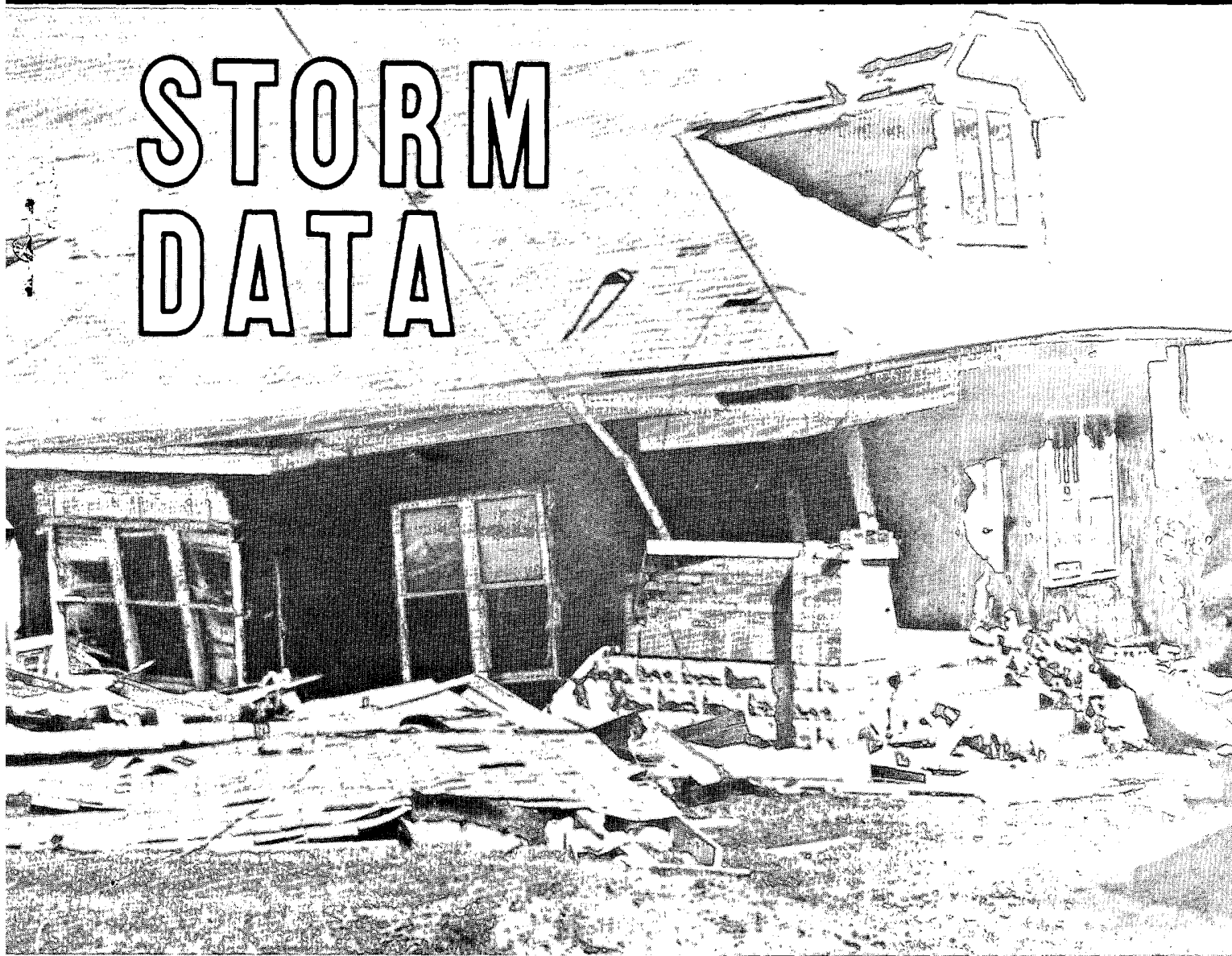


MARCH 1991
VOLUME 33
NUMBER 3

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: A severe tornado (F3) slid this badly anchored home off its foundation and collapsed into the basement on March 27, 1991. The house is located on McCarthy Street in Lemont, Illinois. (See page 14.) Photo courtesy: Jim Allsopp, NWS, Chicago.

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STORM DATA

(ISSN 0039-1972)

National Climatic Data Center

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STORM DATA is prepared, funded, and distributed by the National Oceanic and Atmospheric Administration (NOAA). The Outstanding Storms of the Month section is prepared by the Data Operations Branch of the National Climatic Data Center.

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 limited editing to correct grammatical errors, materials submitted are generally published as received.

Subscription, pricing, and ordering information is available from:

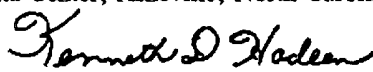
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The editors of **STORM DATA** solicit your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or unusual weather events (past or present). These could be for use in the "Outstanding Storms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

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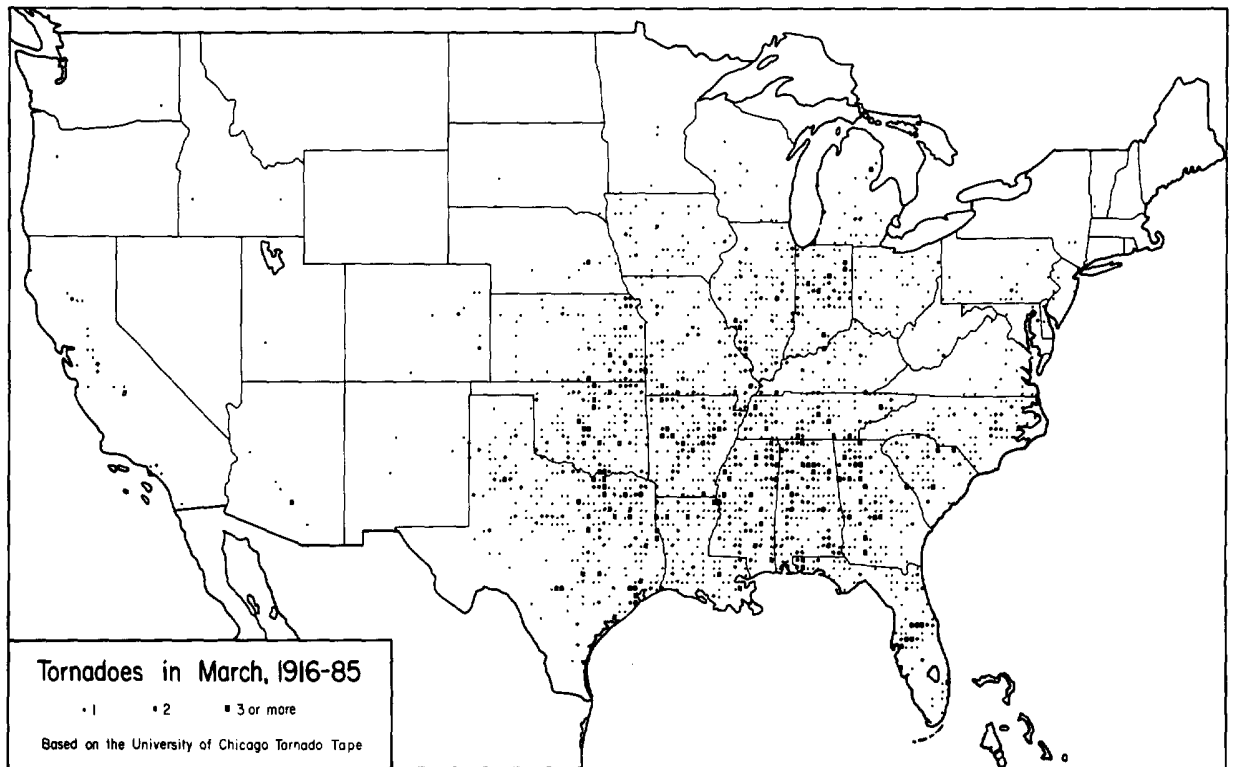
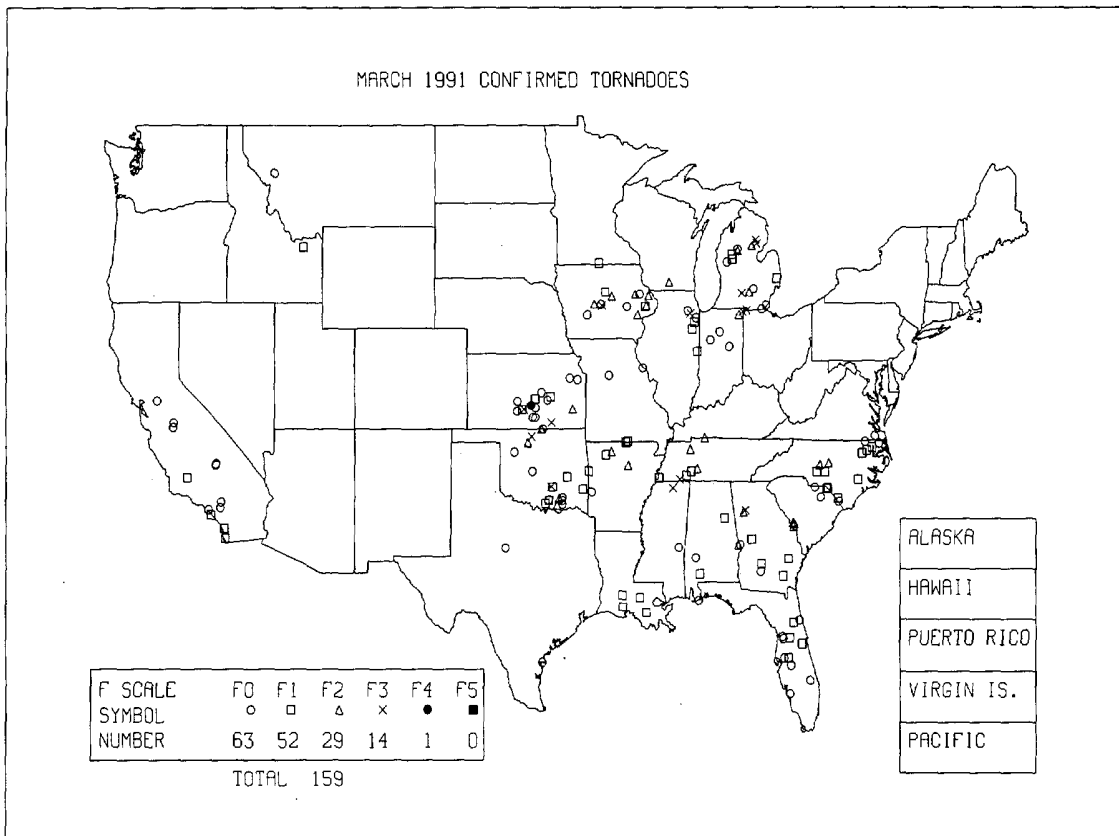
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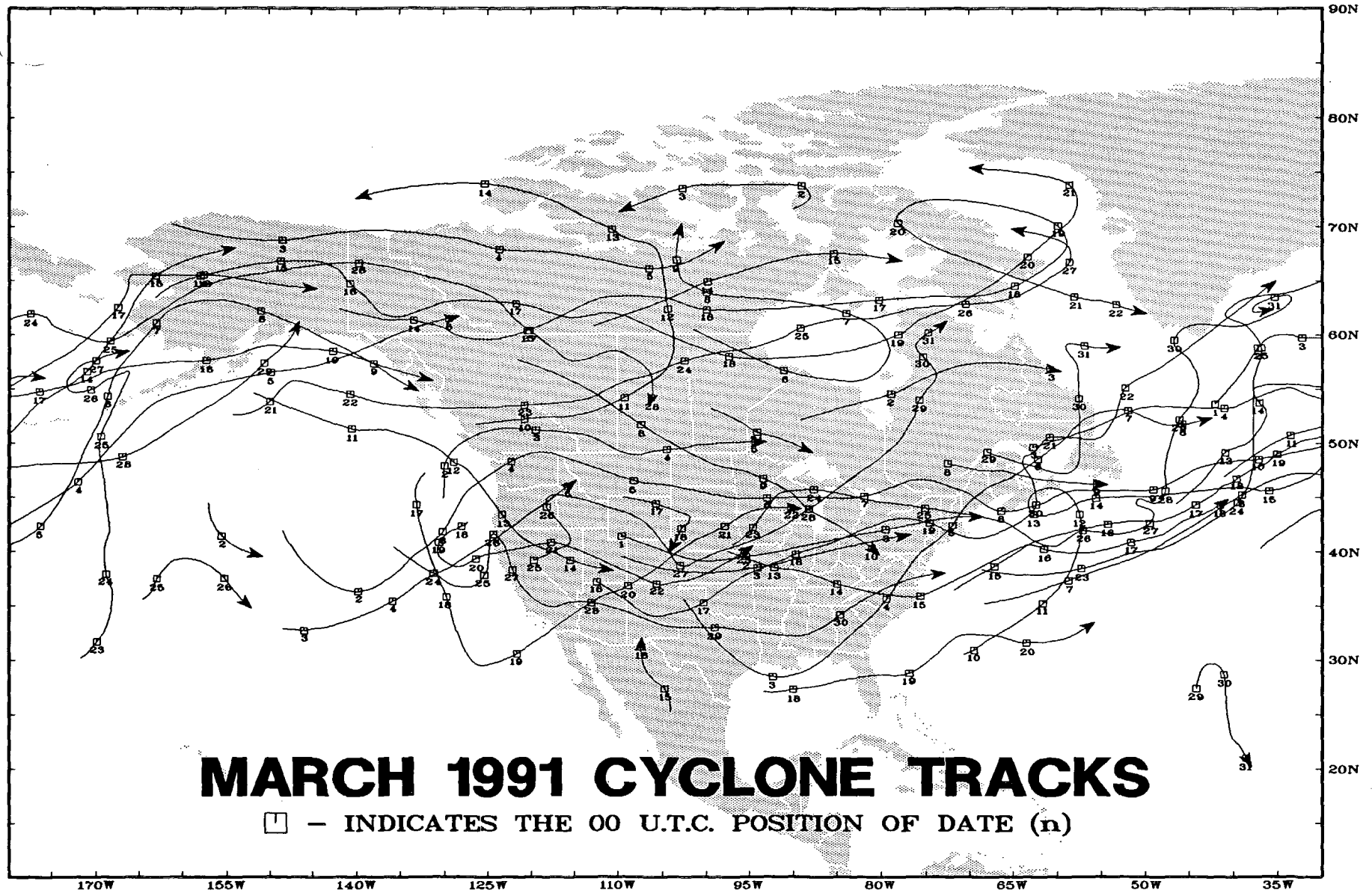
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Director
National Climatic Data Center

OUTSTANDING STORMS OF THE MONTH





1. PRECIPITATION AND TEMPERATURE ANOMALIES - MARCH 1991

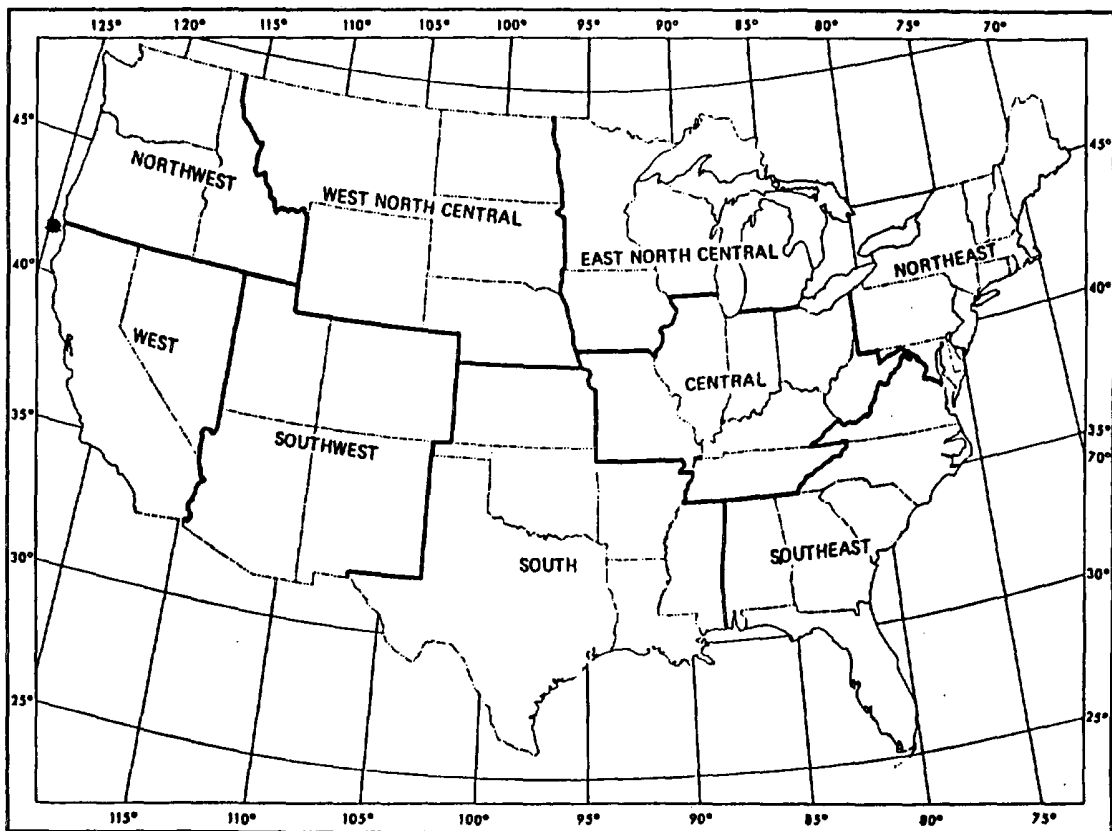
Table 1 lists the 97-year temperature and precipitation rankings for the nine climatically homogeneous regions outlined in Fig. 1. Warmth prevailed over much of the nation, from the Rockies to the East Coast with the northern High Plains and middle Mississippi Valley averaging over 6°F above normal. In contrast, subnormal temperatures were the rule in the West, Southwest, and to scattered stations in Alaska and Hawaii. Greatest departures from normal (-2°F or more) were observed only in California, southern Nevada, and western Arizona. Overall, March 1991 ranked as the 26th warmest March on record since 1895. (See Fig. 4 on page 7.) Above normal precipitation was the rule east of the Mississippi and west of the Rockies, including Hawaii, Alaska, and similar conditions existed in the western Corn Belt, northern Rockies, southeastern Texas, and pockets of the Great Plains (see Fig. 2 and Fig. 3 on page 6.) Much of the Great Plains and parts of the Mississippi Valley, plus the Great Basin had well below normal precipitation. Overall, March 1991 finished as the 14th wettest March on record. Fig. 5 depicts January through March total number of tornadoes for the years 1953 to 1991. March 1991 finished as the second biggest March with 159 tornadoes, and the 3-month total of 199 tornadoes finished as the second biggest January-March total.

TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR MARCH 1991, BASED ON THE PERIOD 1895-1991. 1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

<u>REGION</u>	<u>PRECIPITATION</u>	<u>TEMPERATURE</u>
Northeast	80	84
East North Central	92	76
Central	60	76
Southeast	90	69
West North Central	33	83
South	26	75
Southwest	65	44
Northwest	79	46
West	92	24
National	84	72

