El Verde's Parcelas Davila on Route 186. The father, mother, and one-year-old and three-month-old sisters managed to save themselves. A total of 2.63 inches of rain were reported at Pico del Este, Luquillo in the El Yunque area for the 24-hour period ending August 3rd at 0800 LST (M30, M20)</p>									
Toa Baja									
	09	Afternoon			0	0	4	0	Downburst
<p>Winds associated with a downburst of a thunderstorm ripped apart zinc roofs of six wooden homes in Levittown, Toa Baja causing some panic among the 21 residents at the Punta Salinas community. No injuries were reported. The thunderstorms and gusty winds were a result of a tropical wave that edged its way across Puerto Rico causing the swelling of some creeks and streets. No severe flooding was reported.</p>									
Luquillo									
	13	Afternoon			1	0	4	0	Flash Flooding
<p>A 62-year-old woman drowned when her car was swept away by a swollen creek. The woman and her husband, who lived in Parcelas Fortuna-Luquillo near the Fortuna Creek, boarded their car when they saw the creek was swelling. The two remained trapped in the car as they were swept away by current. The husband was able to survive.</p> <p>Also several Rio Grande families were relocated to shelters as their houses were flooded by the Rio Palmer. A maximum precipitation total of 4.42 inches was reported at San Juan City gage for the 24-hour period ending August 14th at 0800 LST as a tropical wave moved west interacting with a strong trough. (F620)</p>									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

U.S. VIRGIN ISLANDS

None reported.

CORRECTIONS

JANUARY 1990

ILLINOIS - Page 33

Northern Illinois	25	0200CST 1400CST	0	12	6	0	Major Winter Storm Lightning
-------------------	----	--------------------	---	----	---	---	---------------------------------

JULY 1990 - Pages 83-85

Heading should be Mississippi and not Minnesota.

STORM DAMAGE CATAGORIES

REFERENCE NOTES

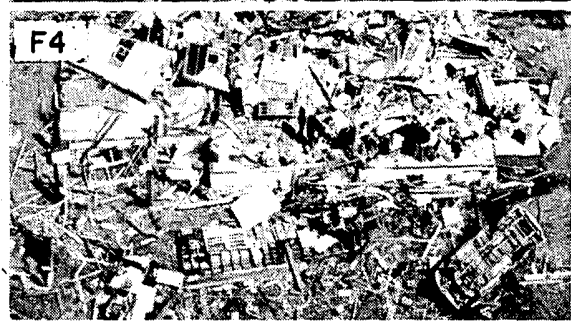
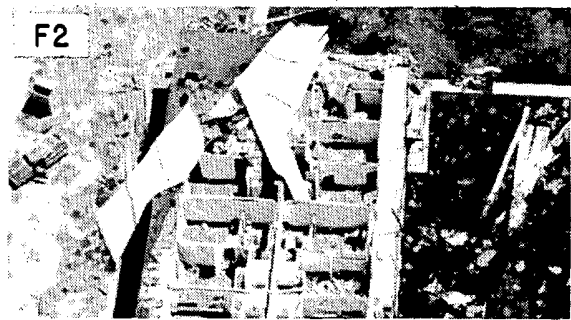
- 1 Less than \$50
- 2 \$50 to \$500
- 3 \$500 to \$5,000
- 4 \$5,000 to \$50,000
- 5 \$50,000 to \$500,000
- 6 \$500,000 to \$5 Million
- 7 \$5 Million to \$50 Million
- 8 \$50 Million to \$500 Million
- 9 \$500 Million to \$5 Billion

- 0/Blank None reported.
- * Miles instead of yards.
- ** Yards instead of miles.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- ≠ Report incomplete.
- ≠≠ Report not received.
- o/c Indicates Crop Damage amount is included in the value given for property damage.

When reports are not received or are incomplete, the Storm Summary National Death and Injury totals may also be incomplete.