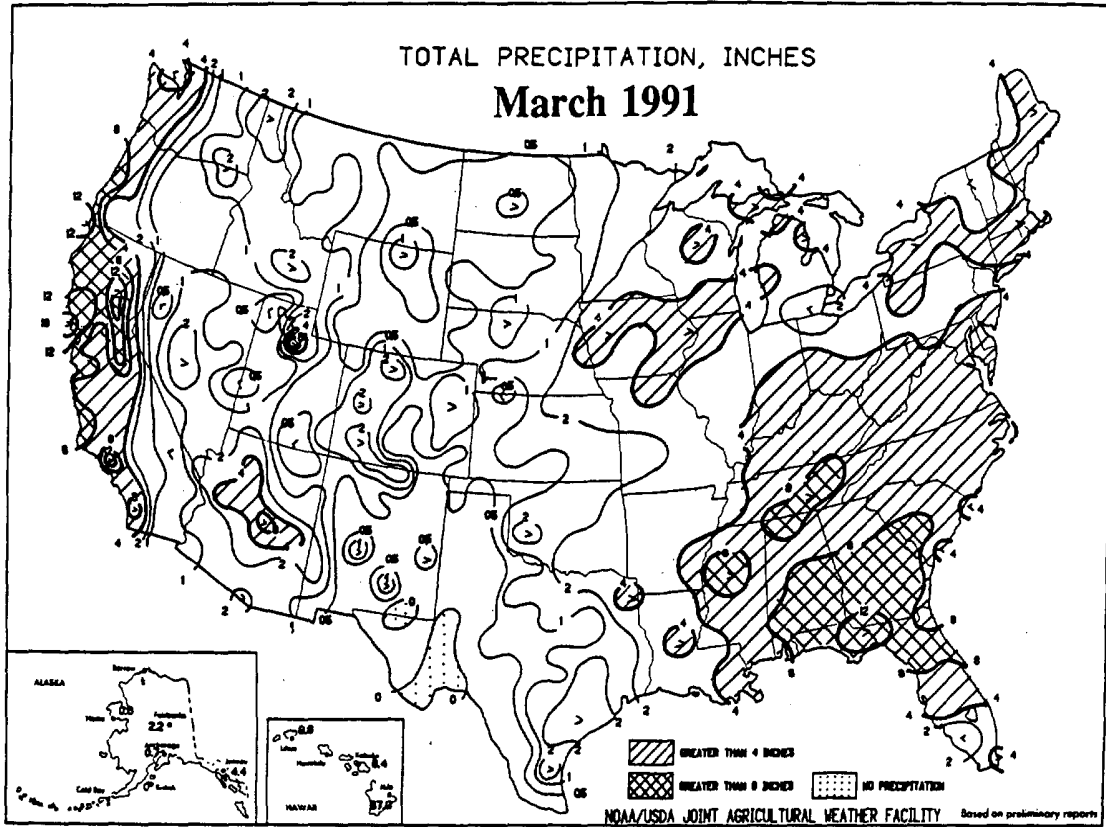
From National Climatic Data Center

Fig. 1



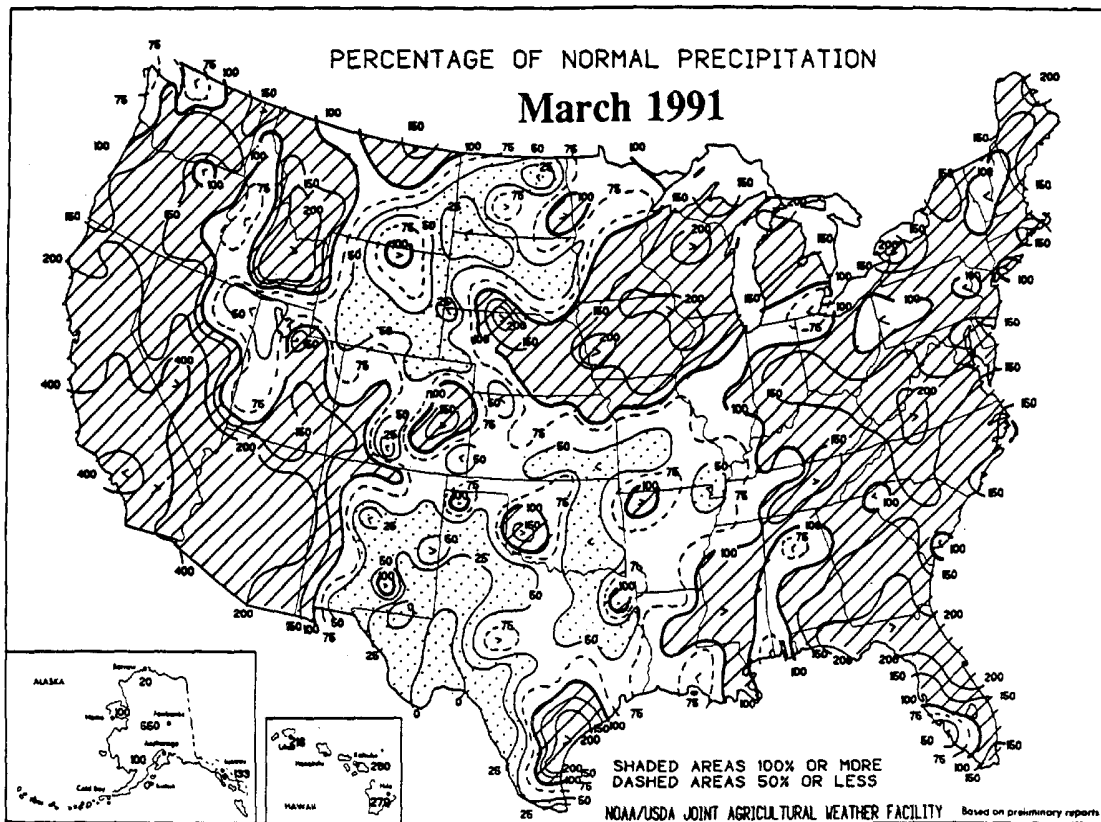
From National Climatic Data Center

Fig. 2



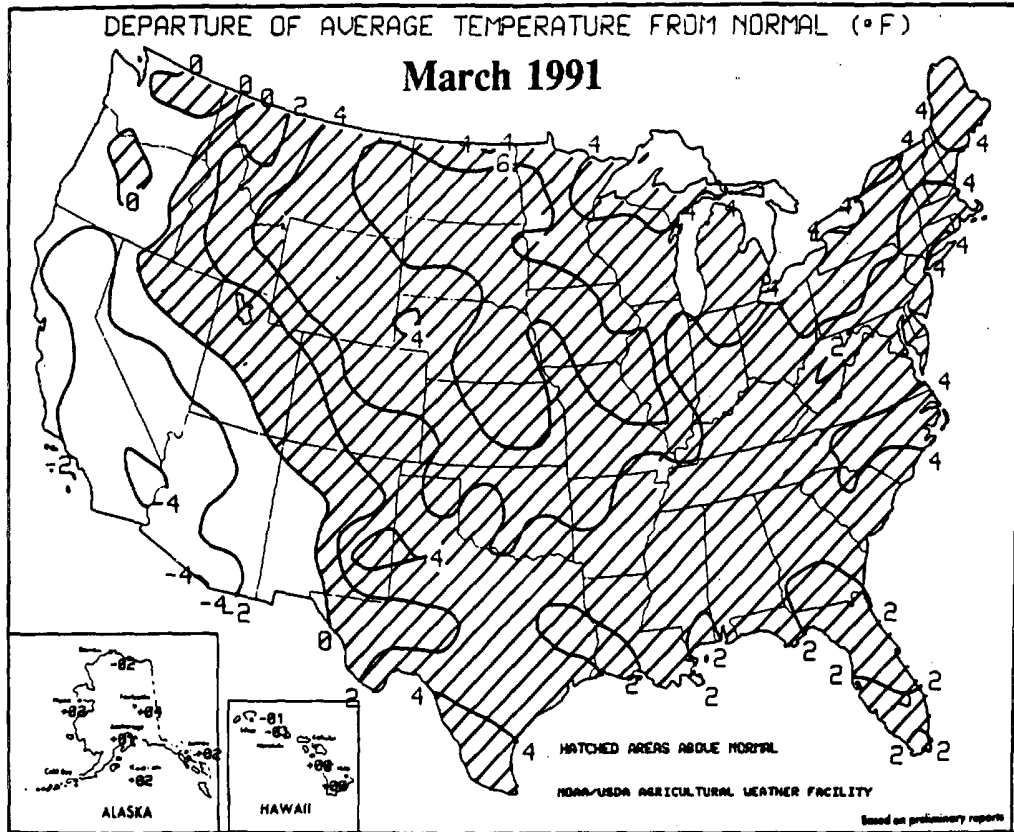
Reprinted from *Weekly Weather and Crop Bulletin* - April 9, 1991

Fig. 3



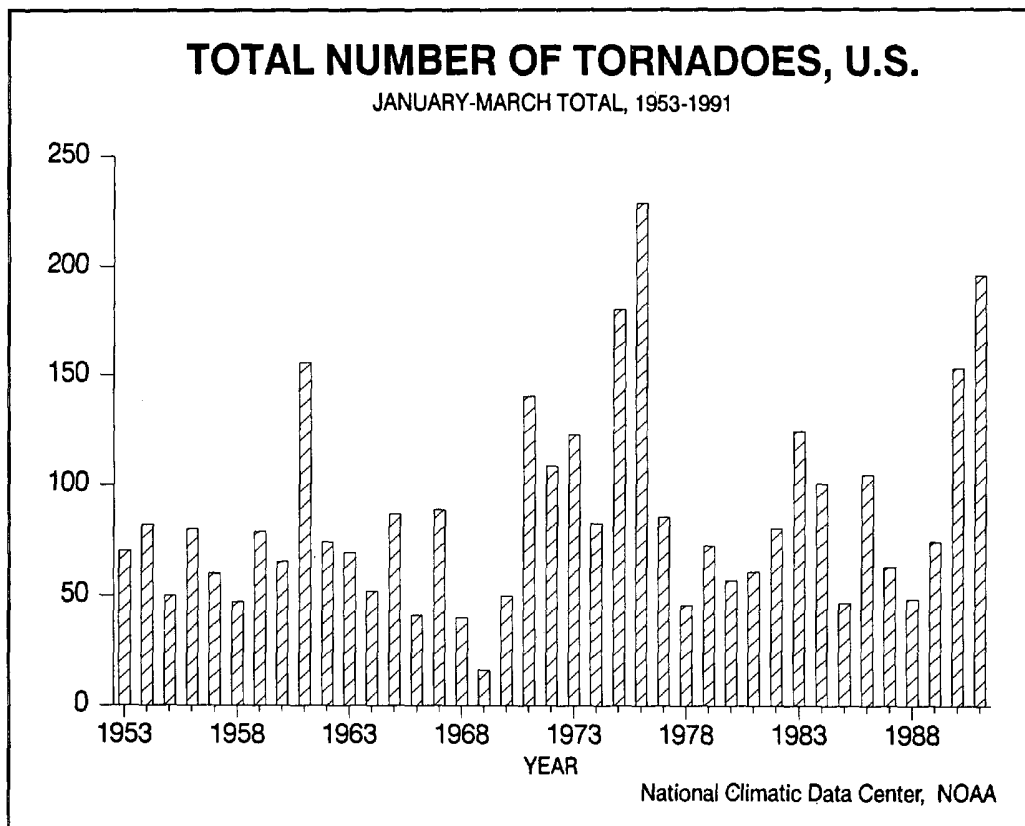
Above figures reprinted from *Weekly Weather and Crop Bulletin* - April 9, 1991

Fig. 4



Reprinted from *Weekly Weather and Crop Bulletin* - April 9, 1991

Fig. 5



From National Climatic Data Center

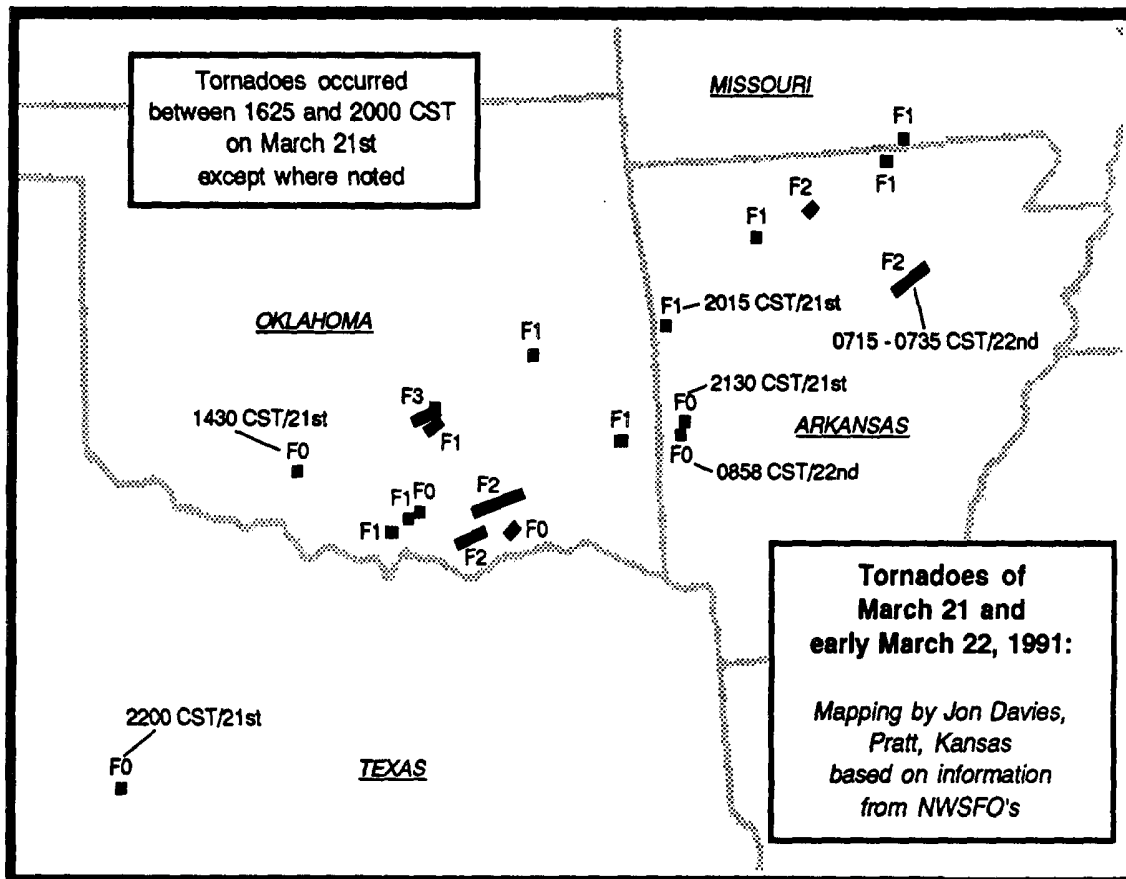
2. SPRING TORNADOES OF MARCH 1991

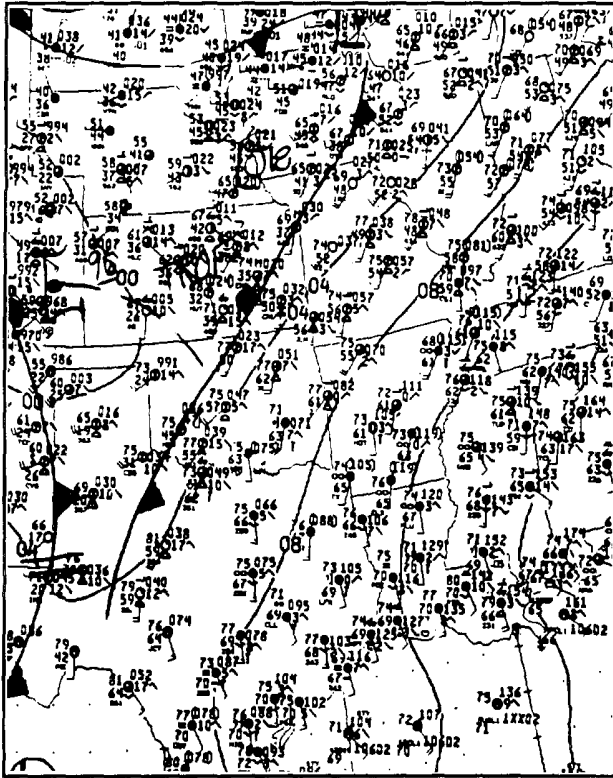
A. March 21st and 22nd - Oklahoma and Arkansas

March 21st and 22nd (the first day of spring) brought excitement to the Oklahoma and Arkansas area. Eleven tornadoes struck Oklahoma with the strongest of the whole outbreak being an F3 that went through Ada, Oklahoma. In Arkansas, seven tornadoes occurred with the strongest two tornadoes (F2s) near Valley Springs and Concord. Overall, 20 tornadoes touched down over a four-state region that included Texas, Oklahoma, Arkansas, and Missouri. Of the 20 tornadoes, there was one F3, four F2, nine F1, and six F0. (See map below.)

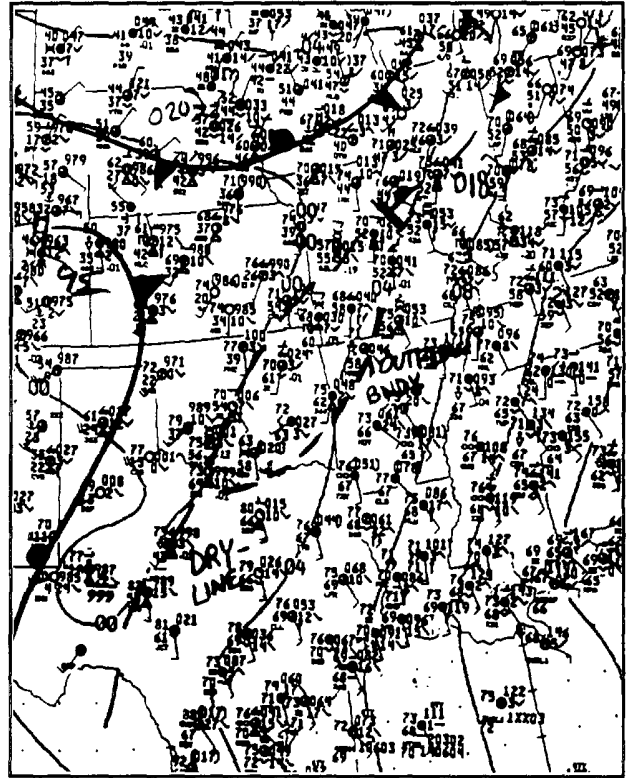
next page) show a developing low-pressure system over the Kansas-Colorado border with moisture being advected out of the Gulf of Mexico northward at low levels. On the 1800 UTC surface map, a weak stationary front was along a line from eastern Iowa southwesterly into central Texas. This, along with upper-level dynamics, was the starting mechanism for these storms. The 0000 UTC surface weather map has an outflow boundary existing to the right of the old stationary front (now a dry line). By 0300 UTC, a squall line had formed from St. Louis, Missouri, southward to Abilene, Texas. Notice the severe thunderstorm at St. Louis!

The surface weather maps of 1800 UTC (21st), 0000 UTC (22nd), and 0300 UTC (22nd) (top of

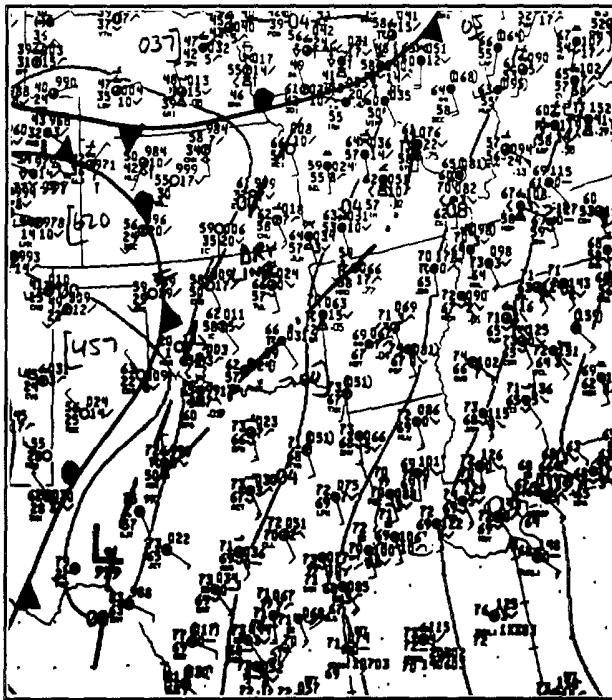




March 21, 1991 1800 UTC



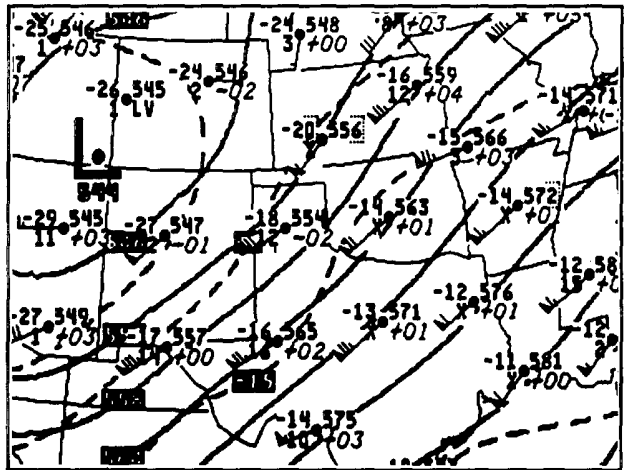
March 22, 1991 0000 UTC



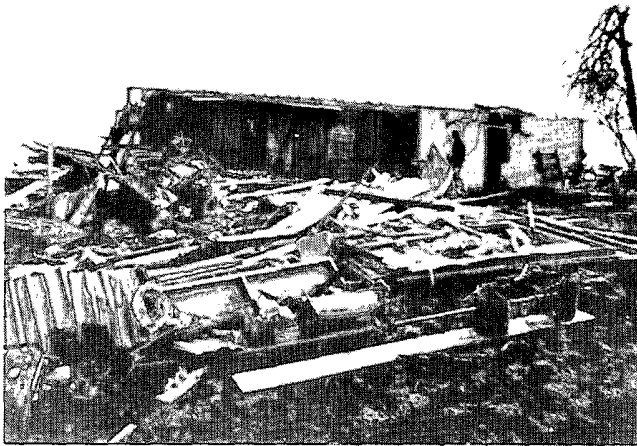
March 22, 1991 0300 UTC



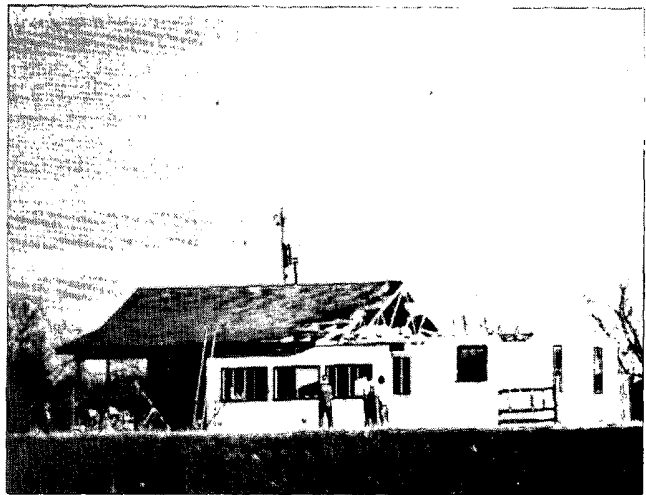
March 21, 1991 2201 UTC



Above right): Satellite picture valid for the time of the tornadoes. (Satellite courtesy: NSSL/Gene Rhoden.) *Right:* A 500-mb map valid for 0000 UTC March 22, 1991. (Maps courtesy: National Climatic Data Center.)



Top and below (left): The strongest of the tornadoes (the only F3) went through Ada, Oklahoma, destroying property. Damage was estimated at \$950,000. (Photo courtesy: NSSL/Gene Rhoden.)



Above (right): This F2 tornado damaged 25 buildings near Durant and Armstrong, Oklahoma. Damage was estimated at \$355,000. (Photo courtesy: NSSL/Gene Rhoden.)

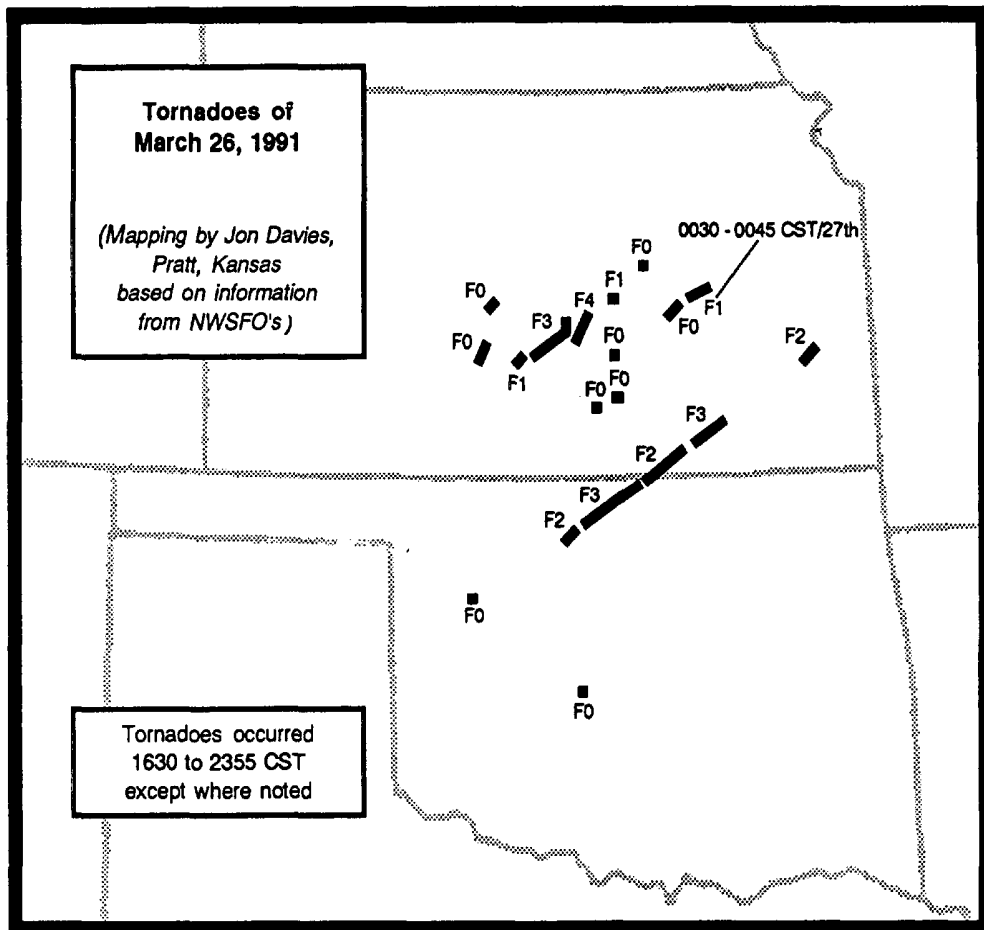


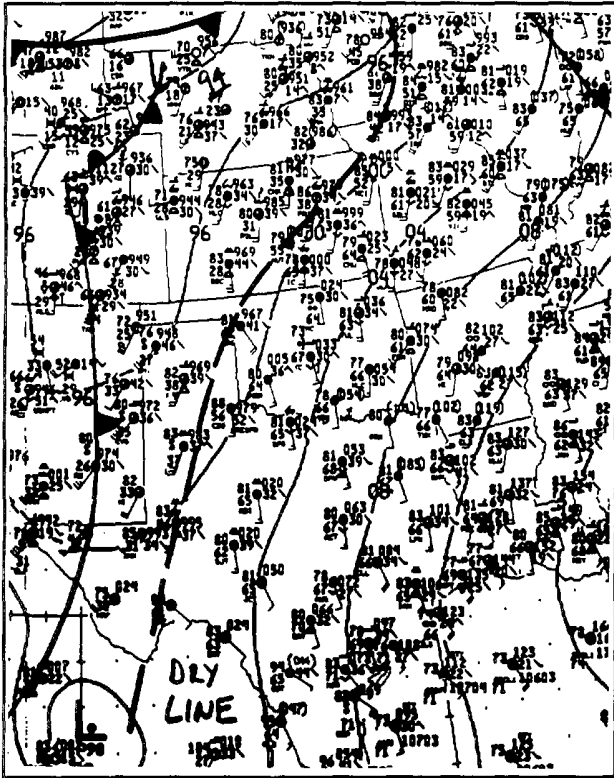
Above (both): Another F2 tornado caused some damage estimated at \$300,000 west of Caney, Oklahoma and intermittently to Lane, Oklahoma.

B. March 26 - Kansas, Oklahoma

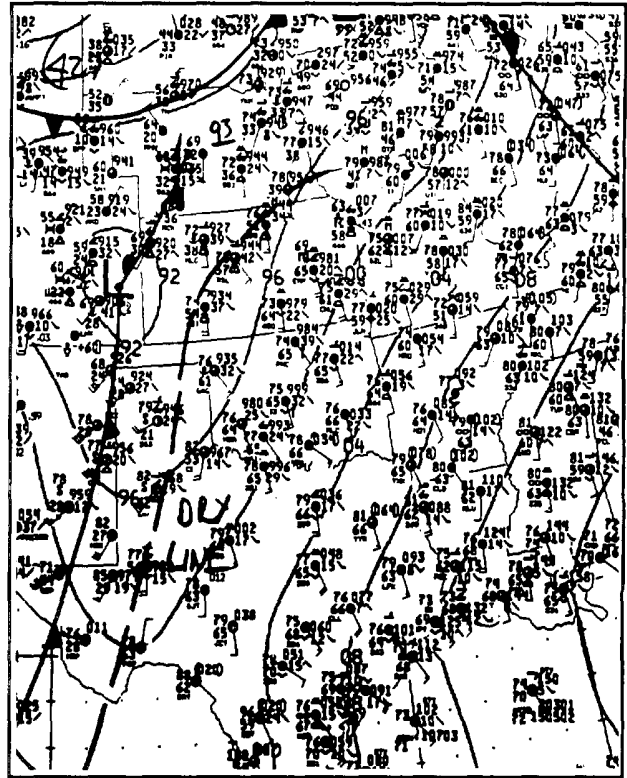
March 26th proved to be an interesting day. A total of 20 tornadoes touched down during a severe weather outbreak that covered a two-state area of Oklahoma and Kansas. Oklahoma received five of the tornadoes with the strongest one being an F3, that went through Grant and Kay Counties. Kansas was the hardest hit state with the strongest tornado being an F4 that went through Willowbrook. Just to the west of Willowbrook, an F3 tornado brushed by Abbyville. Damage total from both tornadoes was estimated between \$10 and \$20 million. (See map below.) The stage was set by 2100 UTC. A rapidly deepening surface low was over Denver, Colora-

do, with a trailing cold front extending southward into Mexico and out into the Pacific. A dry line extended south-southwestward from Iowa into western Texas. Dewpoint differences were significant across the dryline. Dewpoints on the eastern side of the dryline were in the 60s while on the western side of the dryline, dewpoints were generally in the low 30s. With moisture being pulled northward at low levels out of the Gulf of Mexico, and with the favorable upper-level conditions, the stage is set for a severe weather outbreak. (See maps on the next page.) (Map courtesy: National Climatic Data Center.)

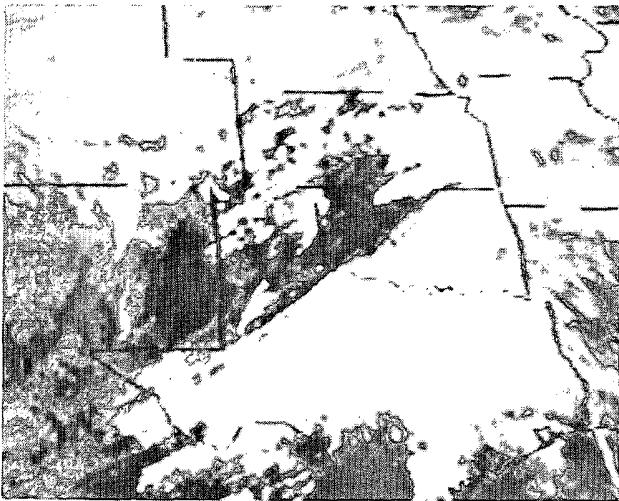




March 26, 1991 2100 UTC



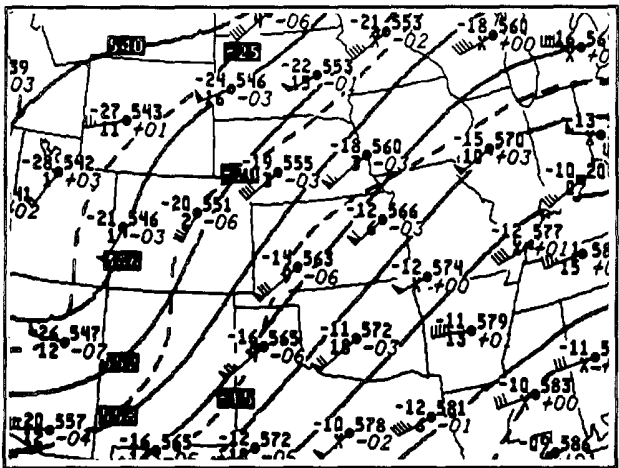
March 26, 1991 0000 UTC



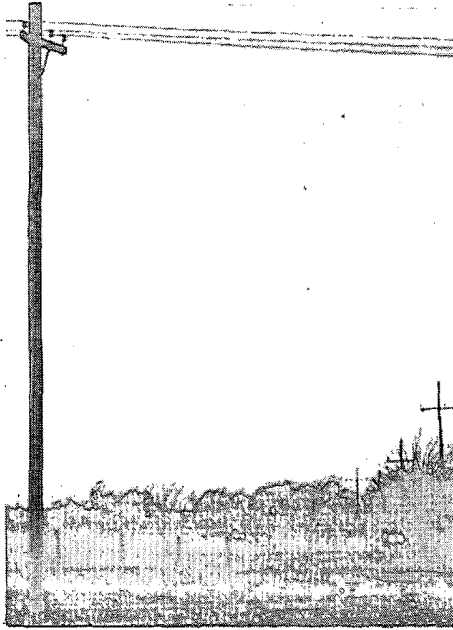
March 26, 1991 0131 UTC



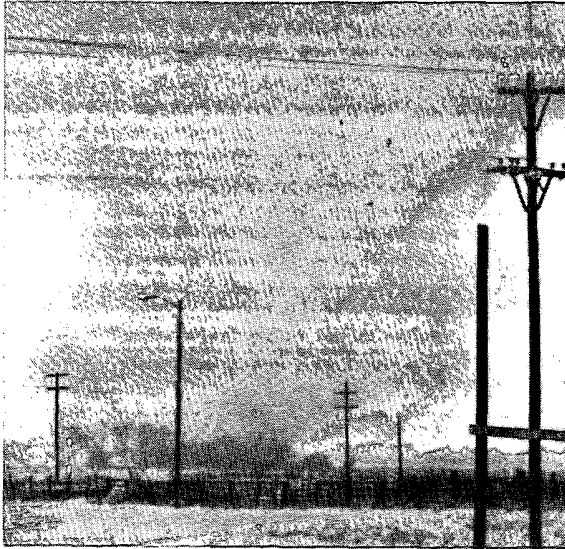
March 26, 1991 0301 UTC



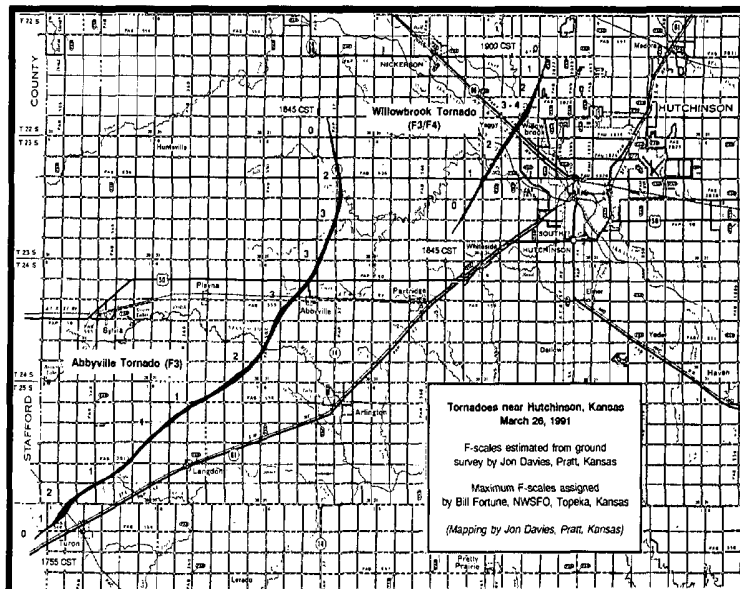
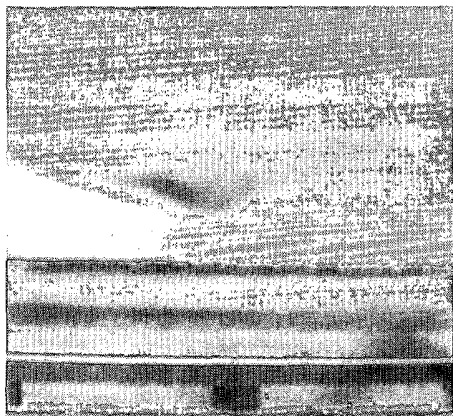
Above (left and right): Two satellite pictures showing the severe thunderstorms in extreme northern Oklahoma and central Kansas. (Satellite courtesy: NSSL/Gene Rhoden.) Left: A 500-mb map showing an approaching trough toward Oklahoma and Kansas. (Maps courtesy: National Climatic Data Center.)



Far left: The Abbyville tornado about to touch down west-northwest of Turon, Kansas (1755 CST). **Left:** The tornado not too long after touchdown. **Below (left):** The tornado at its maximum intensity (F2) near Turon. (Photo by Mark Mills, property of Jon Davies). **Below:** The tornado, now at F3, the strongest during its life cycle nears Highway 50 at approximately 1830 CST. (Photo courtesy: Doug Nelson.)

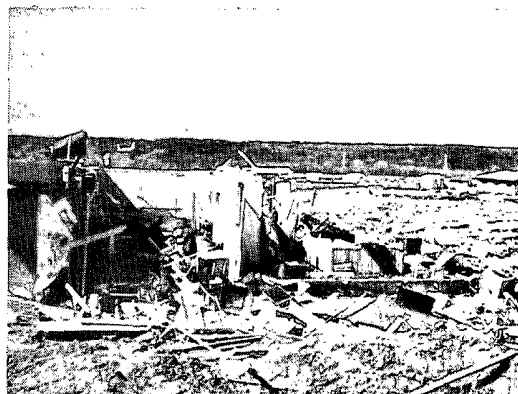
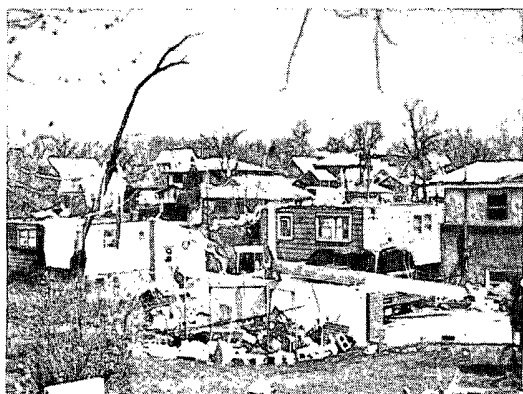


Above (left): The Abbyville tornado dissipating rapidly from F2 to F0. **Above (right):** The tornado coming to an end. Note the vortex on the ground under the blue sky and totally separated from the cloud. Approximate time is about 1845 CST. (Video courtesy and ©: Jon Davies.) **On the following page, top (left):** Picture of the Willowbrook tornado forming which became an F4 tornado at Willowbrook. (Photo courtesy: Doug Nelson.) **Top (right):** A map of the path of the Abbyville and the Willowbrook tornadoes. (Map courtesy: Jon Davies.)



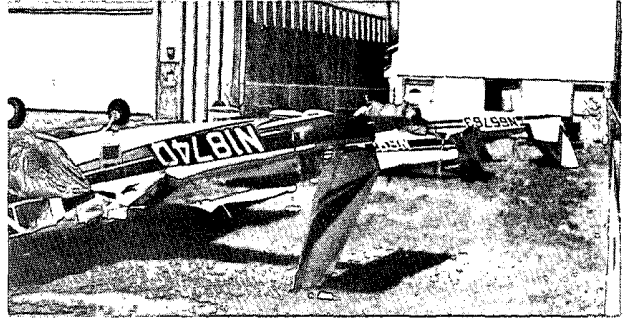
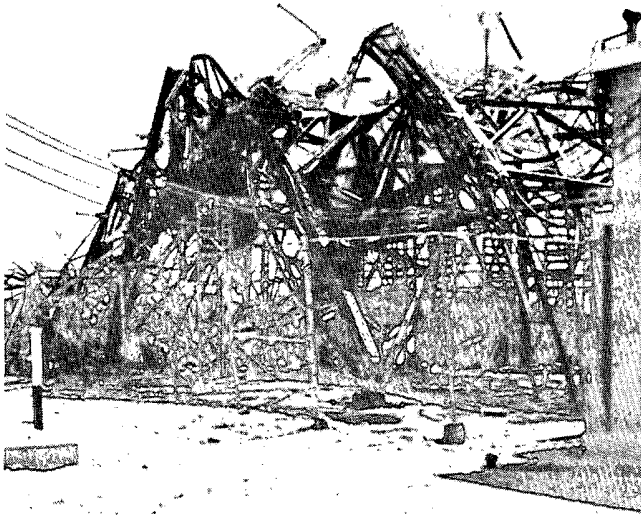
C. March 27 - Illinois, Ohio

Tornadoes were spawned on the Central Great Lakes Region (Illinois, Indiana, Ohio, Michigan) on March 27, 1991. One of the strongest tornadoes (F3) went through Illinois in Will and Cook Counties. Damage was quite extensive with estimates of \$8 million. (See pictures below.) Another strong tornado (F3) struck Williams County near Nettle Lake in Ohio. Winds were estimated at 175 mph with extensive property damage. Many homes were damaged or destroyed with estimates of total damage of \$12 million!

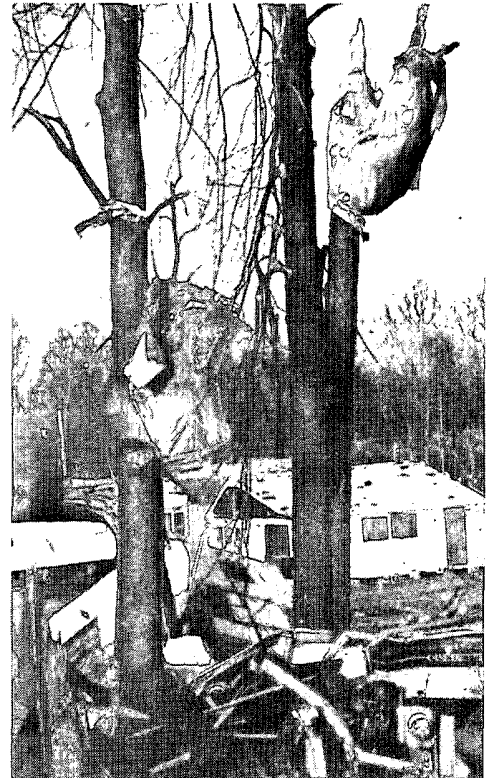


Above left: The tornado intensified to a category F3 at Warner and Puffer Street in Lemont, Illinois. The tornado damage path was 200 yards wide at this point! **Above right and bottom left:** The most severe damage to homes occurred in the subdivision of McCarthy Ponte (a subdivision of new homes). Several of the homes (new or partially built) were severely damaged with two homes being almost completely leveled. **Bottom (right):** This home was not well anchored. It slid off the foundation and collapsed into the basement. (Photo courtesy: Jim Allsopp, NWS, Chicago.)

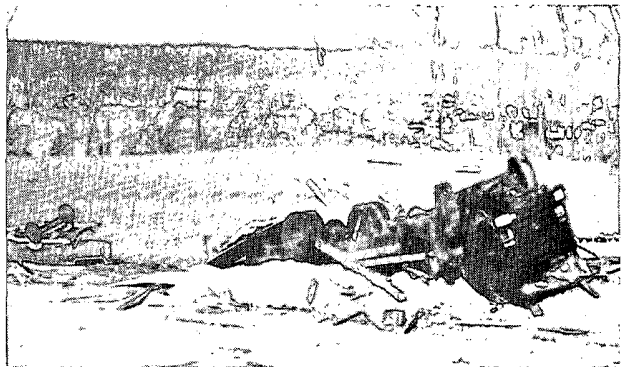




Above (left): On the northern side of 127th Street in Lemont, a roof was peeled off an equipment building and slammed into a 263-foot-tall microwave. The combined force of the winds and flying debris collapsed the tower! **Above:** Winds damaged buildings and flipped over planes at Palwaukee Airport in Wheeling, Illinois. (Above photo taken by Wayne Peterson. Photo supplied by Jim Allsopp, NWS, Chicago.)

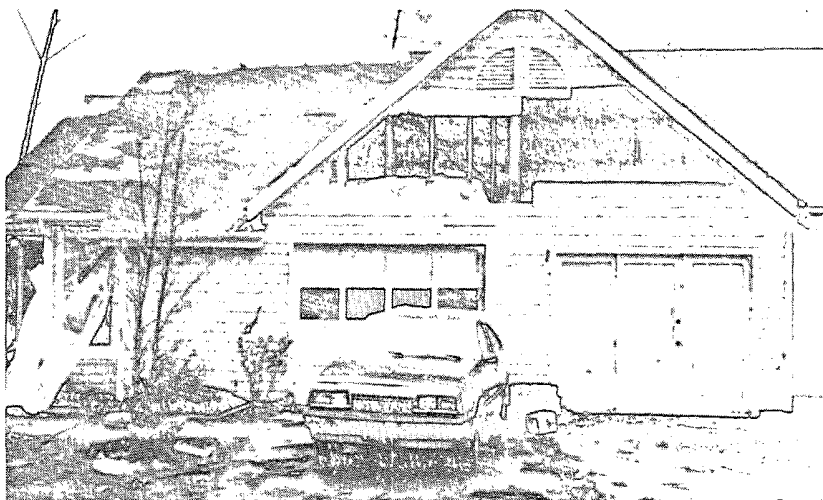
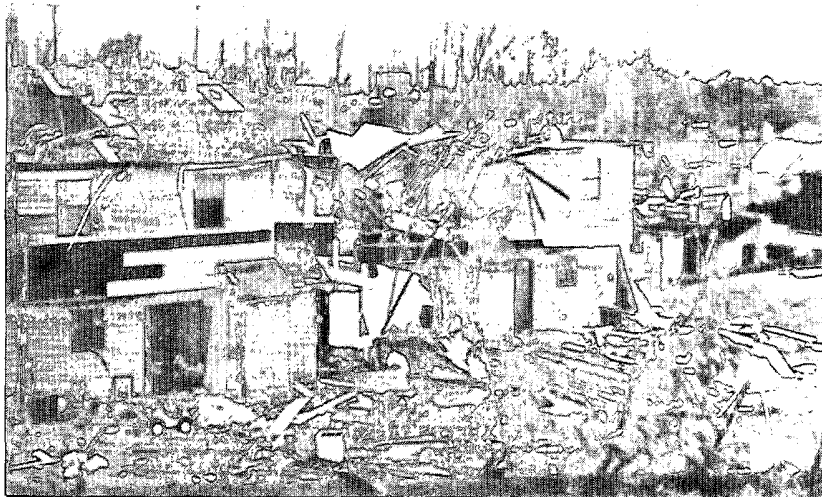
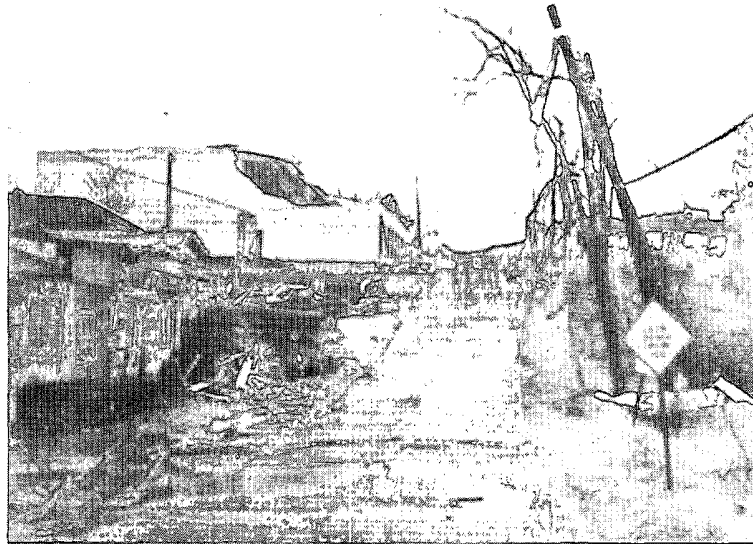


Middle (left): Some tree damage near Nettle Lake, Ohio, where the tornado was rated at F3. **Above (left):** More tornado damage to some homes. **Above (right):** A closer look at the damage. Notice the debris in the trees. **Right:** Tornado overturned the truck as well as scattered debris. (Photo courtesy: Brad Herold, Toledo, Ohio.)