Definition of Fujita Tornado Scale (F scale)

- (F0) Gale tornado (40-72 mph): Light damage
Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage sign boards.
- (F1) Moderate tornado (73-112 mph): Moderate damage
The lower limit (73 mph) is the beginning of hurricane wind speed; peel surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads.
- (F2) Significant tornado (113-157 mph): Considerable damage
Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
- (F3) Severe tornado (158-206 mph): Severe damage
Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off ground and thrown.
- (F4) Devastating tornado (207-260 mph): Devastating damage
Well-constructed houses leveled; structure with weak foundation blown off some distance; cars thrown and large missiles generated.
- (F5) Incredible tornado (261-318 mph): 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 m; trees debarked; incredible phenomena will occur.
- (F6-F12) (319 mph to Mach 1, the speed of sound):
The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.



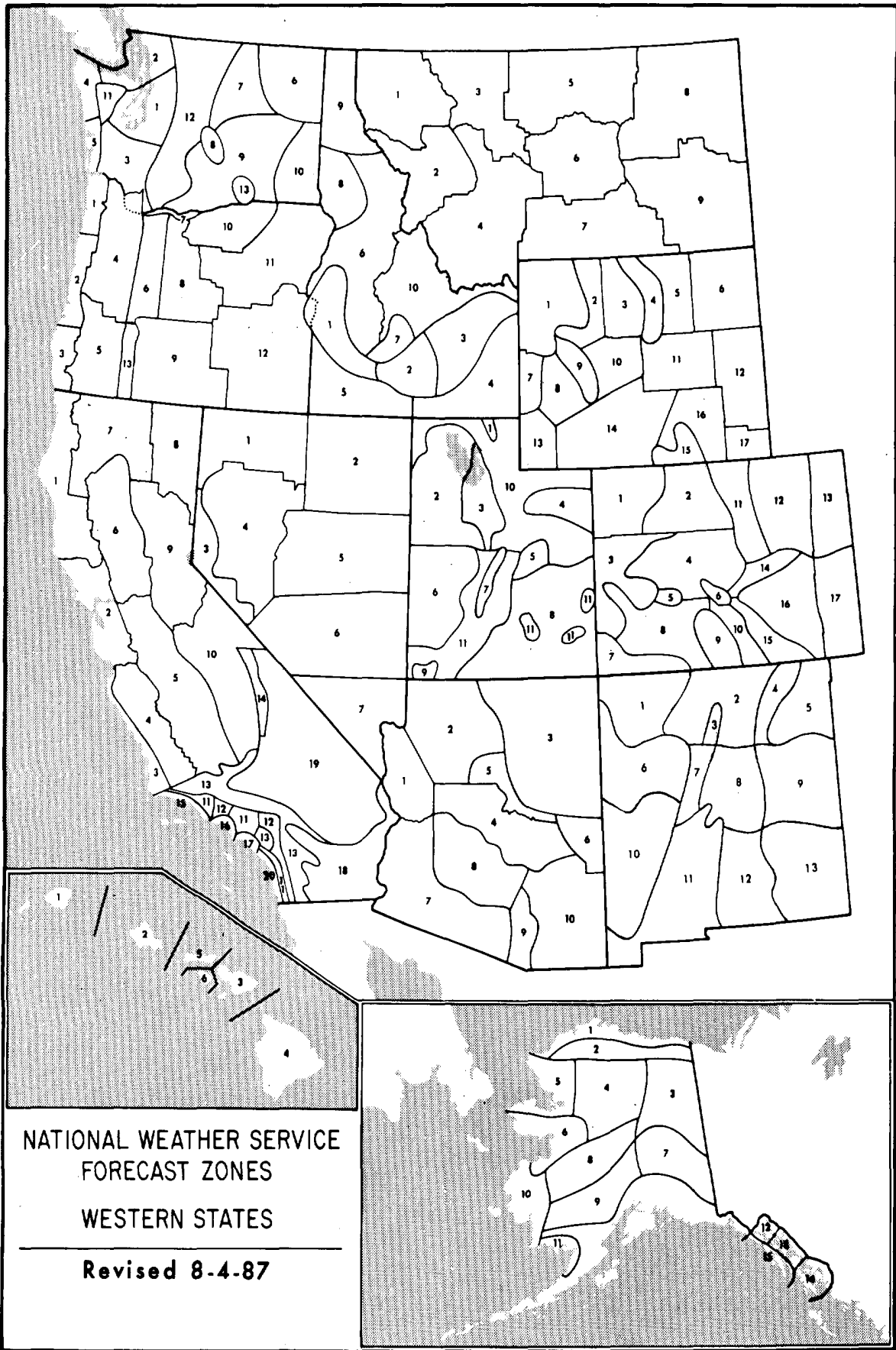
- (F0+F1) Weak Tornado
- (F2+F3) Strong Tornado
- (F4+F5) Violent Tornado