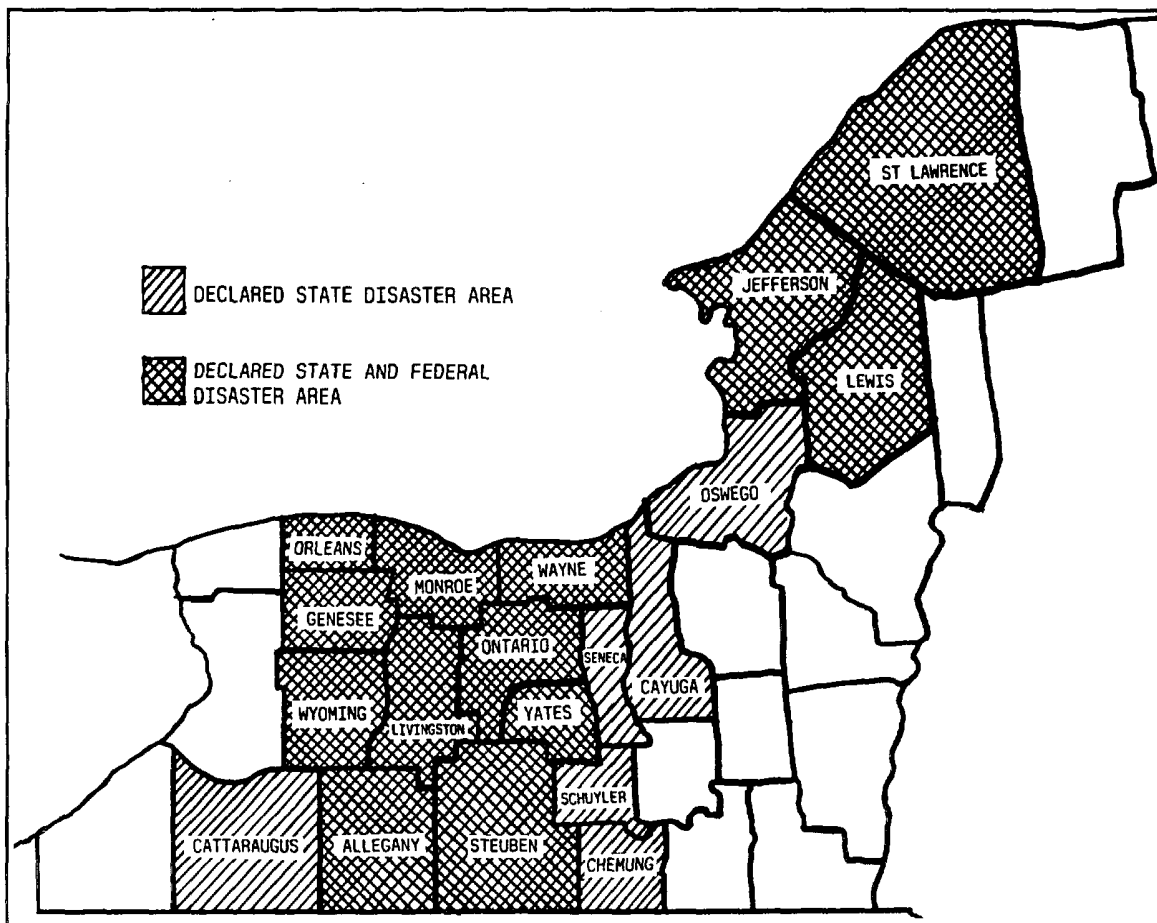
D. March 29, Georgia

A few tornadoes struck Georgia on the 29th of March. Damage from this F2 tornado that struck Douglasville was a block wide with debris spread over three blocks (see picture below). The tornado lifted outside of Douglasville, and the parent storm moved northeast into Cobb County. The tornado touched down in Clarkdale, near Austell. This F3 tornado damaged 415 residences and 127 businesses, including several townhouses (see two bottom pictures below). Damage was estimated at \$6.5 million in Douglas County and near \$11.75 million in Cobb County. *(Photo courtesy: The Rawson Company, Atlanta, Georgia.)*



3. POTPOURRI OF MARCH 1991 WEATHER EVENTS

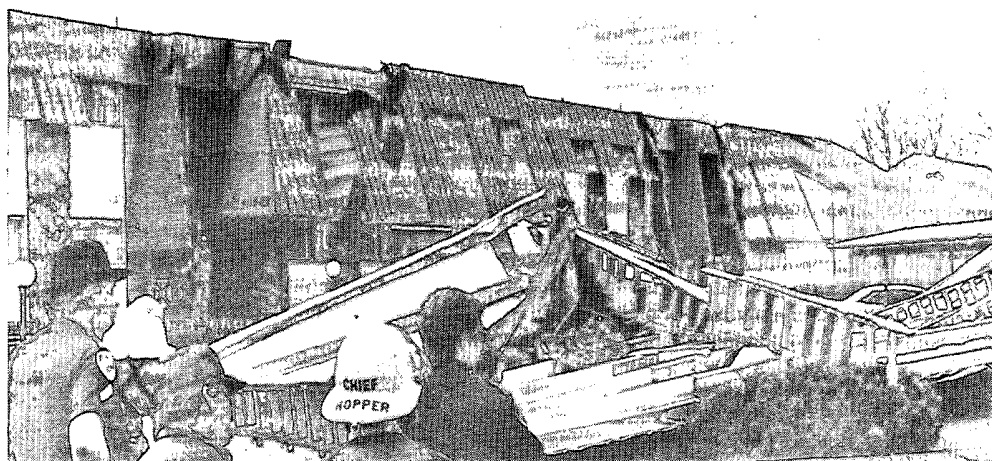
March 3rd and 4th - Ice Storm in New York



Freezing rain started in the late afternoon of the 3rd and continued through the morning of the 4th. At the Rochester Airport, freezing rain fell continuously for a little more than 17 hours. Ice buildups ranged from 1 to 2 inches over the hardest hit areas. Many towns, cities, and counties were declared States of Emergency. In some counties, it was the first State of Emergency declared since Hurricane Agnes in 1972. Governor Mario Cuomo declared 19 counties State Disaster Areas. Utility crews were brought in from Ohio, Pennsylvania, and Canada to help restore power. Storm damage exceeded \$375 million, making the ice storm the most costly natural disaster in the history of New York State. (See map below.) (Courtesy of Judy Levan, WSFO Buffalo.)

March 3rd - High Wind Damage in Oregon

High wind damage in Pendleton, Oregon, (12th and Carden) on March 3rd. A high wind warning was in effect. (Photo courtesy: Bill Andrews, Pendleton, Oregon; *The East Oregonian*.)



4. AURORA BOREALIS - March 24, 1991

Early morning of March 24th, residents of North Carolina and several other southeastern states were treated to a display of the northern lights (aurora borealis). Clouds obscured the event in areas further north. The best viewing was from the higher elevations of the Appalachians where visibilities were unlimited. Shortly after dark on the evening of the 24th, the aurora became visible again and was brighter and more spectacular than the night before. The most dominant color was a crimson red and caused numerous public reports to local law enforcement offices that the "mountains were on fire." Green and

yellow colors were also visible during the display but were confined to the areas just above the horizon while the crimson red portion of the display extended up to about 40° above the horizon.

Despite the high energy levels that produced this event, they were still not as great as during the auroral event of March 13, 1991 when the display began overhead in the Western North Carolina and ended in the southern sky. There were sightings of the aurora as far south as Cuba.

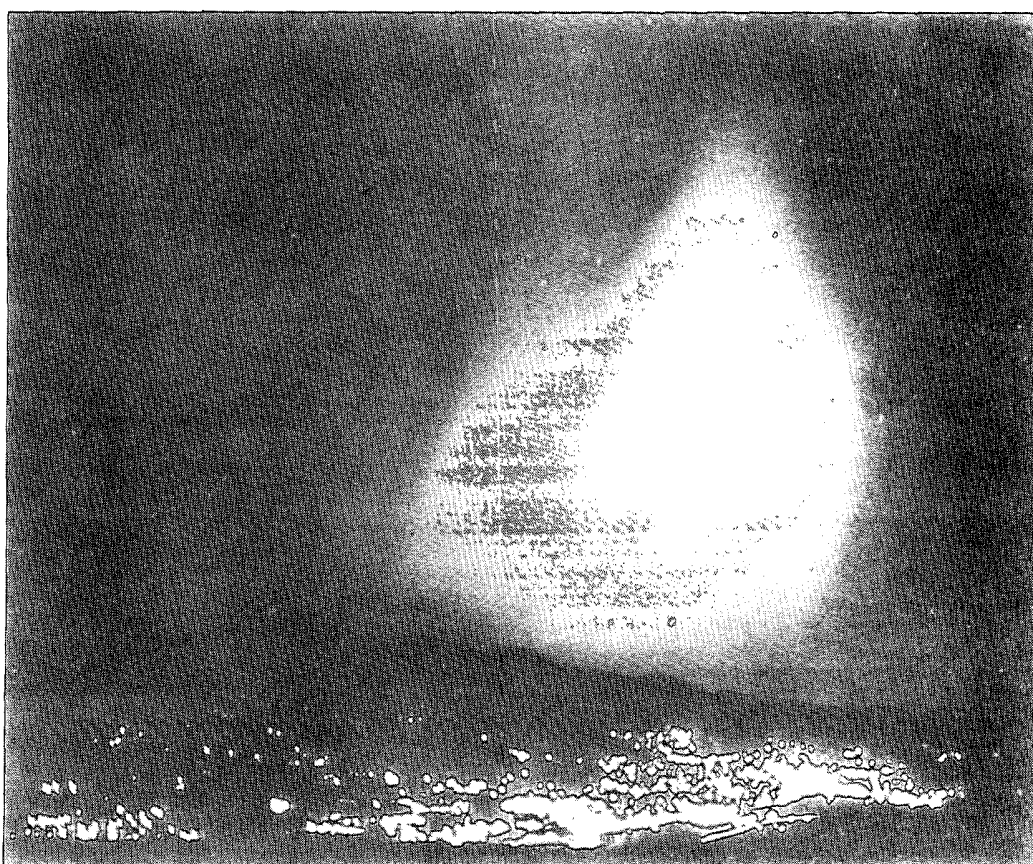


Photo taken 23:05 EST March 24, 1991. (Photo courtesy: Grant W. Godge, NCDC, Asheville, NC.)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Clarke County	01	1220CST	0.3	10	0	0	?	?	Tornado (F0)
	01	1245CST			0	0	?	?	Thunderstorm Winds

At 1220 CST, a small tornado touched down 2 miles north of Thomasville and moved northeast a short distance. The tornado ripped off part of the roof of a gym and damaged a school. At around the same time, strong thunderstorm winds damaged a school and medical clinic in Coffeerville. At 1245 CST, thunderstorm winds blew trees onto power lines at Grove Hill. More tree and power line damage occurred in other parts of the county.

Wilcox County	01	1250CST			0	0	?	?	Thunderstorm Winds
	01	1300CST			0	0	?	?	Thunderstorm Winds

At 1250 CST, thunderstorm winds blew trees onto power lines in the Oak Hill vicinity. At 1300 CST, trees were blown onto power lines at Awin.

Butler County	01	1315CST			0	0	?	?	Thunderstorm Winds
----------------------	----	---------	--	--	---	---	---	---	---------------------------

Trees were blown down at Greenville.

Baldwin County	01	1320CST	0.3	10	0	0	?	?	Tornado (F0)
	01	1330CST			0	0	?	?	Hail (1.75)

At 1320 CST, a small tornado moved northeast through Orange Beach a few hundred yards. The tornado brushed several roof tops and a marina, tearing off shingles and the roof of a boathouse. A home in the same area had its porch blown off. At 1330 CST, golf ball-size hail fell 2 miles west of Lillian.

Lowndes County	01	1320CST			0	0	?	?	Thunderstorm Winds
	01	1325CST			0	0	?	?	Thunderstorm Winds

At 1320 CST, an awning was blown off a building at Interstate 65 and Highway 26 about 7 miles southwest of Hope Hull. At 1325 CST, trees were blown down in the same vicinity.

Montgomery County	01	1400CST			0	0	?	?	Thunderstorm Winds
--------------------------	----	---------	--	--	---	---	---	---	---------------------------

A few trees were blown onto power lines in Montgomery.

Chambers County	01	1510CST			0	0	?	?	Thunderstorm Winds
------------------------	----	---------	--	--	---	---	---	---	---------------------------

Fallen trees were blocking the roads, about 5 miles south of Lafayette.

Lee County	01	1515CST			0	0	?	?	Thunderstorm Winds
-------------------	----	---------	--	--	---	---	---	---	---------------------------

A few trees were downed in the Opelika vicinity.

Pickens County	01	1715CST			0	0	0	0	Hail (0.75)
-----------------------	----	---------	--	--	---	---	---	---	--------------------

Dime-size hail fell at Reform.

Lauderdale County	22	1905CST			0	0	?	?	Thunderstorm Winds
--------------------------	----	---------	--	--	---	---	---	---	---------------------------

Trees were blown down in the Waterloo area.

Colbert County	22	1955CST			0	0	?	0	Thunderstorm Winds
	22	1957CST			0	0	?	?	Hail (1.00)
	22	2010CST			0	0	?	?	Thunderstorm Winds

At 1955 CST, television antennas and power poles were blown down at Cherokee. At 1957 CST, quarter-size hail fell in the Cherokee vicinity. At 2010 CST, trees were blown down at Tuscumbia.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

ALABAMA Cont'd

Franklin County	22	2015CST			0	0	?	?	Thunderstorm Winds
			At Russellville, a few trees were blown onto power lines.						
Lamar County	23	0230CST			0	0	?	0	Hail (1.00)
	23	0230CST			0	0	?	0	Thunderstorm Winds
			Quarter-size hail fell, and trees were blown onto power lines about 4 miles west of Kennedy.						
Fayette County	23	0235CST			0	0	0	0	Hail (0.75)
			Dime-size hail fell at Fayette.						
Colbert County	27	1754CST			0	0	?	?	Thunderstorm Winds
			Trees were blown down at Tuscumbia.						
Lawrence County	27	1905CST			0	0	?	?	Hail (1.75)
	27	1922CST			0	0	?	?	Hail (1.75)
			Golf ball-size hail fell in Hatton at 1905 CST, and in Hillsboro at 1922 CST.						
Morgan County	27	1930CST			0	0	?	0	Thunderstorm Winds
			Trees and power lines were blown down in Decatur.						
Madison County	27	1940CST			0	0	?	?	Thunderstorm Winds (G61)
	27	1940CST			0	0	?	?	Hail (0.75)
	27	2029CST			0	0	?	?	Thunderstorm Winds
			At 1940 CST, thunderstorm winds gusted to 61 knots (70 mph) at the National Weather Service Office. At approximately the same time, dime-size hail was also reported. Trees were uprooted and power lines blown down at 2029 CST in the Huntsville area. A brick wall on the side of an apartment building was blown down. A mobile home and a boathouse were destroyed near Madison.						
Cullman County	27	2045CST			0	0	?	?	Hail (1.75)
			Golf ball-size hail fell at West Point.						
Jackson County	27	2055CST			0	0	?	?	Hail (1.75)
			Golf ball-size hail fell at Hollywood.						
Choctaw County	28	1640CST			0	0	0	0	Hail (0.75)
	28	1640CST			0	0	0	0	Funnel Cloud
			Dime-size hail fell, and a funnel cloud was reported about 6 miles northwest of Butler.						
Green County	29	0300CST			0	0	?	?	Thunderstorm Winds
			Trees were blown down 14 miles northwest of Eutaw.						
Sumter County	29	0300CST			0	0	?	?	Thunderstorm Winds
			At Epes, strong thunderstorm winds knocked down a power company's 115-volt transmission line across Interstate 20/59, onto a truck. Seven support structures were also brought down; no one was injured.						

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

ALABAMA Cont'd

Tuscaloosa County 29 0330CST 0 0 ? ? **Hail (0.75)**
 29 0345CST 0 0 ? ? **Thunderstorm Winds**

At 0330 CST, dime-size hail fell at Tuscaloosa. At 0345 CST, numerous trees were blown down in the Tuscaloosa and Northport areas. In the Northport area, trees fell on several homes, roofs were damaged, and several fences were blown down. A plane was flipped over at the airport in Tuscaloosa.

Hale County 29 0340CST 0 0 ? ? **Hail (0.75)**

Dime-size hail fell at Moundville.

Bibb County 29 0410CST 0 0 ? ? **Thunderstorm Winds**

Numerous trees and power lines were blown down at Eoline.

Jefferson County 29 0415CST 0 0 ? ? **Thunderstorm Winds**
 29 0425CST 0 0 6 0 **Thunderstorm Winds (G60)**
 29 0430CST 0 0 ? ? **Hail (1.75)**

At 0415 CST, strong thunderstorm winds blew trees down and damaged three buildings in Bessemer. At 0425 CST, strong thunderstorm winds gusted to 60 knots (69 mph) at the Birmingham National Weather Service Forecast Office near the western edge of Homewood. In the next few minutes, a tremendous thunderstorm downburst produced straight-line winds that reached an estimated 70 to 100 mph. The intense winds produced a damage path about 0.25 to 0.50 mile wide and moved west to east over a 7- to 8-mile-long path. The most intense area of the straight-line wind path was through Homewood, Mountain Brook, and the Crestline area, nearly to Irondale. Hundreds of large trees were blown down which severely damaged or destroyed numerous homes and vehicles, or other structures. Major tree and botanical damage was sustained at the Birmingham Zoo and Botanical Gardens. In that area, several hundred large trees were blown down which caused damage to a greenhouse, many small plants and trees, and irrigation systems. A major portion of the roof of a large sports center was also blown off. One major insurance company alone recorded over 900 home claims; 100 of the homes were declared uninhabitable. The same company estimated that 100 vehicles were damaged; 10 to 20 percent were considered totaled. Total estimates from other sources showed the number of homes destroyed to be 20 to 25, while another 110 received major damage. Several sources estimated the dollar cost would be somewhere in the \$3 to \$5 million range. Miraculously, there were no injuries or fatalities. At 0430 CST, golf ball-size hail fell at Alabaster, while trees and power lines were blown down in the Gardendale and Center Point areas.

Cleburne County 29 0500CST 0 0 ? ? **Thunderstorm Winds**

Strong straight-line thunderstorm winds blew down approximately 100 acres of trees in northern Cleburne County near the Borden Springs Community. Several hunters were trapped in the area for awhile, but there were no injuries.

Talladega County 29 0530CST 1.0 75 5 13 5 0 **Tornado (F1)**

A tornado moved northeast through Munford over about a 1-mile-long by 75-yard-wide path. Four family members were killed in a mobile home that was completely destroyed; one of four mobile homes destroyed in the same park. Another woman in a mobile home died a few days later. In the area, a total of 6 to 8 more mobile homes were destroyed, 4 more received minor damage, 2 homes received major damage, 11 houses received minor damage, 1 business was destroyed, 6 others sustained minor damage, and 13 people received injuries. (M27M)(F25M)(M03M)(M08M)(F47M)

Autauga County 29 0630CST 0 0 ? ? **Thunderstorm Winds**

Three mobile homes were damaged approximately 10 miles north of Prattville.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Russell County	29	0640CST	2.0	300	0	16	6	?	Tornado (F2)
	29	0930CST			0	0	?	?	Thunderstorm Winds
	29	1030CST			0	0	?	?	Thunderstorm Winds

At 0640 CST, a tornado moved east through Ladonia over a 2-mile-long and 300-yard-wide path. There were 16 injuries, but no fatalities; 55 homes received major damage, of which 16 were destroyed; 2 tractor-semitrailers were blown over across U.S. Highway 80; 1 church had its roof blown off; several businesses in the downtown area were heavily damaged; and numerous trees were snapped off or uprooted. Most of the damage was in or near the center of town along a west-east path near U.S. Highway 80. Damage was estimated to be in the \$1.5 million range. At 0930 CST, thunderstorm winds blew large tree limbs onto power lines in Hurtsboro and Phenix City. At 1030 CST, signs and trees were blown down in Phenix City.

Dallas County	29	0715CST			0	13	6	?	Thunderstorm Winds
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At Selma and Orrville, a total of 15 mobile homes were demolished and hundreds of trees were blown down. The Craig Field complex near Selma sustained more than \$1 million in damage to buildings and two planes, that were mangled. There were 13 injuries throughout the Selma and Orrville area. Total damage estimates for the entire area were placed at around \$2 million.

Elmore County	29	0715CST			0	0	?	?	Thunderstorm Winds
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In the Holtville area, strong thunderstorm winds damaged three mobile homes, outbuildings, and blew down trees.

Chambers County	29	0725CST			0	0	?	?	Thunderstorm Winds
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A home was destroyed, and two others were damaged at Fredonia.

Marengo County	29	0725CST			0	1	?	?	Thunderstorm Winds
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Strong thunderstorm winds blew over a mobile home about 3 miles east of Thomaston. A teenage girl outside the mobile home was blown 50 yards and received scratches and bruises.

Tallapoosa County	29	0730CST			0	0	?	?	Thunderstorm Winds
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A boat was flipped over, and a house and boathouse were damaged at Union.

Lowndes County	29	0750CST			0	0	?	?	Thunderstorm Winds
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Two mobile homes were blown over in Benton, and another mobile home was blown over in White Hall.

Macon County	29	0915CST			0	0	?	?	Thunderstorm Winds
	29	0925CST			0	0	?	?	Thunderstorm Winds

At 0915 CST, trees were blown down along Highway 29 about 5 miles northeast of Tuskegee, and in the Tuskegee National Forest. At 0925 CST, more trees were blown down at Creek Stand.

Lee County	29	0920CST			0	0	?	?	Thunderstorm Winds
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Trees were blown down in the Auburn and Opelika area.

Monroe County	29	1000CST	1.0	30	0	0	?	?	Tornado (F1)
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A tornado touched down just southwest of the Goodway area and then moved northeast. A house was moved off its foundation, four vehicles were flipped over, a few barns were torn up and several roofs ripped, and considerable damage was done to farm equipment and many uprooted trees. There were no deaths or injuries reported and no damage estimates were available.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Crenshaw County	29	1130CST			0	0	?	?	Thunderstorm Winds
Trees were blown onto several houses about 2 miles southwest of Sellers.									
Montgomery County	29	1130CST			0	0	?	?	Thunderstorm Winds
At Sellers, thunderstorm winds blew over a mobile home, ripped off several roofs, and knocked down trees.									
Bullock County	29	1205CST			0	0	?	?	Hail (1.75)
Golf ball-size hail fell 2 miles west of Union Springs.									

ARIZONA

AZZALL	01	0200MST			0	0	3	0	Heavy Snow Flood
A very strong Pacific-storm system moved into the state on February 29th and continued into March 1st. The Flagstaff Airport received 31.5 inches of new snow, and Fairfield Snowbowl reported 50 inches. Trees and power lines were downed, some roofs collapsed, and hundred of motorists were stranded along the highways. In central Arizona, heavy rains resulted in flooding at Black Canyon City as the Agua Fria River overflowed its banks. In the south, a large part of the road to Mount Lemmon was washed away due to heavy rains.									
Maricopa County Wittmann	02	0400MST			1	0	0	0	Flash Flood
A motorist was killed when the Hassayampa River swept his vehicle away. (M56V)									
AZZ003 Northeastern Plateau St. Johns	11	1220MST			0	0	3	0	High Winds (G62)
A cold front raced across the state, and winds up to 71 mph blew roofs off several sheds in St. Johns. Some damage was also reported in Winslow.									
AZZ004-005 Central Basin Mogollon Rim	20 21	0500MST- 0600MST			0	0	0	0	Heavy Snow
Some beneficial snow was welcomed by many, but it also caused considerable trouble for motorists as another in a series of winter storms dropped 6 to 16 inches between Prescott and Flagstaff. The winter storm produced sudden bursts of heavy snow (1 to 2 inches per hour), with a whopping 3.5 inches in Flagstaff between 0500 and 0600 MST.									
AZZ010 Southeastern Arizona Fort Huachuca	26	0901MST			0	0	0	0	High Winds (G60)
AZZ008 South-Central Deserts Florence	26	1220MST			0	0	4	0	High Winds
Trees and power lines were downed, a roof was blown off a county building, and at least one house was damaged when a tree limb fell on it.									
AZZ010 Southeastern Arizona 8 S Safford	26	1400MST			0	0	3	0	High Winds
One mobile home was overturned by high winds in Artesia.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

AZZ005 Mogollon Rim 27-28 0 0 0 0 Heavy Snow

Locally-heavy snow, up to 12 inches, was reported around the area. A new March snowfall record was established in Flagstaff with a total of 79.4 inches. East of town, Interstate 40 was impassable during the early morning. Winslow reported 8 inches of new snow.

ARKANSAS

Howard County 5 N Nashville 21 1030CST 0 0 0 0 Hail (1.00)
 Pike County Lake Greeson 21 1040CST 0 0 2 0 Thunderstorm Winds
 Hail (0.75)

High winds knocked down several trees on the southwestern side of Lake Greeson.

Hempstead County 4 NE Washington 21 1051CST 0 0 0 0 Hail (1.75)
 Benton County Siloam Springs 21 1155CST 0 0 3 0 Thunderstorm Winds

The State Police reported roof damage along Highway 412.

Benton County Bella Vista 21 1330CST 0 0 0 0 Hail (0.75)
 Washington County 5 W West Fork 21 1640CST 0 0 0 0 Hail (0.75)
 Coal Creek 21 1645CST 0 0 2 0 Hail (2.75)

Apple-size hail fell at Coal Creek.

15 S Elkins 21 1650CST 0 0 0 0 Hail (0.75)
 Brentwood 21 1715CST 0 0 0 0 Hail (0.75)
 Madison County 5 S Huntsville 21 1729CST 0 0 0 0 Hail (1.75)
 Washington County Cincinnati 21 1740CST 0 0 0 0 Hail (1.00)
 Madison County 5 SE Huntsville 21 1749CST 0 0 0 0 Hail (0.75)
 Benton County Bentonville 21 1749CST 0 0 0 0 Hail (0.75)
 Newton County Ponca 21 1750CST-1754CST 0.5 100 0 0 4 0 Tornado (F1)

A tornado went through Ponca, damaging several buildings, signs, fences, and downing numerous trees. Four homes suffered serious roof damage, while others were damaged by falling trees. The tornado first touched down on a mountainside just above Highway 43 where it took the roof off several cabins. A vehicle nearby was picked up and tossed about 50 feet to the northwest, while the tornado moved northeast. Luckily, a man and dog inside the vehicle escaped injury. A tree in Ponca, believed to be the oldest maple tree in Arkansas, was also downed. This supercell thunderstorm continued to the northeast and produced two more tornadoes in Arkansas.

Compton 21 1804CST 0 0 0 0 Hail (1.75)
 Boone County 7 S Harrison 21 1812CST 0 0 0 0 Hail (1.75)
 Newton County Dogpatch 21 1820CST 0 0 0 0 Hail (1.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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
1 SW Valley Springs
2 NE Valley Springs

21	1830CST-1835CST	4.0	100	0	12	6	0	Tornado (F2)
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A tornado touched down 1 mile southwest of Valley Springs and moved northeast through town. Sixty buildings suffered some type of damage; at least 35 sustained major damage. Seven mobile homes were completely destroyed. Twelve people were injured, seven treated and released with five others requiring hospitalization.

Marion County
Pyatt
Lakeway

21	1840CST			0	0	0	0	Hail (1.75)
21	1840CST			0	0	0	0	Hail (1.75)

Washington County
Prairie Grove

21	1855CST			0	0	0	0	Hail (0.75)
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Baxter County
Lakeview
Gamaliel

21	1900CST			0	0	0	0	Hail (1.75)
21	1915CST			0	0	3	0	Thunderstorm Winds

Thunderstorm winds downed trees, caused roof damage, and destroyed some storage sheds.

Benton County
Bella Vista
Fulton County
6 N Gepp

21	1930CST			0	0	0	0	Hail (0.75)
21	1930CST-1940CST	2.0	150	0	0	5	0	Tornado (F1)

A tornado touchdown along Highway 87 damaged several ranches and destroyed three barns. In addition, five homes suffered roof damage, one truck was blown over, other vehicles sustained broken windows, and several power poles were downed.

Sebastian County
Fort Smith

21	2015CST-2020CST	0.5	100	0	1	4	0	Tornado (F1)
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A small tornado swept across downtown Fort Smith. Damage was mainly restricted to roofs and broken windows. One person was injured by flying glass.

Crawford County
2 N Van Buren
Polk County
8 NW Rocky

21	2030CST			0	0	0	0	Hail (1.00)
21	2058CST			0	0	0	0	Hail (0.75)

Franklin County
Ozark

21	2119CST			0	0	0	0	Hail (0.75)
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Polk County
3 N Mena

21	2122CST			0	0	3	0	Thunderstorm Winds
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The roof was blown off a house west of Mena.

Scott County
Y City

21	2125CST			0	0	0	0	Hail (0.75)
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Polk County
1 SW Mena

21	2130CST-2132CST	0.2	50	0	0	2	0	Tornado (F0)
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Trees and a storage building were downed by a small tornado.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARKANSAS Cont'd

Baxter County		21	2205CST			0	0	0	0	Hail (0.75)
Mountain Home		21	2215CST			0	0	0	0	Hail (0.75)
Norfolk Lake										

Dime-size hail fell along Highway 62 near Norfolk Lake.

Fulton County		21	2225CST			0	0	2	0	Thunderstorm Winds
1 S Vidette										

Thunderstorm winds broke large tree branches which downed power lines along Highway 87.

Marion County		21	2230CST			0	0	0	0	Hail (0.75)
Peel										

Montgomery County		21	2240CST			0	0	2	0	Thunderstorm Winds
Story										

Thunderstorm winds downed power lines.

Yell County		21	2255CST			0	0	2	0	Thunderstorm Winds
Ola										

Near Ola, thunderstorm winds downed trees.

Pope County		21	2320CST			0	0	3	0	Thunderstorm Winds
Atkins										

Thunderstorm winds downed power lines in Atkins.

Faulkner County		22	0030CST			0	0	0	0	Hail (1.00)
1 N Greenbrier										

Yell County		22	0528CST			0	0	0	0	Hail (0.75)
Chickalah										

Belleville		22	0610CST			0	0	3	0	Thunderstorm Winds
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Thunderstorm winds downed trees and power lines around Belleville.

Conway County		22	0620CST			0	0	2	0	Thunderstorm Winds
5 N Morrilton										

Thunderstorm winds downed trees.

1 S Solgohachia		22	0630CST			0	0	5	0	Thunderstorm Winds
5 NE Springfield										

A thunderstorm microburst left a path of damage about 10 miles long and up to 0.25 mile wide across Conway County. Destroyed property included one home, two mobile homes, four chicken houses, six outbuildings, one vehicle, and one barn. Moderate to heavy damage occurred to seven homes, two mobile homes, three chicken houses, one barn, and two vehicles. The storm also downed hundreds of trees.

Cleburn County		22	0658CST			?	?	?	?	Funnel Cloud
2 N Crossroads										

SKYWARN spotters reported a funnel cloud over southwestern Cleburn County that later developed into a damaging tornado at Drasco and Concord.

Heber Springs		22	0700CST			0	0	0	0	Hail (1.75)
Cleburn and Independence Counties										

1 S Drasco		22	0715CST-			0	1	5	0	
Jamestown			0735CST	15.0	150	0	1	5	0	Tornado (F2)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

ARKANSAS Cont'd

A tornado (F1) touched down just south of Drasco where it destroyed two buildings, overturned two mobile homes, downed 20 to 25 trees, and downed power lines and poles. The tornado moved northeast downing more trees before hitting Concord.

In Concord, the tornado reached F2 strength and caused a 100-yard path of damage through the downtown area: four mobile homes were destroyed as was the city fire station; a bank and several other buildings lost their roofs; the elementary school suffered minor damage, mainly broken windows and fences knocked down by falling trees; a couple of poultry houses just north of town suffered roof damage; and trees and power lines were downed throughout the area.

The tornado continued northeast, but weakened to F1 strength as it moved into Independence County, 1 mile south of Almond. The next notable damage occurred at Jamestown, where trees were downed, two mobile homes badly damaged, and a barn and several outbuildings destroyed.

Independence County									
Batesville	22	0745CST			0	0	4	0	Thunderstorm Winds
Dowdy	22	0800CST			0	0	3	0	Thunderstorm Winds

Thunderstorm winds downed trees and power lines damaging roofs, signs, and outbuildings all around Batesville. Trees and power lines were also downed near Dowdy.

Lawrence County									
Walnut Ridge	22	0800CST			0	0	0	0	Hail (0.75)
Randolph County									
5 S Pocahontas	22	0800CST			0	0	2	0	Thunderstorm Winds

Thunderstorm winds downed power lines.

Greene County									
1 N Paragould	22	0805CST			0	0	0	0	Hail (0.75)
Lawrence County									
Walnut Ridge	22	0820CST			0	0	3	0	Thunderstorm Winds

Thunderstorm winds downed trees and power lines.

Jackson County									
Swifton	22	0830CST			?	?	?	?	Funnel Cloud

Sheriff's deputies reported a funnel cloud in Swifton.

Greene County									
Marmaduke	22	0835CST			0	0	2	0	Hail (1.75)
	22	0835CST			0	0	3	0	Thunderstorm Winds
Clay County									
Rector	22	0835CST			0	0	4	0	Thunderstorm Winds
Piggott	22	0840CST			0	0	2	0	Hail (1.75)
Piggott	22	0840CST			0	0	3	0	Thunderstorm Winds

A severe thunderstorm produced hail and wind damage across northeastern Greene and southeastern Clay Counties. Windows were broken and vehicles dented by hail, while strong winds downed trees and power lines and caused roof damage. In Rector, a grocery store lost part of its roof, resulting in water damage inside the store.

Independence County									
Charlotte	22	0840CST			0	0	4	0	Thunderstorm Winds

Thunderstorm winds blew the roofs off four houses, depositing one on a nearby road. A couple of chicken houses and storage buildings were destroyed. Large trees and some power lines were also downed.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Polk County 2 W Mena	22	0850CST- 0910CST			0	2	4	0	Thunderstorm Winds
Thunderstorm winds demolished a mobile home and damaged or destroyed 14 outbuildings. Two houses and a car were damaged by falling trees. Many trees and some power lines were downed in an 8-mile by 12-mile area, extending from near Potter to near Acorn. Two people suffered minor injuries from flying debris.									
Lawrence County Alicia	22	0850CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds destroyed a barn in Alicia.									
Polk County 2 SW Mena	22	0858CST- 0904CST	0.2	40	0	0	2	0	Tornado (F0)
Trees were downed by a small tornado.									
Lawrence County 2 E Hoxie	22	0900CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds downed trees and power lines just east of Hoxie.									
Scott County Parks	22	0920CST			0	0	4	0	Thunderstorm Winds
A severe thunderstorm produced wind damage along a path that was 2 miles long and 0.5 mile wide around Parks, destroying seven outbuildings and a carport. Much of the path was through the Ouachita National Forest resulting in numerous downed trees.									
Desha County Halley	22	1425CST			0	0	2	0	Thunderstorm Winds
Thunderstorm winds downed some power lines.									
Ashley County Wilmot	22	1515CST			0	0	0	0	Hail (0.75)
Chicot County Lake Village	22	1545CST			0	0	0	0	Hail (0.75)
Clay County 4 W Corning	27	0930CST			0	0	3	0	Thunderstorm Winds

CALIFORNIA, Northern

CAZ009-010 Sierra Nevada	01	0000PST- 1200PST			0	0	?	0	Heavy Snow
A cold Pacific storm brought 1 to 2 feet of snow in the Sierra Nevada.									
Sacramento County 4 SW Sacramento	01	1103PST- 1120PST			0	0	0	0	Funnel Cloud
A funnel cloud formed in the cold air behind the front.									
CAZ001-002-006- 007, Northern and Central Coast,	03	0200PST- 1000PST			0	0	?	0	High Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CALIFORNIA, Northern Cont'd

**Northern Mountains,
Northern Sac Valley**

A strong cold front produced winds to 60 mph along the coast north of Santa Cruz, in the northern mountains and in the northern Sacramento Valley. Numerous trees and power lines were downed.

**CAZ006-007-008-009-010
Northern Mountains,
Sierra Nevada,
Sacramento Valley**

03 0600PST-
04 2000PST
0 0 ? 0 Heavy Snow

A cold moist storm system brought heavy amounts of precipitation to the mountains where 2 to 5 feet of snow were reported. Power lines were downed and a falling oak toppled a 300-foot radio tower near Sacramento. A mud slide brought boulders onto Highway 16 through Rumsey Canyon. Highway 50 over the Sierra was closed due to an avalanche.

**Sonoma, Napa, and
Butte Counties**

03 1200PST-
04 1800PST
1 0 4 ? Flood

Heavy rains caused the Russian River near Guerneville to crest near flood stage; minor flooding of homes was reported. A 6-year-old girl drowned in Concow Creek in Butte County.

**CAZ009-010
Sierra Nevada**

10 1500PST-
2400PST
0 0 ? 0 Heavy Snow

A very cold and moist storm lowered the snow level below 2,000 feet. Up to a foot of snow fell in the Sierra Nevada from Yosemite Park northward.

**Kern County
Bakersfield**

10 1630PST-
2030PST
0 0 0 0 Blowing Dust

The visibilities south of town on Highway 99, were severely restricted.

**CAZ007-008-009
Northern Mountains
Sierra Nevada**

12 0200PST-
13 0800PST
0 0 ? 0 Heavy Snow

Another very cold and moist storm lowered the snow level to near 1,500 feet where 12 to 18 inches of snow fell.

**CAZ002
San Francisco
Bay Area**

14 2200PST-
15 0400PST
0 0 ? 0 High Winds

Gusts to 60 mph were observed especially in the hills of East Bay.

**CAZ002-003
Central Coast
and Valleys**

16 2300PST-
17 1100PST
0 0 4 ? High Winds

An intense low-pressure system moved onshore, producing winds to 70 mph. Numerous trees and power lines were downed, and the berry crop in Santa Barbara County was damaged.

**Kern County
Bakersfield**

17 1130PST-
1200PST
0 20 6 0 Blowing Dust

Strong southeasterly winds across the San Joaquin Valley floor severely reduced visibility. Two separate accidents involved a total of 27 vehicles.

**CAZ005-009-010
Sierra Nevada
Tehachapis**

17 1200PST-
18 1800PST
0 0 ? 0 Heavy Snow

A cold front produced snowfall amounts of 1 to 2 feet.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CALIFORNIA, Northern Cont'd

**Kern County
Taft**

17 1930PST-1945PST 0.1 40 0 0 5 0 Tornado (F1)

The path of the tornado appeared to be from north to south. Witnesses and damage analysis support circular motion and lifting action.

San Luis Obispo and Northern Santa Barbara Counties

18 1900PST-19 0100PST 0 0 5 ? Flash Flood

Heavy rains produced flash flooding that washed an automobile into the ocean at Gaviota. Major urban flooding in Santa Maria resulted in the washout of roads and bridges.

**Kern County
Tehachapi**

18 2030PST-2230PST 0 0 5 0 High Winds

Seventy-five-mph winds were measured through the Tehachapi Valley blowing shingles off, damaging weak carports, and downing power lines.

Mountains of Tulare and Kern Counties

19 0000PST-0400PST 0 0 ? 0 Blizzard

High winds and heavy snow closed roads out of the San Joaquin Valley with up to 3 feet of snow reported in the mountains.

**Kern County
Northwestern Portion**

19 0140PST-0249PST 0 0 0 0 Flash Flood

Highway 46 and 7th Standard Road were closed due to flooding.

Kings County

19 0200PST-0900PST 0 0 ? 0 Flash Flood

Heavy rains and mud slides combined to close Highways 41 and 46.

San Luis Obispo County

19 2300PST-20 0300PST 0 0 ? 0 Flash Flood
Heavy Snow

Flooding closed the highway between Morro Bay and Los Osos. Six to twelve inches of snow were reported over Cuesta Pass.

San Louis Obispo County

19 2350PST 0 0 5 0 Lightning

A lightning strike started a fire that destroyed two houses.

Kern County

20 0530PST-0800PST 0 0 ? 0 Flash Flood

Heavy rains caused mud flows and flooding in Mineral Wells. Flooding was also reported near Shafter and Taft.

Santa Barbara County

20 1041PST ? ? 0 0 0 0 Waterspout

20 W Santa Barbara Madera County

20 1105PST 0 0 0 0 Funnel Cloud

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CALIFORNIA, Northern Cont'd

A funnel cloud was reported south of Highway 152 near Chowchilla.

San Louis Obispo
County

10 W Point Sal	20	1130PST	?	?	0	0	0	0	Waterspout
Madera County	20	1155PST			0	0	0	0	Funnel Cloud

Funnel clouds were reported near Kerman and Madera.

Madera County	20	1229PST			0	0	0	0	Funnel Cloud Hail (0.75)
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A funnel cloud was reported just north of the San Joaquin River near Road 25. Reports of 0.50- to 0.75-inch hail with up to 2 inches deep on the ground.

Sacramento County

16 ENE Sacra- mento	20	1317PST- 1332PST			0	0	0	0	Funnel Cloud
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San Joaquin County
6 E Stockton

6 E Stockton	20	1320PST- 1322PST			0	0	0	0	Funnel Cloud
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Sacramento County

19 E Sacramento	20	1330PST- 1339PST			0	0	0	0	Funnel Cloud
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19 ESE Sacramento

19 ESE Sacramento	20	1334PST- 1348PST			0	0	0	0	Funnel Cloud
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San Joaquin County
8 ENE Stockton

8 ENE Stockton	20	1340PST- 1347PST			0	0	0	0	Funnel Cloud
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18 ENE Stockton

18 ENE Stockton	20	1350PST			0	0	0	0	Funnel Cloud
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San Louis Obispo
County

Los Alamos	20	1400PST			0	?	?	0	Hail (?)
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Hail on the roadway resulted in a six-car accident in Los Alamos.

Fresno County	20	1405PST			0	0	0	0	Funnel Cloud
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A funnel cloud was reported 2 miles south of Chandler Field.

Stanislaus County

12 SE Modesto	20	1406PST			0	0	0	0	Funnel Cloud
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Madera County

6 SW Chowchilla	20	1430PST	?	?	0	0	0	0	Tornado (F0)
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Fresno County

Fresno	20	1455PST			0	0	?	?	Hail (0.75)
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Hail was reported by the public in downtown Fresno.