From J. Atmos. Sci., August 1981, p. 1517-1519

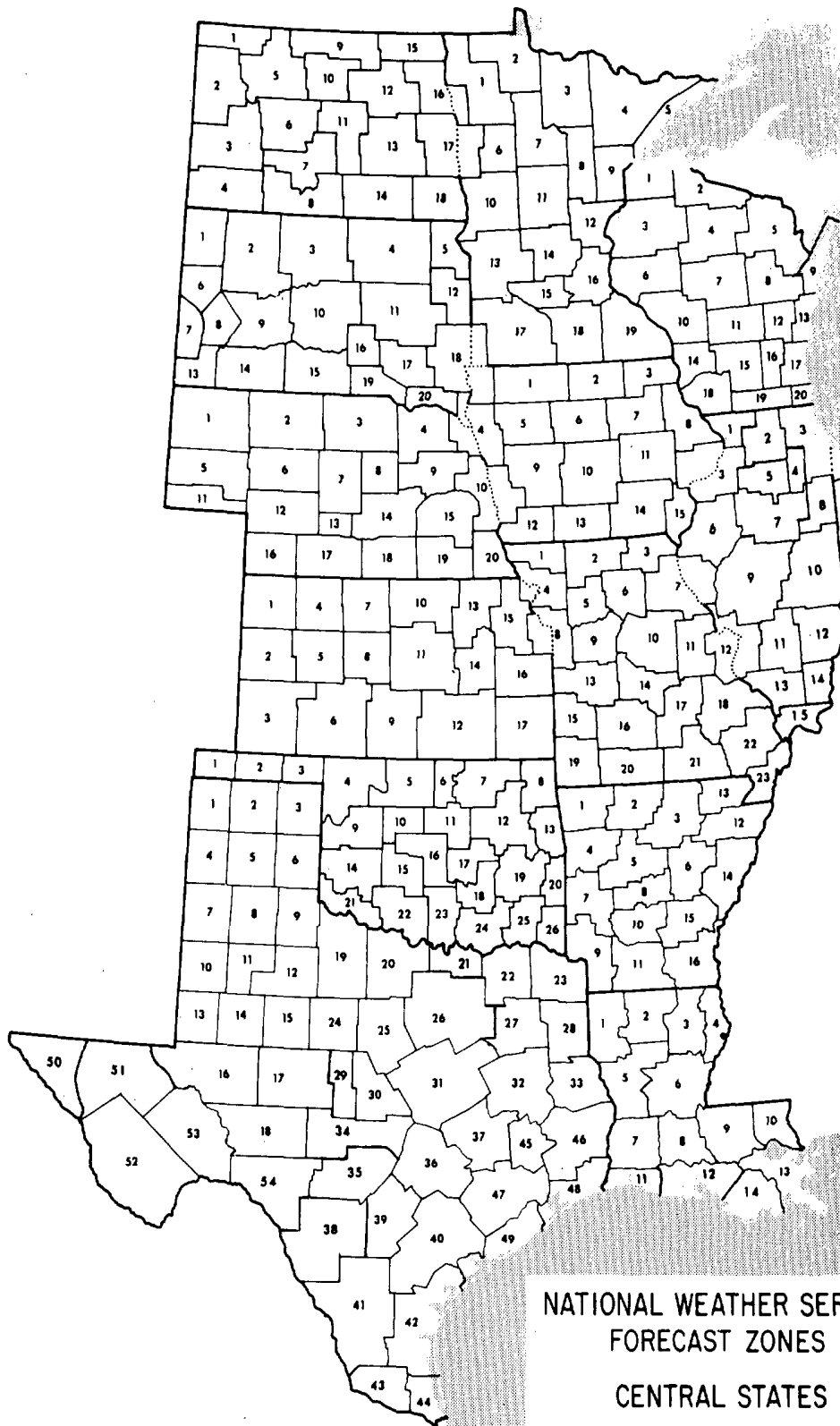
STORM SUMMARY

AUGUST 1990

TYPE	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	IDAHO	ILLINOIS	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND & DC	MASSACHUSETTS	MICHIGAN	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE
TORNADOES																											
Number				1	4			3		3	2	2	9	1		1			1	1	1	1	1	4			
Days				0	3			0		0	2	1	6	0		0			0	0	0	0	0	2			
Deaths				0	0			0		0	3	0	0	0		0			0	0	0	0	0	0	0	0	
Injuries				0	0			0		0	5	0	0	0		0			0	0	0	0	0	0	0	0	
Property Damage				0	0			0		0	8	0	6	0		0			0	0	0	0	0	0	0	0	
Crop Damage				0	0			0		0	6	0	4	0		0			0	0	0	0	0	0	0	0	
HAIL																											
Deaths	0	0	0	0	0			0	0	0	0	0	0	0	0												
Injuries	0	0	0	0	0			0	0	0	0	0	0	0	0												
Property Damage	0	0	0	0	0			0	0	0	0	0	0	0	0												
Crop Damage	0	0	0	0	0			0	0	0	0	0	0	0	0												
THUNDERSTORM WINDS																											
Deaths	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Injuries	3	0	0	8				0	0	0	2	1	1	0	0												
Property Damage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
Crop Damage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
HIGH WINDS																											
Deaths																	0									0	
Injuries																	0									0	
Property Damage																	0									0	
Crop Damage																	0									0	
LIGHTNING																											
Deaths	1		0	0	0	0	0	5	0	0	1	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	
Injuries	4		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Property Damage	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Crop Damage	0		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FLASH FLOODS																											
Deaths		1		2	0				0	0	0	0	0	0	0												
Injuries		0		0	0				0	0	0	0	0	0	0												
Property Damage		0		0	0				0	0	0	0	0	0	0												
Crop Damage		0		0	0				0	0	0	0	0	0	0												
FLOODS																											
Deaths		0					0				0		0													0	
Injuries		0					0				0		0													0	
Property Damage		0					0				0		0													0	
Crop Damage		0					0				0		0													0	
HEAVY SNOWSTORMS AND BLIZZARDS a																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ICE STORMS #																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
HURRICANES AND TROPICAL STORMS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ALL OTHERS																											
Deaths			0						0	0									0					0			
Injuries			0						0	0									0					0			
Property Damage			0						0	0									0					0			
Crop Damage			0						0	0									0					0			