Merced County

8 ESE Merced	20	1515PST			0	0	0	0	Funnel Cloud
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Fresno County

Firebaugh	20	1555PST			0	0	0	0	Funnel Cloud
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Tulare County

Between Tulare and Tipton	20	1835PST			0	0	0	0	Funnel Cloud
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All of the above funnel clouds and tornadoes were spawned in cold air behind a strong cold front.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CALIFORNIA, Northern Cont'd

CAZ005-007-008- 23 1200PST-
009-010, Mountains 26 0600PST 0 0 0 0 **Heavy Snow**
of Northern and
Central California Three closely spaced storms dumped a total of 3 to 6 feet of snow in the mountains. These were part of a series of late winter and early spring storms that finally put a dent in the overall years long drought picture.

Merced County 25 1145PST 0 0 0 0 **Funnel Cloud**
Merced
Fresno County
Kerman 25 1145PST 0 0 0 0 **Funnel Cloud**

Two funnel clouds were spotted near the same location in Kerman.

Merced County 25 1515PST 0 0 0 0 **Funnel Cloud**
3 N LeGrand

Two funnel clouds were spotted near the same location.

Fresno County 25 1535PST 0 0 0 0 **Funnel Cloud**
5 W Firebaugh

San Mateo County 25 1645PST ? ? 0 0 0 0 **Waterspout**
5 NW Half Moon Bay

CAZ010 26 0600PST-
Southern Sierra 2100PST 0 0 0 0 **Heavy Snow**

One to three feet of snow fell in the Sierras between Yosemite and Sequoia National Parks. Power and phone line outages affected thousands.

Madera County 26 0805PST 0 0 0 0 **Funnel Cloud**
Coarsegold

San Joaquin County 26 0920PST 1 0 3 0 **Squall Line**
15 NNE Stockton

Gusty winds west of Lockeford toppled an oak tree onto a car, killing the driver.

Santa Barbara County 26 1245PST 0 0 3 2 **Thunderstorm Winds**
10 SW Santa Maria

A microburst with winds estimated to 80 mph, caused damage to small structures and crops on and near Vandenburg Air Force Base.

Madera County 26 1400PST 0 0 0 0 **Funnel Cloud**
Southwestern Portion

Kern County 26 1407PST-
Ridgecrest 1411PST ? ? 0 0 0 0 **Tornado (F0)**

A tornado was observed by the Naval Weapons Test Center weather observer touching down in the open desert and scattering tumbleweeds.

Solano County 26 1635PST 0 0 0 0 **Funnel Cloud**
2 E Fairfield

San Joaquin County 26 1715PST ? ? 0 0 ? ? **Tornado (F0)**
5 W Lodi

Solano County 26 1720PST 0 0 0 0 **Funnel Cloud**
13 SE Fairfield

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

CALIFORNIA, Northern Cont'd

**Merced County
Plainsburg**

26	1740PST- 1835PST	?	?	0	0	?	?	Tornado (FO)
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A funnel cloud was reported to be nearly stationary for over 45 minutes. At that point it briefly touched down for an unknown distance then lifted and dissipated.

**Madera County
Between Madera
and Chowchilla**

26	1740PST			0	0	0	0	Funnel Cloud
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**Kings County
Hanford**

26	1830PST			0	0	0	0	Funnel Cloud
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**Madera County
5 NE Madera**

26	1830PST			0	0	0	0	Funnel Cloud
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CALIFORNIA, Southern

CAZALL

01	All Day			1	6	6	?	Heavy Rain Snow Flood
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A series of winter storms moved through southern California, from February 27th to March 1st, producing heavy rain, mountain snows, and local urban flooding. Heavy surf in Malibu slammed against a row of expensive beach front homes, severely damaging one home and threatening at least two more. Pounding surf driven by the storm also swept away boats along the Los Angeles County beaches. Floodwaters swamped normally dry washes in Desert Hot Springs, where more than 15 cars were found submerged in deep ravines of water. Water rushing over roads leading into Desert Hot Springs were up to 5 feet deep in places. Six people were injured in Mission Viejo after a 20-car pileup, during a sudden downpour. In Big Bear Lake, where 2 to 3 feet of snow fell, the city declared a local emergency after road clearing became difficult. One death occurred when a young boy in Pedley (in Riverside County), drowned while playing in a storm drain with two other people. (M190)

CAZALL

17 20	All Day-			0	0	6	?	Heavy Rain Snow Local Flood
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A vigorous storm moved through southern California from off the central California coast producing rains of from 1 to 8 inches, and up to 14 inches in some mountain areas. Oldman Mountain had 8.20 inches; Santa Barbara, 7.35 inches; Mt. Wilson, 6.17 inches; and the Los Angeles Civic Center, 1.89 inches. From 2 to 5 feet of snow fell in the mountains. Snow closed roads and snarled traffic on Cajon Pass. Local flooding and some mud slides occurred. In Hesperia roads were washed out due to flooding. Local urban flooding was reported in the Santa Barbara area, with significant runoff in some streams and drainage areas.

**Los Angeles County
Lakewood
Bellflower**

19	0200PST	0.5	50	0	0	?	0	Tornado (FO)
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A tornado was reported near Del Amo Boulevard and Clark Street. It moved to the northeast near the eastbound 91 freeway. Damage was light, with two roofs blown off, a car picked up, windows shatters, and trees and power lines blown down.

**San Diego County
San Carlos**

19	0230PST	1.0	440	0	0	5	?	Tornado (F1)
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A tornado struck near the San Carlos area of San Diego County. The tornado damaged at least 20 homes, toppled trees, damaged cars, and littered streets with debris and broken glass. Damage was estimated at more than \$200,000.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CALIFORNIA, Southern Cont'd

Riverside County
Riverside

20 1130PST ? ? 0 0 ? 0 Tornado (F0)

A tornado was reported near the intersection of Highway 60 and Interstate 215, moving toward the southeast.

San Bernardino County
Muscoy

20 1245PST 1.0 50 0 0 ? 0 Tornado (F0)

A funnel became a tornado when it touched down briefly in Muscoy, as it was moving toward the northeast. The funnel cloud began west of Muscoy and ended in San Bernardino, a distance of 4 miles. The damage reported was light; an awning was ripped off, a shed was damaged, an automobile was flipped over, and the top of a power pole was broken off.

San Diego County
Oceanside

20 1300PST 0 0 0 0 Funnel Cloud

Two funnel clouds were reported by a pilot.

Ventura County
Pt. Mugu Naval Air Station

20 1700PST 0 0 0 0 Funnel Cloud

Kern County
China Lake Naval Air Station

25 1420PST ? ? 0 0 0 0 Tornado (?)

A weather observer at China Lake spotted a tornado northwest of the Naval Air Station, moving northeast.

San Diego County
Oceanside

25 1615PST ? ? 0 0 0 0 Waterspout

A waterspout was observed by a lifeguard about 1 mile offshore from Oceanside Harbor. Its movement was unknown.

CAZALL

25 All Day-
27 0 0 ? 0 Heavy Rain
Snow

A deep low-pressure system off the California coast moved through southern California, with strong winds, heavy rains, and mountain snow. Some thunderstorms moved through the area in association with a cold unstable air mass. Rainfall amounts were generally from 1 to 5 inches, with Mt. Wilson receiving 7.52 inches. Heavy snow fell in the mountains and northern deserts, with about 3 feet of snow falling at Big Bear, and 3.5 feet at Mt. Wilson. An avalanche occurred along State Route 18 west of Big Bear, which closed the highway for several days and buried cars.

Orange County
Huntington Beach

26 2235PST 3.0 55 0 0 ? 0 Tornado (F1)

A tornado did sporadic damage over a 3- to 3.5-mile spread from the beach, across Hamilton Street and the Newland-Magnolia Street area, to near the Magnolia and Adams Street area of Huntington Beach. Some damages were sustained in a mobile park. Up to 50 residences reported some type of damage; mainly roofs and roof shingles were blown off, and fences and tree limbs broken.

San Diego County
San Marcos

27 0200PST ? ? 0 0 ? 0 Tornado (F?)

A tornado lifted a shed from one yard and moved it to another.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

COZ002-004-007-008-010
Mountains and Four-Corners

01	0000MST-								
03	2100MST				0	0	0	0	Heavy Snow

The snowstorm, which began February 28th, continued into the beginning of March. Strong winds persisted, producing blowing snow and low visibilities through the mountains. Snowfall totals for the March portion of the storm (storm totals February 25th through March 3rd are in parenthesis) included: 31 inches at Irwin (38 inches); 28 inches at Gothic (38 inches); 23 inches at Wolf Creek (36 inches); 22 inches at St. Paul (28 inches); 21 inches at Crested Butte (27 inches); 20 inches at Telluride (27 inches); 17 inches at Purgatory (24 inches) and at Cooper (18 inches); 15 inches at Copper Mountain (17 inches); and 12 inches at Vail (14 inches) and Sunlight (14 inches). The Four-Corners region received 4 to 8 inches during the entire storm.

COZ002-004-011
Northern and Central Mountains and Front Range

03	0000MST-								
04	2100MST				0	0	4	0	High Winds

Strong westerly to northwesterly winds raked the northern foothills area from southwest of Denver to the Wyoming border at speeds in excess of 90 mph, causing some damage across the front range. Gusts of 60 to 90 mph were common with 119 mph recorded at Wondervu (west of Boulder), 106 mph at Shanahan Ridge, and 92 mph at Table Mesa, both to the southwest of Boulder. Several trees, traffic signs, and lights were uprooted or blown over. Flying debris caused damage to homes, buildings, and cars. In Boulder, a stop sign was uprooted and struck a car. There were no reports of injuries.

COZ001-002-004-005-008-010-015-016, Northwestern Plateau Mountains, Upper Arkansas Valley, Southern Foothills, and Southeastern Plains

04	0000MST-								
06	1800MST				0	0	4	0	Winter Storm High Winds

A major winter storm blasted through the state, producing over 2 feet of snow in several areas throughout the Colorado Rockies. Strong westerly winds of 40 to 50 mph, with gusts to 80 mph, combined with heavy snow to create whiteout conditions across the mountains on the 4th and 5th. An uprooted tree knocked down power lines near Winter Park, leaving residents in a large area around the ski area without power for a few hours on the night of the 5th. Winds decreased considerably on the 6th but snows continued until midday. Mountain snowfall totals ranged from 8 to 33 inches. Higher totals included: 33 inches at Irwin; 30 inches at Mary Jane and Vail; 29 inches at Gothic; 26 inches at Beaver Creek and Berthoud Pass; 25 inches at Henderson and Snowmass; 24 inches at Steamboat Springs; 23 inches at Aspen Mountain; 22 inches at Cooper; 21 inches at Copper Mountain; 20 inches at Lake Eldora; 19 inches at Loveland and Wolf Creek; 18 inches at Breckenridge and Monarch; 17 inches at Telluride; and 16 inches at Aspen, St. Paul, and 7 Utes.

The same storm also dropped up to 7 inches of snow on the northeastern plateau on the 4th and 5th with Craig reporting 7 inches.

The southern foothills and western sections of the southeastern plains received 4 to 8 inches of snow on the 5th and early on the 6th. Rye reported 8 inches while Pueblo received up to 8 inches in parts of the city.

High winds associated with the storm system caused some damage in the Upper Arkansas Valley in Salida. At around 1300 MST on the 5th, a tree was blown over onto a house. Later that day at about 1830 MST, the porch of a home was blown off and thrown into some power lines. No injuries were reported with either incident.

COZ002-004-008-010, Mountains

10	1800MST-								
12	1800MST				0	0	0	0	Winter Storm

A strong Pacific storm moved through the Great Basin and into western Colorado on the evening of the 10th. Snow began in the mountains on the 10th and continued through the afternoon of

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

the 12th. Snow totals for the 48-hour period ranged from 5 to 34 inches. Strong winds with gusts of 50 to 80 mph caused blowing and drifting snow on the 11th and 12th, often creating near whiteout conditions. Wolf Creek Pass reported a gust of 100 mph. Many roads were closed due to snowpack and low visibilities, including Interstate 70 between Silverthorne and the Eisenhower Tunnel. The northern and central mountains received the brunt of the storm. Snowfall totals included: 34 inches at Irwin; 31 inches at Gothic; 19 inches at Vail; 18 inches at Mary Jane and Crested Butte; 15 inches at Snowmass; 14 inches at Copper Mountain, Loveland, Steamboat Springs, and Telluride.

COZ011-012-013-014-015-016-017
Eastern Foothills
Pikes Peak/
Palmer Divide,
Northeastern and
Southeastern Plains

11	0000MST-								
12	1200MST			0	1	5	0		High Winds Blizzard

The same system which produced heavy snow in the mountains caused high winds along the eastern foothills and plains and blizzard conditions in the northeastern plains of Colorado. A very strong low-pressure system pulled a Pacific cold front across the front range during the late afternoon of the 11th. Around 0400 MST on the 11th, westerly winds, gusting to 70 mph, overturned a tractor-semitrailer pulling a modular office building. The accident occurred on Interstate 25 near Monument Hill, about 20 miles north of Colorado Springs. The driver, male, received multiple injuries and was in serious condition. After the front moved through, northwesterly winds with gusts often in excess of 60 mph, whipped across the front range. Blowing dust reduced visibilities to 2 miles at Denver Stapleton Airport at about 1838 MST. At 1955 MST, State Highway Patrol officials reported gusts of 60 to 70 mph near Trinidad. A small building was blown down 1 mile west of Haswell in Kiowa County. At Eads, also in Kiowa County, wind gusting to 70 mph blew the back off a building. The strong wind continued across eastern Colorado through the night until midday on the 12th. Snow accompanied the winds overnight in the northeastern plains, causing blizzard conditions from 2300 MST on the 11th until 0900 MST on the 12th. Winds to 40 to 60 mph and snow reduced visibilities to zero from Weld, Morgan, and Elbert counties to the Kansas border. Fort Morgan residents were without power most to the night when a 115,000-volt transmission line fell under the force of the wind and the weight of ice and snow. Interstate 70 was closed from Watkins (20 miles east of Denver) to the Kansas border until around 0900 MST on the 12th. Ranchers reported losses of livestock, including newborn calves in the calving season. Numerous reports of lost shingles, broken tree limbs, and damaged chimneys spread across northeastern Colorado. The snow ended by midmorning with winds dropping off by midday.

COZ002-004-008-010-015-016-017
Mountains,
Southeastern Plains
and Border and
Southern Foothills

14	Unknown-								
16				0	0	0	0		Heavy Snow

Another in a long series of Pacific storms brought heavy snow to Colorado, this time to the mountains and the southeast. Snow began in the mountains on the 14th as the upper-level low tracked toward southwestern Colorado. As the upper system continued its southeasterly trek, the surface low pushed into northern New Mexico by the 15th, producing upslope conditions for much of southeastern Colorado. Snowfall amounts across the mountains ranged from 5 to 17 inches while at lower elevations snowfall ranged from 4 to 10 inches. Mountain snow totals included 17 inches at Wolf Creek; 14 inches at Berthoud Pass; 13 inches at Powder Horn; 12 inches at Steamboat Springs; 11 inches at Loveland and Winter Park; and 9 inches at Arapahoe Basin, Monarch, and Purgatory. At lower elevations, snow totals included 8 to 10 inches in the Cuchara area of Herfano County; 6 inches at Limon and Towner; 5 inches at Pueblo and Walsh; and 4 inches at Holly and Rye.

COZ002-004-008-010
Mountains

19	All Day								
				0	0	0	0		Heavy Snow

A strong upper-level, low-pressure system and a Pacific cold front moved through the state on the 21st, bringing heavy snow to the mountains and strong winds to the eastern foothills. Strong westerly winds of 25 to 40 mph with gusts to 60 mph also plagued the mountains, producing low

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

visibilities from blowing snow. Snowfall totals for the two days ranged from 6 to 19 inches. Snowfall amounts included 19 inches at Vail; 18 inches at Telluride; 16 inches at Mary Jane Ski Area and at Wolf Creek; 14 inches at Beaver Creek, Steamboat Springs, and Monarch; 13 inches at Loveland; 12 inches at Sunlight and Irwin; 11 inches at Divide, Berthoud Pass, Copper Mountain, and Winter Park; and 9 inches at Powder Horn, Arapahoe Basin, and Woodland Park.

High winds also affected the eastern foothills late on the 21st as the cold front made its way into the eastern sections of the state. The winds continued through the day on the 22nd. Westerly to northwesterly winds gusted at 60 to 80 mph across the foothills. Fort Collins reported a gust to 62 mph while at Rollingsville, a gust of 84 mph was recorded. Nunn, in northwestern Weld County, recorded a gust of 50 mph.

COZ002-004-008-009-010-011-012-013-014

Mountains, San Luis Valley, Pikes Peak/Palmer Divide, Northern Foothills, and Northeastern Plains

26 0000MST-									
28 0000MST				0	0	0	0		Heavy Snow

Strong southwesterly flow aloft and Pacific moisture moved across the state, producing heavy snow over the mountains and the northeastern sections of the state. Snowfall totals in the mountains ranged from 5 to 22 inches while the San Luis Valley and the eastern plains snowfall ranged from 3 to 10 inches. Mountain snowfall reports included 22 inches at Platoro Reservoir and Summitville; 20 inches at Wolf Creek and Creede; 18 inches at 7 Utes; 17 inches at Sunlight; 15 inches at Beaver Creek; 16 inches at South Fork; 13 inches at Monarch and Purgatory; 12 inches at Copper Mountain and Irwin; 11 inches at Loveland, Mary Jane, Aspen Mountain, and Crested Butte; 10 inches Steamboat Springs and St. Paul; and 9 inches at Arapahoe Basin, Bear Lake, Lake Eldora, and Vail. On the 26th, Wolf Creek Ski Area reported wind gusts in excess of 60 mph shortly after midnight with five occurrences of 100+ mph gusts.

Snow in northeastern Colorado included 8 inches at Limon; 4 inches at Kiowa and Doubleheader; and 3 inches at Fort Morgan. In the San Luis Valley, snow totals included 9 inches at Del Norte; 6 inches at Conejos; and 3 inches at San Luis and Monte Vista.

COZ002-004-008-010-011-014-015-016-017

Mountains, Eastern Foothills, Pikes Peak/Palmer Divide and Southeastern Plains

29 0000MST-									
30 1200MST				0	0	0	0		Heavy Snow

A fast-moving and intense mid-level storm moved through Colorado from northwest to southeast. Heavy snow fell across the mountains and most of the plains with the most affected areas being in the southeastern quarter of the state. In roughly 36 hours, the mountains, the southern foothills, and the southeastern plains had received from 3 to 16 inches of snow while the northern foothills and northeastern plains reported 2 to 6 inches of snow. One exceptional snowfall report came from Cuchara, a small town and ski area about 70 miles southwest of Pueblo. A total of 41 inches of snow fell in approximately 24 hours, ending by midmorning on the 30th. Snow plows were reported ineffective at times as snow drifts were up to 6 feet high in places.

Mountain snowfall totals included 16 inches at Leadville; 15 inches at Steamboat Springs; 12 inches at Divide; and 10 inches at Berthoud Pass, Beaver Creek, Lake Eldora, and Telluride. The southern foothills and plains received 16 inches at Rye; 12 inches at Wooten Ranch; 9 inches at Walsenburg; 8 inches at Trinidad and Beulah; 5 inches at Hugo, La Junta, Kiowa and Eads; 4 inches at Colorado Springs; and 3 inches at Walsh and Las Animas. In the northern foothills and plains, 6 inches fell at South Platte (southwest of Denver) and at Doubleheader; 3 inches at Castle Rock; and 2 inches at Limon.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CONNECTICUT

CTZALL 02 0900EST-1400EST 0 0 4 0 **High Winds**

Strong southwesterly winds caused isolated property damage and scattered power outages. A peak gust to 43 mph was recorded at Bradley International Airport in Windsor Locks and a gust to 37 mph at was recorded Bridgeport.

DELAWARE

Sussex County
4 NNE Milford 02 0700EST 0 0 4 0 **Thunderstorm Winds**

A mobile home was knocked off its foundation and partially damaged. A water tank weighing about 300 pounds was toppled. The damage was confined to a narrow path and was due to straight-line winds.

FLORIDA

Santa Rose County
19 NNE Pensacola 01 1510EST 0 0 2 0 **Thunderstorm Winds**

A house suffered moderate damage from strong thunderstorm winds.

Escambia County
Pensacola Naval Air Station 01 1535EST 0 0 2 0 **Thunderstorm Winds (G54)**

A helicopter was overturned by strong wind gusts just north of Lexington Pier on the Naval Air Station grounds.

Santa Rose County
Allentown 01 1610EST 0 0 2 0 **Thunderstorm Winds**

Large tree limbs were broken off and blown into power lines near Allentown. Power was out in much of the area for several hours.

Marion County
Ocala 01 1736EST 0 0 2 0 **Thunderstorm Winds**

Strong thunderstorm winds blew large tree branches into power lines resulting in a power outage for 750 customers.

Franklin County
St. George Island 02 0755EST 0 0 2 0 **Thunderstorm Winds**

The sheriff's office reported a roof was blown off a house on St. George Island.

Alachua County
3 SW Gainesville 02 1321EST 0 0 1 0 **Hail (1.00)**

One-inch-diameter hail fell briefly in southwestern Gainesville.

Putnam County
Florahome 02 1413EST 0 0 2 0 **Hail (1.75)**

The sheriff's office reported golf ball-size hail at Florahome.

St. Johns County
Elkton
Armstrong 02 1445EST 0 0 3 0 **Hail (1.75)**

Golf ball-size hail fell in Elkton and Armstrong. Roof damage was also reported in Armstrong.

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FLORIDA Cont'd

Putnam County 38 E Gainesville	02	1540EST			0	0	1	0	Hail (1.75) Golf ball-size hail fell at Bostwick.
Franklin County Apalachicola	03	0100EST			0	0	0	0	Thunderstorm Winds (G61) A fishing boat captain reported winds gusting to 70 mph during a severe thunderstorm near Apalachicola.
1 E Carrabelle	03	0330EST			0	0	1	0	Thunderstorm Winds Strong thunderstorm winds downed trees and power lines.
Taylor County 2 N Perry	03	0355EST- 0455EST			0	0	3	0	Thunderstorm Winds (G70) Strong thunderstorm wind gusts blew the roof off a flea market north of Perry. A sheriff's deputy estimated winds of 80 mph. Numerous trees and power lines were downed throughout Taylor County. A door was blown off a fire station trailer in the northeastern part of the county.
Lafayette County Mayo	03	0515EST			0	0	2	0	Thunderstorm Winds Trees were uprooted, power lines knocked down, antennas were blown over, and aluminum carport roofs were damaged by strong thunderstorm winds.
Nassau County Fernandina Beach	03	0730EST			0	0	1	0	Thunderstorm Winds Tree branches and street signs were toppled by strong thunderstorm winds.
Columbia County Lake City	03	0915EST			0	0	1	0	Thunderstorm Winds Strong thunderstorm winds blew down traffic lights in Lake City.
Citrus County Inverness	03	0920EST	0.4	20	0	0	3	2	Tornado (F0) A small tornado damaged trees, power lines, and antennas. Several mobile homes suffered roof damage.
Homosassa	03	0930EST			0	0	1	0	Thunderstorm Winds Strong winds uprooted several large trees.
Pasco County New Port Richey	03	0934EST			0	0	3	0	Thunderstorm Winds Two houses were damaged by strong winds; one had its roof blown off.
Citrus County Floral City	03	0958EST	0.5	30	0	0	3	0	Tornado (F0) A small tornado damaged roofs of mobile homes, the roof and porch of a house, uprooted trees, and downed power lines.

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FLORIDA Cont'd

Pasco County Hudson	03	1000EST			0	0	4	0	Thunderstorm Winds
Two homes were damaged by strong winds; one house and one mobile home had their roofs torn off.									
Hillsborough County Tampa	03	1003EST			0	0	0	0	Thunderstorm Winds
Winds gusted to 81 mph at the WTVT television tower in Tampa; elevation 200 feet.									
Lake County 1 S Leesburg	03	1010EST	0.1	20	0	0	3	0	Tornado (F1)
A tornado briefly touched down uprooting several large oak trees and damaging one home.									
Putnam County Georgetown	03	1023EST	1.0	40	0	0	6	0	Tornado (F1)
A tornado touched down in Georgetown in southeastern Putnam County. Numerous homes in Georgetown suffered damage to roofs, carports, and windows. Many trees and power lines were downed. Total damage was estimated at \$1.3 million.									
Lee County Fort Myers	03	1025EST			0	0	3	3	Thunderstorm Winds
Thunderstorm winds uprooted several trees and blew over traffic lights.									
Sumter County Dade City	03	1030EST			0	0	2	0	Thunderstorm Winds
Five homes had their roofs blown off by strong thunderstorm winds.									
Flagler County 1 W Bunnell	03	1030EST	0.2	20	0	0	2	0	Tornado (F0)
A small tornado uprooted trees and downed power lines near Bunnell.									
Hillsborough County Ruskin	03	1035EST			0	0	3	2	Thunderstorm Winds
Several mobile homes suffered damage, sheds were destroyed, and trees and power lines were downed by strong winds.									
St. Johns County Elkton	03	1045EST			0	0	2	0	Thunderstorm Winds
Several trees and cable lines were blown down near Elkton.									
Hardee County Wauchula	03	1050EST			0	0	2	0	Thunderstorm Winds
Several power poles were knocked down by thunderstorm winds.									
Polk County Polk City	03	1050EST			0	0	4	0	Thunderstorm Winds
Strong winds blew the roof off a house, blew out windows, and destroyed a barn.									

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FLORIDA Cont'd

Winter Haven Lakeland	03	1109EST			0	0	5	0	Hail (0.75) Thunderstorm Winds
Large hail fell at Winter Haven and Lakeland. Several mobile homes were destroyed at Lakeland.									
Highlands County Lake Jackson	03	1115EST	?	?	0	0	0	0	Waterspout
Several waterspouts were observed over Lake Jackson.									
Charlotte County 15 NE Punta Gorda	03	1120EST			0	0	3	0	Thunderstorm Winds
Strong winds tore the roof off one mobile home, and blew down trees and power lines northeast of Punta Gorda.									
Orange County Winter Park	03	1125EST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds toppled a large tree which fell across a home, heavily damaging it.									
Osceola County 5 SW Kissimmee	03	1127EST			0	0	1	0	Thunderstorm Winds
A large tree was uprooted and fell across a highway.									
Orange County Taft	03	1130EST			0	0	4	0	Thunderstorm Winds
Thunderstorm winds blew the roof off a mobile home.									
Hillsborough County 3 N Dover	03	1136EST	0.2	20	0	0	2	0	Tornado (F0)
Trees and power lines were downed by a small tornado north of Dover.									
Orange County Bithlo	03	1145EST	0.5	50	0	0	5	0	Tornado (F1)
A tornado caused major damage to a warehouse and tore the roof off a mobile home. Another mobile home was moved off its blocks and several trees were snapped.									
Volusia County Ormond By The Sea	03	1145EST			0	1	1	0	Hail (2.50)
Baseball-size hail fell at Ormond By The Sea in northern Volusia County. The driver of an automobile was knocked unconscious when a hailstone crashed through his car window.									
Brevard County Melbourne	03	1244EST			0	0	5	0	Thunderstorm Winds
At the Melbourne Regional Airport, two 5,000-pound doors on aircraft hangars were blown in, and two aircraft were damaged. A large pine tree was uprooted at a nearby shopping center and several others lost limbs.									
Martin County 12 ESE Okeechobee	03	1450EST	0.3	2	0	0	2	0	Tornado (F0)
The sheriff's office reported a small tornado touchdown near the Martin-Okeechobee line moving east into Martin County. Several mobile homes were damaged and trees downed.									

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MARCH 1991

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FLORIDA Cont'd

Palm Beach County West Palm Beach	03	1619EST			0	0	2	0	Thunderstorm Winds (G57)
Wind gusts to 66 mph were reported at the Palm Beach Airport, resulting in several downed trees.									
Lee County Iona McGregor	04	0430EST	0.5	50	0	0	4	2	Waterspout Tornado (F0)
A waterspout moved onshore where minor damage was reported to 2 houses, 17 mobile homes, and 2 vehicles. Several roofs were lifted and several screen porches damaged. Trees and power lines were also downed.									
Jackson County Graceville	06	1200EST			0	0	2	0	High Winds
Strong winds toppled a large sign in front of a bank building.									
Walton County DeFuniak Springs	06	1200EST			0	0	2	0	High Winds
Strong winds toppled a tree which then crashed into a utility building and destroyed it.									
Citrus County 7 W Hernando	08	1030EST			0	1	2	0	High Winds
Strong wind gusts flipped a cement truck on County Road 486 west of Hernando. The truck driver was slightly injured.									
St. Johns County St. Augustine	08	1719EST			0	0	0	0	High Winds (G50)
Wind gusts to 58 mph, along with sustained winds of 30 to 40 mph for about 10 minutes, occurred at the Camachee Cove Marina just north of the St. Augustine Inlet. A large oak tree was blown down, and a radio antenna was also downed.									
Seminole County 5 E Geneva	10	1030EST			2	1	0	0	High Winds
Three boaters were caught in strong winds in a 15-foot boat on Lake Harney. The boat capsized and two of the men drowned while the third was rescued. The rescued man was treated at a local hospital and released. (M430)(M500)									
Polk County Lakeland	18	1014EST	2.0	100	0	2	6	0	Tornado (F1)
A tornado touched down three times as it moved through the Lakeland area. It moved through the Woodbrook Mobile Home Park, Heatherwood Mobile Home Park, Georgetown Mobile Home Park, Citrus Center Shopping Center, Azalea Village Mobile Home Park, Ariane Mobile Home Park, and Cottonwood apartment complex. There were two minor injuries, an 18-month-old boy and an 8-year-old boy, both due to flying glass. Total damage of \$1.75 million included: 13 mobile homes destroyed, 85 mobile homes suffering major damage, and 190 houses, apartments, and mobile homes which had minor damage. Numerous telephone and power lines were downed, as well as many trees.									
Fort Meade	18	1045EST	0.5	30	0	0	2	0	Tornado (F0)
The Florida Highway Patrol reported a brief tornado touchdown west of Fort Meade; mostly trees and power lines were damaged.									

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FLORIDA Cont'd

St. Lucie County
Fort Pierce 18 1245EST 0 0 2 0 **Thunderstorm Winds**

Strong winds lifted the metal roof off the back porch of a house and deposited it in the front yard.

FLZ006-007-009-012 29 1000EST-2000EST
Northern Florida 0 0 5 0 **High Winds**

Winds of 45 mph, with gusts to 65 at some locations, caused damage to trees, power lines, and signs primarily in Alachua, Columbia, Madison, Marion, Levy, and Volusia Counties. A tree was uprooted and blown across a Jeep in Ocala in Marion County. A mobile home was destroyed by a falling tree at Lake City in Columbia County. A tree crashed into a school building in the town of Madison, in Madison County. Alachua, Levy, and Volusia Counties reported primarily tree and power line damage.

GEORGIA

Coweta County
Moreland 01 1500EST 0 0 2 ? **Thunderstorm Winds**
Newnan 01 1530EST 0 0 2 ? **Thunderstorm Winds**
Sharpsburg 01 1546EST 0 0 4 ? **Thunderstorm Winds**

At Moreland, thunderstorm winds pushed a tree into the power lines and caused an isolated outage. By 1530 EST, tree limbs had torn down power lines in Newnan. After 1546 EST, additional outages developed around Sharpsburg. A set of portable bleachers and a scoreboard were damaged at a school by the winds. At another location, a seminary lost a large porch. The porch debris caused more damages to the building. A 300-pound piece of playground equipment was carried 300 yards, over a building, and dropped. Damage costs at the seminary were estimated at near \$25,000.

Troup County
West Point 01 1620EST 0 0 2 ? **Thunderstorm Winds**
Hogansville 01 1630EST 0 3 5 ? **Thunderstorm Winds**
Hogansville 01 1640EST 0 0 ? ? **Funnel Cloud**
La Grange 01 1700EST 0 0 4 ? **Thunderstorm Winds**

Numerous trees were blown down over Troup County, including West Point, Hogansville, and La Grange, by thunderstorm winds estimated at 50 mph.

At Hogansville, a home's porch and carport were destroyed by the winds. Debris was carried over 100 yards from the house. One piece flew into a feeder line and caused a major power outage to nearly 3,500 customers at 1630 EST. A concrete block barn was also completely destroyed by the storm. With about 20 trees uprooted, a golf course had major damages. Several homes and other properties were damaged by falling trees. Three people were treated for minor injuries sustained during this storm.

At La Grange, winds ripped off half of a home's roof and did considerable tree damage. Around La Grange, near 2,000 customers were briefly left without electrical power.

Coweta County
Moreland 01 1655EST 0 0 3 ? **Thunderstorm Winds**
3 SE Moreland 01 1700EST 0 0 3 ? **Thunderstorm Winds**
Meriwether County
Lutherville 01 1700EST 0 0 3 ? **Thunderstorm Winds**

Scattered trees were uprooted in Moreland, along U.S. Highway 27 outside Moreland in Coweta County, and around Lutherville in Meriwether County. Power lines were torn down; about 1,200 customers were left without power.

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GEORGIA Cont'd

Fayette County
 2 NE Peachtree City 01 1715EST 0 0 3 ? Thunderstorm Winds
 Scattered trees were uprooted by thunderstorm winds.

Newton County
 Covington 01 1800EST 0 0 3 ? Thunderstorm Winds
Walton County
 Countywide 01 1815EST 0 0 3 ? Thunderstorm Winds
 Monroe 01 1830EST 0 0 3 ? Thunderstorm Winds

Scattered trees were uprooted by thunderstorm winds over Walton and Newton Counties. In Newton County, one tree and a few limbs were downed around Covington. Power outages developed over Walton County, including Monroe.

Oconee County
 North High Shoals 01 1835EST 0 0 5 ? Thunderstorm Winds
Clarke County
 3 S Athens 01 1845EST 0 0 3 ? Thunderstorm Winds
 5 W Athens 01 1852EST 0 0 5 ? Thunderstorm Winds
 Athens 01 1854EST 0 0 ? ? Thunderstorm Winds (G72)
Oconee County
 Watkinsville 01 1855EST 0 0 3 ? Thunderstorm Winds
 5 NW Watkinsville 01 1855EST 0 0 3 ? Thunderstorm Winds
Clarke County
 Athens 01 1900EST 0 0 4 ? Thunderstorm Winds

Thunderstorm winds moved across Clarke and Oconee Counties and uprooted numerous trees. Cable television, electrical, and communication lines were torn down at many locations, including Athens, Watkinsville, and North High Shoals resulting in widespread outages. About 1835 EST, two chicken houses were destroyed around North High Shoals; a few chickens were killed. Another chicken house had major damages, along with a few houses and other structures. Traffic stopped on U.S. Highway 441 due to fallen trees. Several signs and billboards were damaged south of Athens about 1845 EST. The roof and west wall of a building were damaged near the airport. Ten residents at an apartment complex were left without shelter after their building lost its roof. Trees blocked several roads, and traffic lights were torn down. One home suffered damages when a tree fell onto it. Debris damaged several cars at an automobile dealership in Athens. By 1855 EST, trees were downed between Watkinsville and Bogart. In Watkinsville, several signs were damaged.

Richmond County
 Augusta 01 1900EST 0 0 4 ? Thunderstorm Winds

About 1900 EST, an aircraft was damaged at Bush Field Airport when hangar doors blew onto it.

Madison County 01 1900EST 0 0 3 ? Thunderstorm Winds
Oglethorpe County 01 1910EST 0 0 3 ? Thunderstorm Winds
Greene County 01 1920EST 0 0 3 ? Thunderstorm Winds
Hart County 01 1930EST 0 0 3 ? Thunderstorm Winds
Elbert County
 2 N Elberton 01 2000EST 0 0 3 ? Thunderstorm Winds

Scattered trees were blown down by winds over the five-county area. Power outages developed in Madison and Oglethorpe Counties after the winds and trees downed lines. North of Elberton, an uprooted tree heavily damaged an automobile.

Jefferson County
 Countywide 01 2000EST 0 0 4 ? Flash Flood
 Wadley 01 2020EST 0 0 4 ? Thunderstorm Winds

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GEORGIA Cont'd

Several county roads were damaged by flash flooding over Jefferson County. Downburst winds rolled a frame building off its foundation at Wadley and left it overturned. Several trees were uprooted along a short path across U.S. Highway 1 and a county road. Uprooted trees damaged several houses, an irrigation system, and disrupted utility services in the area.

Chattahoochee County Lawson Air Force Base (LSF)	02	0126EST			0	0	?	?	Thunderstorm Winds (G62)
Grady County 3 SE Cairo Cairo	02	0210EST			0	0	4	?	Thunderstorm Winds

Thunderstorm winds caused scattered tree damage around Cairo. Along Georgia Highway 93, south of Cairo, trees were uprooted and a garage was destroyed by the winds. In downtown Cairo, tree limbs downed utility lines and caused power outages.

Crawford County 5 SE Roberta	02	0400EST			0	0	5	?	Thunderstorm Winds
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Outside of Roberta on Georgia Highway 42, six chicken houses were demolished or damaged by strong winds. Many birds were lost and several trees were blown down.

Pulaski County Hawkinsville	02	0500EST			0	0	4	?	Thunderstorm Winds
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Scattered trees and power poles were damaged by strong winds across Hawkinsville. In downtown Hawkinsville, a tower was blown down, the glass door of a supermarket was shattered by the winds, one house sustained damages from a falling tree, and a wind-blown antenna damaged a car.

Dooly County Vienna	02	0505EST			0	0	5	?	Thunderstorm Winds
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Scattered tree damage occurred around Vienna as heavy rainfall and strong thunderstorm winds developed. With the ground already saturated by more than 4 inches of rainfall, downburst winds pushed over about 10 trees. Several fell onto a house and caused considerable structural damage. The winds blew out the wall of a warehouse.

Worth County Sylvester	02	0600EST			0	0	5	?	Thunderstorm Winds
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Scattered wind damage occurred along U.S. Highway 82 around Sylvester. A tractor shelter, two storage buildings, and a sign were damaged, along with one vehicle that was damaged by the debris. Two plate glass windows were blown out, and two signs were blown down at an automobile dealership.

Turner County Ashburn	02	0630EST	0.1	50	0	4	5	?	Tornado (F1)
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A small tornado developed over the eastern section of Ashburn and moved northeast toward Interstate 75. The tornado caused considerable damage to several homes and businesses between the civic center and the interstate. One restaurant was demolished after its ceiling and west wall collapsed. A nearby motel lost its sign. Several trees were downed along the path and caused damage to houses. Utilities were interrupted for about 1,000 homes. Four people were treated for minor injuries.

Southern Portion	02	0645EST			0	0	4	?	Thunderstorm Winds
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A flea market in southern Turner County had damage to its roof ventilation unit.

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GEORGIA Cont'd

Ben Hill County 4 E Fitzgerald	02 0700EST				0	0	3	?	Thunderstorm Winds
	Thunderstorm winds near Georgia Highway 319 ripped the roof off a shed and moved a mobile home.								
Chatham County Savannah	02 1700EST				0	0	3	?	Thunderstorm Winds
	Broken tree limbs downed electrical lines around Savannah and caused scattered power outages.								
Atkinson County Pearson	03 0215EST				0	0	4	?	Flash Flood
7 N Pearson	03 0230EST				0	0	3	?	Flash Flood
Willacoochee	03 0245EST				0	0	4	?	Flash Flood
	Flash flooding developed across Atkinson County, especially in Pearson, over sections of U.S. Highway 441 north of Pearson and around Willacoochee. Water, up to 1 foot deep, entered retail stores in downtown Pearson. At Willacoochee, many streets and roads were flooded, as well as a few buildings.								
Whitfield County Dalton	03 0246EST				0	0	4	?	Lightning
	A barn was destroyed after lightning set it on fire.								
Coffee County Douglas	03 0330EST				0	0	3	?	Thunderstorm Winds
	Thunderstorm winds downed several trees and power lines that resulted in power outages.								
Tattnall County 2 SW Glennville	03 0400EST	0.8	50		0	0	5	4	Tornado (F1)
	A small tornado developed over a sparsely populated area outside of Glennville near Georgia Highway 144, and moved east to near U.S. Highway 301. As the tornado moved along its path, about 50 trees were uprooted or snapped. Along the tornado's path, five houses, two chicken houses, a factory, a school, a government building, and several smaller farm buildings were either demolished or heavily damaged. A mature pecan orchard sustained heavy damage. The damage to the properties was estimated at near \$148,500.								
Bulloch County 2 W Register	03 0430EST				0	0	3	?	Thunderstorm Winds
	Numerous trees were uprooted over Bulloch County, mainly west of Register. A roof was partially torn off a home.								
Evans County Claxton	03 0445EST				0	0	3	?	Thunderstorm Winds
	Scattered trees were blown down by thunderstorm winds.								
Ben Hill County Countywide 5 E Fitzgerald	03 0500EST				0	0	4	?	Flash Flood
Irwin County Countywide 4 NE Ocilla	03 0500EST				0	0	4	?	Flash Flood

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GEORGIA Cont'd

Heavy rainfall developed over Irwin and Ben Hill Counties and produced flash flooding. Roads in both counties were damaged. One family was evacuated from a house northeast of Ocilla before water rose to 2 feet inside. East of Fitzgerald, a car was damaged in floods on U.S. Highway 319.

Appling County									
Countywide	03	0500EST			0	0	5	?	Flash Flood
Countywide	03	0500EST			0	0	4	?	Thunderstorm Winds
Baxley	03	0505EST			0	0	4	?	Thunderstorm Winds
Surrency	03	0515EST			0	0	4	?	Thunderstorm Winds

Flash floods developed over Appling County damaging many county roads. Water flooded several apartments along Georgia Highway 15 at Baxley. An earthen dam burst during the heavy rainfall. Scattered trees were blown down by thunderstorm winds over Appling County. Across the county, winds damaged a few buildings and tore down utility lines. In downtown Baxley, winds damaged a shopping center. A mobile home was demolished at Surrency.

Decatur County									
Bainbridge	03	0500EST			0	0	3	?	Thunderstorm Winds
Countywide	03	0500EST			0	0	4	?	Flash Flood

Several county roads and streets in Bainbridge were flooded. In Bainbridge, water rose into the garages of a few homes and entered a mobile home on U.S. Highway 84. In southwestern Decatur County, a large portion of the recreational area at Lake Seminole was flooded. Several homes in a subdivision were flooded. Scattered trees and limbs were downed by the winds. Power outages developed at Bainbridge when transformers were damaged by lightning and trees. Utility lines were also torn down.

Grady County									
Countywide	03	0500EST			0	0	4	?	Flash Flood
Whigham	03	0500EST			0	0	3	?	Thunderstorm Winds

Flash floods developed over Grady County and damaged several county roads. At Whigham, a couple of trees were uprooted by the winds.

Mitchell County									
Camilla	03	0500EST			0	0	4	?	Flash Flood

The Big Slough, a tributary of the Flint River, flooded about ten homes and several storage areas were flooded in Camilla. A few roads were damaged and closed to traffic by 0530 EST.

Lowndes County									
Valdosta	03	0500EST-			0	0	6	?	Flood
	12	0700EST							

After heavy rainfall throughout the weekend, the Withalacoochee River flooded in Valdosta. Fourteen families were evacuated, and several homes and businesses had extensive damage. The river crested at 22.4 feet on March 5th. At Valdosta, the flood stage is 13 feet on the Withalacoochee River. Damage from the flooding was estimated at \$1.5 million.

Lowndes County									
Valdosta	03	0540EST			0	0	3	?	Thunderstorm Winds
Hahira	03	0540EST			0	0	4	?	Flash Flood
Countywide	03	0540EST			0	0	4	?	Flash Flood

Several roads were flooded during the heavy rainfall as the storms moved across Lowndes County; some roads were heavily damaged. Residents of a subdivision in Hahira were evacuated after flooding developed. Several feet of water entered homes and flooded a group of horse stables. Trees were uprooted over Valdosta.

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GEORGIA Cont'd

Cook County

Sparks	03	0540EST			0	0	4	?	Flash Flood
Adel	03	0540EST			0	0	4	?	Thunderstorm Winds
Sparks	03	0540EST			0	0	3	?	Thunderstorm Winds

An earthen dam was washed out during flash floods produced by heavy rainfall over Cook County. Georgia Highways 37, 17, and county roads were flooded. Scattered trees were uprooted and fell on buildings in Adel and Sparks. In Adel, a broken utility pole heavily damaged a truck.