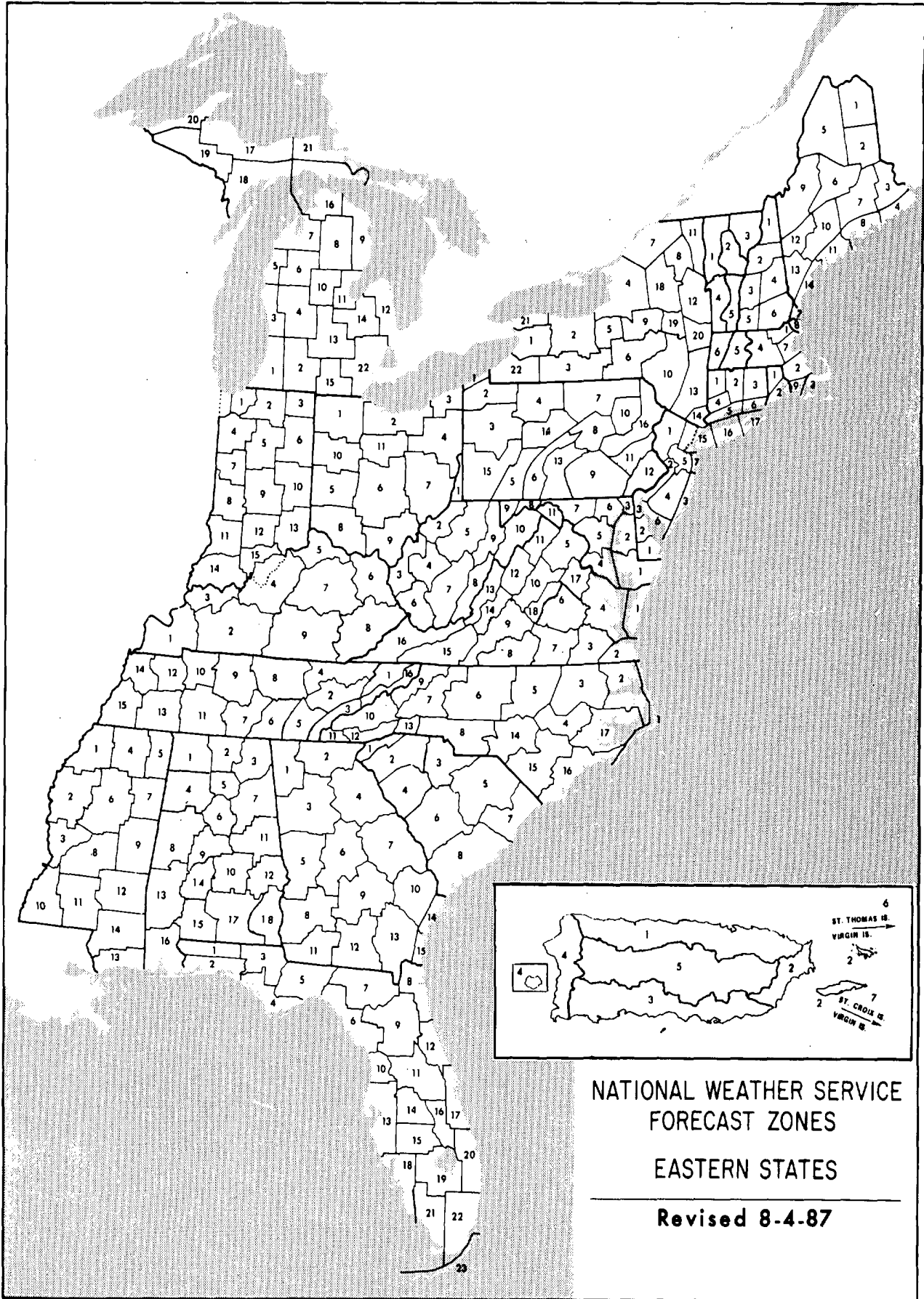


NATIONAL WEATHER SERVICE
FORECAST ZONES
WESTERN STATES
Revised 8-4-87



NATIONAL WEATHER SERVICE
FORECAST ZONES
CENTRAL STATES

Revised 8-4-87



STORM DATA

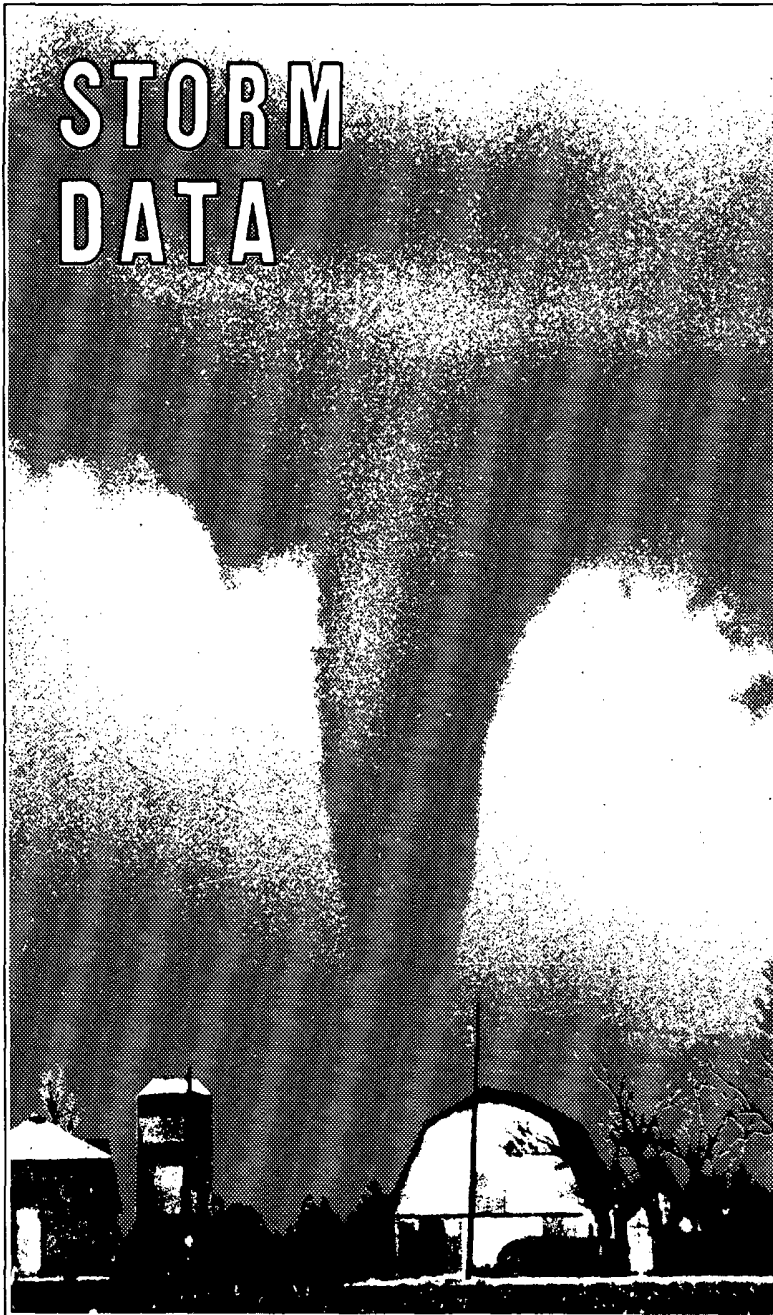


Photo courtesy: Larry Miller, Kansas Heritage Photography

STORM DATA is a monthly chronicle of significant and unusual weather events. Photographs and charts depicting storms, descriptions of extraordinary weather events occurring in each state, and summary tables of storm-related deaths, injuries, and property and crop damage are contained in this publication.

To order materials:

Fill out order form below. Please print. FOLD ON DOTTED LINE & TAPE CLOSED.

Service & handling:

Add \$5.00 per order - initial subscription only.

Make payment to:

Commerce/NOAA/NCDC, in U.S. funds drawn on a U.S. bank or U.S. affiliate. Payment may be made by VISA, MasterCard, American Express, check or money order. All orders must be paid in advance.

Telephone:

(704) 259-0682

STORM DATA

<u># of Issues</u>	<u>Unit Price</u>	<u>Total</u>
Individual month(s)* _____	@ \$4 \$ _____	
1 yr. subscription _____	@ \$32 \$ _____	
Service & Handling	\$ 5.00	
Rush** (add \$37)	\$ _____	
TOTAL CHARGES	\$ _____	

* List years and months on separate sheet of paper

** Rush applies to back issues only

SHIP TO

Company/Person: _____
 Attention: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____
 Card No: _____
 VISA/AMEX/MC: _____ Exp Date: _____
 Cardholder's
 Signature: _____

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

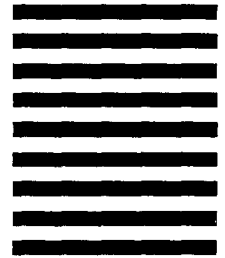


NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 1100 WASHINGTON, DC

POSTAGE WILL BE PAID BY NOAA

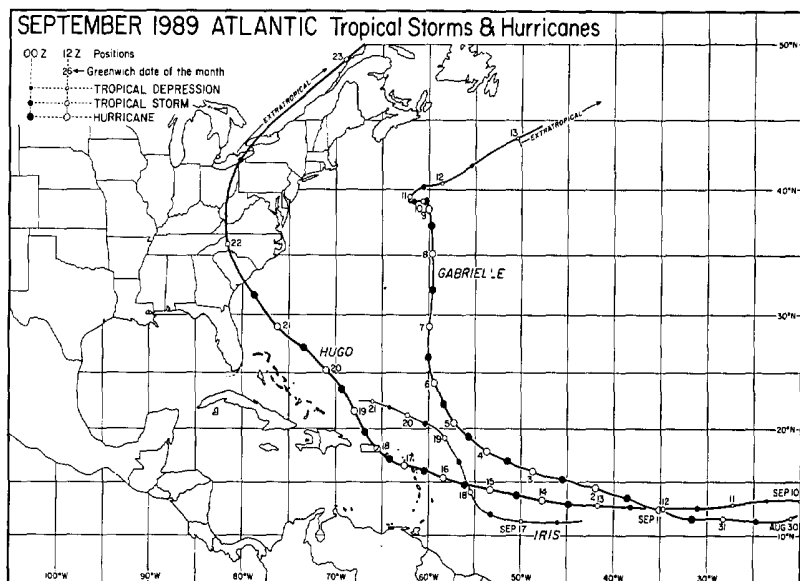
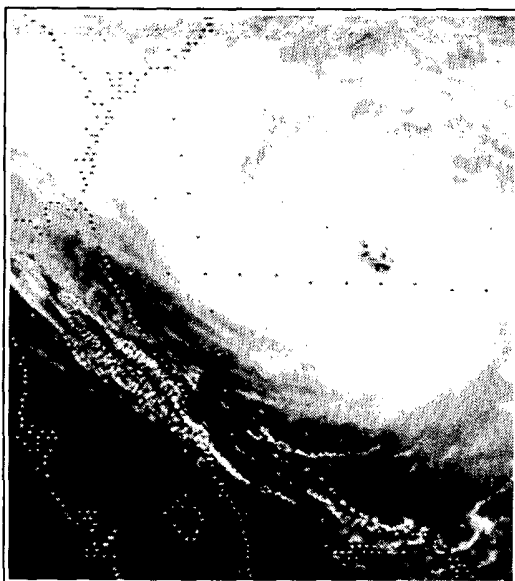
NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE NC 28801-2696



HURRICANE HUGO, SEPTEMBER 10-22, 1989

Despite excellent warning lead times and excellent government and public response to the warnings, the fury of Hurricane Hugo took many by surprise and will undoubtedly haunt the memory of many Americans for years to come. Along with numerous deaths and injuries, HUGO brought large-scale devastation to much of the Carolinas, Puerto Rico, the Virgin Islands and other islands of the Caribbean, making it the costliest hurricane in U.S. history.

Over the course of slightly less than two weeks, HUGO followed a trajectory that was typical for an Atlantic Basin tropical system: originating near Africa in the vicinity of the Cape Verde Islands, traveling west across the tropical Atlantic to the Leeward Islands, turning northwest toward the U.S. coast until making landfall in the Carolinas, and once inland, turning northeast under the influence of the Westerlies and becoming extratropical while skirting the eastern U.S.-Canada border (see map below). The system originated from a cluster of thunderstorms that moved off the African coast on September 9th and organized into a tropical depression on the 10th just southeast of the Cape Verde Islands. The system moved west at 18 knots, attaining storm status on the 11th, and hurricane status on the 13th while located about 1100 nautical miles east of the Leeward Islands. HUGO gradually turned west-northwest and slowed in its translation as it headed for the Islands. While still several hundred miles east of the Islands on the 15th, the first reconnaissance aircraft reported HUGO as having a minimum central pressure of 918 mb and an estimated maximum surface wind of 140 knots. This turned out to be HUGO's maximum intensity.



National Oceanic and Atmospheric Administration
NATIONAL CLIMATIC DATA CENTER

World's Largest Weather Records Archive

WHY DO YOU NEED WEATHER DATA?



- *Litigation*
- *Insurance Claims*
- *Environmental Studies*
- *Engineering Projects*
- *University Research*
- *Personal Curiosity*



WHAT TYPE OF INFORMATION DO YOU NEED?



- *Station Records*
- *Monthly/Annual Summaries*
- *Long Term Climatic Studies*
- *Surface or Upper Air Charts*



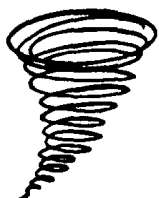
WHICH OUTPUT MEDIA IS BEST FOR YOU?



- *Publications*
- *Paper Copies*
- *Charts*
- *Microfiche/Microfilm*
- *Floppy Disk*
- *Computer Tape*



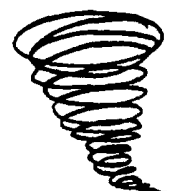
Call or write NCDC and explain your weather related problem.
Our meteorologists will provide the best possible solution.



NATIONAL CLIMATIC DATA CENTER

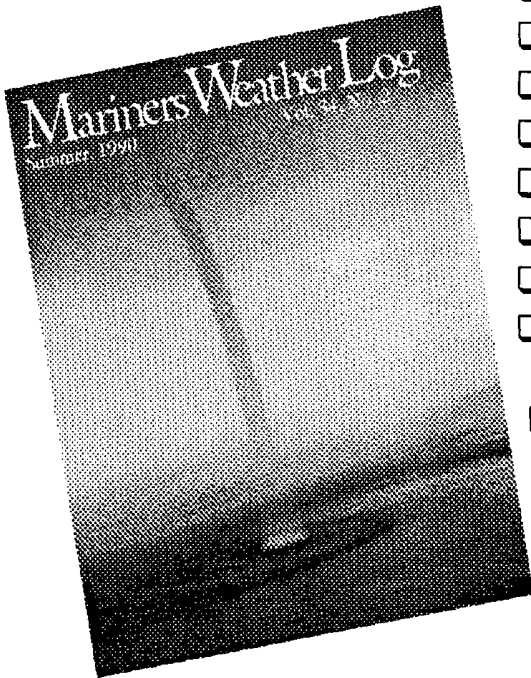
Federal Building, Asheville, N. C. 28801-2696

Phone (704) 259-0682 or (704)-CLIMATE



Mariners Weather Log

Serving the maritime community



- Comprehensive coverage of storms.
- Typhoon and Hurricane information.
- Unusual weather phenomena at sea.
- Selected gale and wave observations.
- Storm tracks and weather-related casualties.
- History of marine weather and marine lore.
- Lighthouse features by Elinor DeWire
- Sea photography and radio tips.

For sample copy and subscription form write:

**User Services Branch
National Oceanographic Data Center
NOAA
Washington, DC 20235**

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Environmental Satellite, Data, and Information Service
National Climatic Data Center
Federal Building
Asheville NC 28801

**BULK RATE
POSTAGE & FEES PAID
United States Department Of Commerce
NOAA Permit No. G - 19**

To change your address, please return a copy of the mailing label along with your new address.

"FORWARDING AND RETURN POSTAGE GUARANTEED - ADDRESS CORRECTION REQUESTED"