Brooks County

Dixie	03	0540EST			0	0	5	?	Flash Flood
Countywide	03	0540EST			0	0	4	?	Flash Flood

2 SE Morven
3 E Quitman

Flash flooding developed over Brooks County. Many roads were impassable, including U.S. Highway 84 between Quitman and Valdosta and Georgia Highway 94 near Morven; several roads were damaged. Residents of a mobile home park in Dixie were evacuated during the flash flooding. Water entered several homes. The costs of the damage was estimated at \$200,000.

Thomas County Countywide Thomasville

	03	0540EST			0	0	4	?	Flash Flood
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Several bridges and roads were damaged by flash floods over Thomas County and in Thomasville.

Thomasville

	03	0600EST- 07 1900EST			0	0	4	5	Flood
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With the ground already saturated from earlier rainfall, additional rainfall over Thomas County pushed the Ochlocknee River over its banks around Thomasville where a few mobile homes were flooded. The corn and sunflower crops around Thomasville suffered substantial damage. The river crested near 21.4 feet on March 4th. Flood stage on the Ochlocknee River at Thomasville is 15 feet.

Tattnall County Reidsville

	03	0600EST- 21 0700EST			0	0	4	?	Flood
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After heavy rainfall across Tattnall County, the Ochopee River flooded at Reidsville. The river crested at 21.1 feet on March 7th. Several yards and houses around Reidsville were flooded, along with many roadways. The flood stage on the Ochopee River at Reidsville is 11 feet.

Bacon County 7 W Alma Alma

	03	0600EST			0	0	5	?	Thunderstorm Winds
	03	0620EST			0	0	3	?	Thunderstorm Winds

Three mobile homes were destroyed in western Bacon County by strong, straight-line winds. Three other homes, several shelters, and barns were heavily damaged. In Alma, numerous trees were uprooted. Scattered power outages developed.

Eastern Portion

	03	0600EST- 04 2400EST			0	0	4	?	Flood
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Heavy rainfall caused flooding over several sections of eastern Bacon County along the Big Satilla Creek. Water entered three mobile homes as the creek rose to its highest level since 1948 by March 4th.

Coffee County Douglas

	03	0600EST			0	0	5	?	Flash Flood
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Several vehicles were damaged or lost during the flash flooding over Douglas. Near the Satilla River, a few farms and several homes were flooded. One bridge suffered severe water damages.

Pierce County	03	0625EST			0	0	5	?	Thunderstorm Winds
Countywide	03	0625EST			0	0	5	?	Flash Flood
Patterson									
Countywide									

Several roads were blocked and at least 20 homes and other buildings were heavily damaged or destroyed by the winds and fallen trees over the county. Widespread power outages developed. After heavy rainfall fell onto already saturated soils, flash floods developed over Pierce County. Several roads were washed out by the floods. The damage to the roads was estimated at near \$250,000.

4 SSW Blackshear	03	0630EST- 1645EST	1.5	75	0	20	?	?	Tornado (F1)
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A small tornado developed at Georgia Highway 121 in Blackshear. The tornado first set down in a mobile home park and then damaged a country club. The storm traveled north-northeast and touched down twice in two more mobile home parks before dissipating near Georgia Highway 121 just north of Blackshear.

About 20 homes were heavily damaged along the path; 7 were totally demolished. Numerous trees were twisted or snapped by the tornado. Although the storm traveled over a path of about 5 miles, the tornado was only on the ground about 30 percent of the time. At least 20 people were treated for minor injuries; three people were briefly hospitalized. The cost of the damage to the residential properties alone was estimated at over \$300,000.

Ware County	03	0630EST			0	0	4	?	Thunderstorm Winds
Waycross	03	0630EST			0	0	5	?	Flash Flood
Waycross									
Countywide									

Scattered trees were uprooted by thunderstorm winds. Utility services were interrupted over Waycross when trees and winds downed lines. Several homes were damaged by falling trees.

With the soils saturated from rainfall over the previous 2 days, flash floods developed in Waycross, and other sections of Ware County. A number of roads were damaged and pavement sank in some areas of Waycross. Several ponds overflowed and one dam broke.

Bulloch County	03	0630EST			0	0	3	?	Thunderstorm Winds
Statesboro									

Scattered trees were uprooted by the winds. Utility services were interrupted at Statesboro and surrounding areas.

Chatham County	03	0630EST			0	0	3	?	Thunderstorm Winds
Savannah									

Scattered power outages developed over Savannah after lines were downed by winds and broken tree limbs.

Evans County	03	0630EST			0	0	6	?	Thunderstorm Winds
Hagan	03	0645EST			0	0	5	?	Thunderstorm Winds
2 N Claxton	03	0700EST			0	0	4	?	Thunderstorm Winds
Claxton	03	0700EST			0	0	4	?	Thunderstorm Winds
5 NNW Claxton									

At Hagan, a furniture store was completely destroyed by thunderstorm winds. Two nearby businesses sustained roof and other structural damage. North of Claxton, several farm buildings were destroyed by strong winds, while a steel-frame building was heavily damaged. Several

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

GEORGIA Cont'd

trees were damaged or uprooted. The costs for repairs were estimated at near \$30,000. By 0700 EST, the winds pushed a large tree onto another home in Claxton and damaged its roof and porch. At a nursery northwest of Claxton on Georgia Highway 169, three greenhouses were heavily damaged. Power lines and traffic lights were downed in Claxton. Scattered power outages developed at Hagan and over the remainder of the county.

Pierce County
Blackshear
Southeastern
Portion

03 0700EST-									
06 0700EST				0	0	5	?		Flood

At least 25 families were evacuated over Pierce County during the flooding, including 5 families near the Satilla River at the county line between Pierce and Brantley Counties. At Blackshear, a golf course community was flooded.

Brantley County
Nahunta
Hickox
Wayne County
Jesup

03 0700EST									Thunderstorm Winds
03 0730EST				0	0	4	?		Thunderstorm Winds

Numerous trees and power lines were downed by the winds around Nahunta and Jesup; scattered power outages resulted. At Hickox, a mobile home was heavily damaged after the winds pushed a tree onto the home.

Liberty County
Hinesville
Bryan County
Richmond Hill

03 0745EST									Thunderstorm Winds
03 0800EST				0	0	4	?		Thunderstorm Winds

Scattered trees were damaged or uprooted over Liberty and Bryan Counties. Tree limbs tore down power lines at Hinesville and caused power outages. At Richmond Hill, large trees fell onto two houses and caused damages.

Jeff Davis County
Countywide
Northeastern
Portion

03 0745EST									Flash Flood
03 0745EST				0	0	4	?		Thunderstorm Winds

Flash floods developed over Jeff Davis County and washed out several county roads. An automobile was lost in flood waters. Thunderstorm winds damaged two tobacco barns near the Altamaha River.

McDuffie County
Countywide
Thomson

03 0745EST									Flash Flood
03 0745EST				0	0	3	?		Lightning

Flash floods developed over McDuffie County and pushed several area creeks, including Brier Creek, out of their banks. County roads had substantial damage. North of Thomson, an earthen dam near Georgia Highway 17 was heavily damaged by the waters. In Thomson, lightning damaged a radio tower.

Emanuel County
6 W Summertown
Countywide

03 0745EST									Flash Flood
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Flash floods developed over Emanuel County and caused damage to several county dirt roads. Near Summertown, a vehicle fell into a creek after the pavement collapsed during the flooding.

Colquitt County
Moultrie
Countywide
Autryville

03 0750EST									Thunderstorm Winds
03 Morning				0	0	4	?		Flash Flood

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Flash floods pushed several local creeks over their banks. Around Autryville, about 30 roads were closed. At least 15 county roads had considerable damages. In Moultrie, scattered trees were blown down by the winds.

Tift County
Countywide
Tifton

03 Morning	0	0	4	?	Flash Flood
03 0750EST	0	0	4	?	Thunderstorm Winds

Flash floods developed over Tift County and caused minor damage to several roads. In Tifton, scattered trees were blown down damaging several businesses.

Chatham County
Savannah
Wilmington Island
Dutch Island
Coffee Bluff
Whitemarsh Island

03 0745EST	0	2	4	?	Thunderstorm Winds
03 0755EST	0	0	4	?	Thunderstorm Winds
03 0805EST	0	0	5	?	Thunderstorm Winds

Numerous trees were blown down by strong winds around Savannah, Dutch Island, and Wilmington Island. Several houses, smaller structures, and other fixtures were damaged by falling trees. In Savannah, the roof of an apartment complex was partially torn off. At least two persons were injured and hospitalized. At Coffee Bluff and Whitemarsh Island, considerable damages occurred to automobiles, structures, boats, and homes. Winds blew the roof off a building and carried it 500 feet before it dropped. The roof of a marina was blown off.

Glynn County
Brunswick

03 0800EST	0	0	4	?	Thunderstorm Winds
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Power outages developed for about 100 customers after limbs fell onto utility lines during the storm. Part of the roof at a business on U.S. Highway 17 was blown off, shearing a gas line.

McIntosh County
2 N Darien

03 0800EST	0	0	3	?	Thunderstorm Winds
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Trees were uprooted along Georgia Highway 99 north of Darien.

Terrell County
Dawson
Countywide
Dawson
Countywide

03 1045EST	0	0	4	?	Thunderstorm Winds
03 1045EST	0	0	4	4	Flash Flood

Several county dirt roads were washed out or flooded as heavy rainfall produced flash floods over Terrell County. In Dawson, high waters damaged the carpet in a business. Agricultural damage occurred when fields were flooded.

Several trees were blown across county roads. The roof of a farm building was damaged near Dawson. At the Dawson-Terrell County Airport, an airplane was flipped over with damage over \$3,000. A recreational vehicle was totalled when the winds flipped the vehicle onto its side.

Sumter County
4 E Americus

03 1145EST	0	0	4	?	Thunderstorm Winds
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A chicken house was demolished, shingles were blown off a barn's roof, and scattered trees were uprooted by thunderstorm winds.

Houston County
Perry
4 S Warner Robins
Warner Robins
Bonaire
Kathleen

03 1146EST	0	0	?	?	Funnel Cloud
03 1148EST	0	0	?	?	Funnel Cloud
03 1155EST	0	0	5	?	Thunderstorm Winds
03 1155EST	0	0	4	?	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Funnel clouds were sighted at Perry along U.S. Highway 341 and south of Warner Robins off Georgia Highway 96. Numerous trees and limbs were blown down across Houston County as strong storms moved through. Trees blocked many roads from Perry to southeast of Warner Robins, including Georgia Highway 247 and U.S. Highway 341. Trees were downed on railroad tracks at Bonaire and several other areas. At Kathleen, a tree fell on a house. At Bonaire, some storage buildings sustained wind damage.

Strong winds demolished a barn on Highway 96 outside of Warner Robins and took the roof off an automobile supply store in town. Damage to the business was estimated between \$50,000 to \$75,000. In Warner Robins, a tree fell on two cars and a wooden pole fell on a car. Power lines were downed on Robins Air Force Base and a builder's office was overturned.

Dodge County 2 S Chauncey	03 1150EST			0	0	?	?	Hail (1.75)
	03 1200EST			0	0	3	?	Thunderstorm Winds

Large tree limbs were blown down by winds.

Twiggs County 1 N Jeffersonville	03 1230EST			0	0	3	?	Thunderstorm Winds
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Several trees were blown down on power lines and across the roads around Jeffersonville. Scattered outages occurred.

Richmond County Countywide Augusta	03 1245EST			0	0	4	?	Flash Flood
	03 1315EST			0	0	4	?	Flash Flood

By 1245 EST, several streams were flooding in eastern Richmond County; a few roads were washed out. Augusta was flooded near Rae's Creek, Rocky Creek, and Almond Lake. By 1630 EST, several flooded areas were evacuated. Small hail developed at Augusta.

Laurens County Southern Portion	03 1300EST			0	0	3	?	Thunderstorm Winds
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Scattered trees were blown onto power lines over extreme southern Laurens County along U.S. Highway 441.

Wayne County Jesup	03 1320EST			0	0	4	?	Thunderstorm Winds
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An uprooted tree caused structural damage to a house in Jesup.

Brantley County Hickox	03 1330EST			0	0	4	?	Thunderstorm Winds
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Thunderstorm winds lifted the roof off a barn at Hickox.

Liberty County Western Portion 9 NW Hinesville	03 1330EST			0	0	3	?	Thunderstorm Winds
	03 1330EST			0	0	?	?	Hail (1.00)

Trees and power lines were downed over western Liberty County. Most of the damage occurred northwest of Hinesville near Georgia Highway 144.

Treutlen County Soperton 5 SW Soperton	03 1330EST			0	0	?	?	Hail (1.75)
	03 1330EST			0	0	?	?	Funnel Cloud

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Bryan County Pembroke	03	1345EST			0	0	3	?	Thunderstorm Winds
									Winds uprooted many large trees and caused widespread power outages in Pembroke.
Chatham County 4 NNE Richmond Hill	03	1410EST			0	0	?	?	Funnel Cloud
									A funnel cloud was sighted at the intersection of Interstate 95 and Georgia Highway 204.
Worth County Scooterville	03	1415EST	Short	20	0	0	4	?	Tornado (F0)
									A very small tornado developed and briefly touched down in a mobile home park. Minor damage occurred to a few homes and trees were downed.
Sylvester Acree Countywide	03	1420EST			0	0	4	?	Flash Flood
									With the ground completely saturated from rainfall over the previous 2 days, flash floods developed over Worth County. Several homes were evacuated in Sylvester. Most of the damage occurred to the county's roads and bridges.
Effingham County Guyton	03	1420EST			0	0	?	?	Hail (1.75)
Guyton	03	1420EST			0	0	4	?	Thunderstorm Winds
									At Guyton, strong winds tore the roof off an airplane hangar.
Berrien County Countywide	03	Afternoon			0	0	4	?	Thunderstorm Winds
Nashville	03	Afternoon			0	0	3	?	Lightning
Countywide	03	Afternoon			0	0	5	?	Flash Flood
Ray City	03	Afternoon			0	0	4	?	Flash Flood
									Numerous trees and limbs were downed over Berrien County, including Ray City. At Nashville, a house sustained minor damage after lightning set it afire. Flash floods developed over the county. Two homes in Ray City were flooded. Many roads were washed out; eight bridges were damaged.
Chatham County Savannah	03	1548EST			0	0	?	?	Thunderstorm Winds (G55)
Lee County Leesburg	03	Afternoon			0	0	4	?	Flash Flood
									The Kinchafoonee Creek flooded in Leesburg. Several mobile homes were evacuated and minor damage occurred.
Dougherty County 9 SE Albany	03	Afternoon			0	0	4	?	Flash Flood
Radium Springs	03	Afternoon			0	0	4	?	Flash Flood
									A farm located near Dry Creek, southeast of Albany, sustained over \$30,000 in damage after about 2 feet of water entered the new house and several storage buildings. At Radium Springs, two homes were flooded.
Albany	04	0700EST-			0	0	4	?	Flood
	08	0700EST			0	0	4	?	Flood

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

GEORGIA Cont'd

The Flint River rose out of its banks at Albany due to persistent heavy rainfall. The river caused minor water damage in town and over area roads. The Flint River crested at 25.8 feet on March 5th; flood stage is 20 feet.

Echols County Statenville

04	0700EST-								
20	0700EST				0	0	?	5	Flood

The Alapaha River rose above its flood stage after heavy rains developed over Echols County. The river rose to 28.2 feet by March 11th. Riverside farms had extensive crop damage and timber operations were flooded. The flood stage at Statenville is 24 feet.

Terrell County Dawson

04	0700EST-								
08	0700EST				0	0	4	?	Flood

After heavy rainfall over the area, the Kinchafoonee Creek rose rapidly around Dawson and caused minor flooding. The river crested at 16.2 feet on March 6th. The flood stage on the Kinchafoonee Creek is 13 feet at Dawson.

Bryan County Eastern Portion Richmond Hill Effingham County Eden

05	0700EST-								
22	0700EST				0	0	4	?	Flood

05	0700EST-								
22	0700EST				0	0	4	?	Flood

After persistent heavy rainfall, the Ogeechee River caused considerable flooding around Eden and over eastern Bryan County. Parts of Georgia Highway 204, U.S. Highway 17, and Interstate 95 were impassable to Richmond Hill. Several riverside yards and homes were flooded. On March 9th, the river crested at 13.5 feet. Flood stage at the Eden gage is 9 feet.

Ware County Waycross

05	0700EST-								
13	0700EST				0	0	4	4	Flood

After heavy rainfall over Ware County, extensive flooding of agricultural, timber, and recreational concerns developed on the Satilla River near Waycross. Floods damaged sections of the railroad tracks and hampered traffic. The river crested at 21.5 feet on March 7th. The flood stage at Waycross is 16 feet.

Brantley County Atkinson

05	0700EST-								
18	0700EST				0	0	4	?	Flood

After persistent, heavy rainfall occurred, the Satilla River flooded agricultural, recreational, and timber concerns. A few yards and homes were flooded around Atkinson. The river crested at 21.2 feet on the 10th; the flood stage is 13 feet.

Decatur County Bainbridge

06	0700EST-								
10	0100EST				0	0	4	4	Flood

The Flint River rose out of its banks after heavy rainfall persisted over Decatur County. Some areas of Bainbridge and county roads were flooded. The corn and sunflower crops had extensive damages. The river crested at 27.5 feet on March 8th; flood stage is 25 feet.

Montgomery County S Uvalda

06	0700EST-								
19	0700EST				0	0	4	?	Flood

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

GEORGIA Cont'd

Jeff Davis County
Extreme North-eastern Portion

06 0700EST 0 0 4 ? Flood

After persistent, heavy rainfall, flooding developed on the Altamaha River. Vacation homes, cabins, and low-lying properties were flooded along the river in Montgomery and Jeff Davis Counties. Riverside roads were impassable. The river crested at 19.8 feet on March 9th; flood stage is 15 feet.

Dade County
Rising Fawn

27 2200EST 0 0 3 ? Thunderstorm Winds

A few trees were uprooted by thunderstorm winds at Rising Fawn.

Bartow County
Adairsville
Floyd County
Silver Creek

29 0615EST 0 0 3 ? Thunderstorm Winds

29 0615EST 0 0 3 ? Thunderstorm Winds

Broken tree limbs tore down power lines and caused outages in Bartow County. A few uprooted trees fell across a road near Silver Creek.

Polk County
Esom Hill
4 W Cedartown

29 0615EST 0 0 3 ? Thunderstorm Winds

29 0630EST 0 0 3 ? Thunderstorm Winds

As thunderstorms moved across Polk County, scattered trees and limbs were blown down. Numerous utility outages developed at Esom Hill and around Cedartown.

Palding County
Dallas
Dallas

29 0700EST 0 0 ? ? Funnel Cloud

29 0700EST 0 0 4 ? Thunderstorm Winds

A funnel cloud was sighted near U.S. Highway 278 at Dallas. Strong winds ripped part of the roof, gutters, and a 10-foot-wide door off a warehouse building and exposed its contents to the rain. Several other businesses and houses had minor wind damage. A few trees were uprooted.

Muscogee County
Green Island
Hills
Columbus

29 0750EST 0 0 3 ? Thunderstorm Winds

29 0800EST 0 0 3 ? Thunderstorm Winds

Numerous trees were downed over the entire northern portion of Columbus and over Green Island Hills. Utility lines were torn down and many power outages developed.

Carroll County
Temple

29 0800EST 0 0 ? ? Hail (1.00)

Harris County

29 0800EST 0 0 3 ? Thunderstorm Winds

Ellerslie

29 0800EST 0 0 3 ? Thunderstorm Winds

Ellerslie

29 0815EST 0 0 4 ? Thunderstorm Winds

Numerous limbs and trees were downed by winds around Cataula and along U.S. Highway 27 near Ellerslie. Many roads were blocked. Numerous power outages occurred. Around 0800 EST at Ellerslie, strong winds uprooted large trees at one location and damaged the house, carport and barn. About 0815 EST, winds destroyed a set of park bleachers and a police antenna. Other minor damage occurred at Cataula and Ellerslie.

Taylor and Upson Counties
3 NW Five Points

29 0805EST 0.5 25 0 0 5 ? Tornado (F1)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

2 E Carsonville
5 NE Carsonville

A small tornado skipped along U.S. Highway 80 and moved northeast from Taylor County into Upson County. The most intense damage occurred around three locations. Although the storm track was about 6 miles long, the tornado was apparently aloft over most of the path. The area was sparsely populated. Numerous trees were twisted or snapped above the ground; others were uprooted. The hardest hit area of trees was northwest of Five Points near U.S. Highway 80. A roof was blown off a home just east of Carsonville at 0810 EST. Another house nearby lost its carport. About 0815 EST, several large trees were downed at Georgia Highway 19 and U.S. Highway 80 in Upson County. About 5 miles northeast of Carsonville, a mobile home was blown 200 feet from its foundation and demolished.

Douglas County
Douglasville

29 0815EST 3.0 200 0 2 7 ? Tornado (F2)

A tornado developed a mile west of downtown Douglasville and moved northeast along Georgia Highway 78 through the city. Damages were a block wide with debris spread over three blocks. Seven older frame houses were demolished; about 15 had major damage. A convenience store and recreational vehicle center were totally destroyed. Several county buildings and vehicles were damaged. The tornado lifted just outside of Douglasville. The parent storm moved northeast toward Lithia Springs. No damage occurred along the storm's track until a tornado touched down at Austell in Cobb County. In Douglasville County, 81 residential building and 18 businesses were damaged by the tornado. Damage costs were estimated at about \$6,500,000.

Lithia Springs
Douglasville
Countywide

29 0825EST 0 0 ? ? Funnel Cloud
29 0830EST 0 0 5 ? Thunderstorm Winds

Several houses over Douglas County were damaged by thunderstorm winds, particularly around Georgia Highway 92 southeast of Douglasville. Several homes were set afire by downed power lines.

Cobb County
2 NW Austell

29 0830EST 5.0 0.5 0 25 7 ? Tornado (F3)

The thunderstorm that produced the tornado in Douglas County moved northeast into Cobb County. The tornado set down in Clarkdale, 2 miles northwest of Austell, and moved northeast through an area of commercial and residential development.

Near the beginning of the trail, a few cows were killed. Along the path, numerous trees were twisted or snapped and many power lines were downed. In the residential area, about 15 townhouses were destroyed and another 20 had major structural damages. About 100 homes had roof damage or minor structural damage. Several vehicles were overturned, damaged by trees, or destroyed by the tornado. A local hospital sustained structural damage.

By the time the tornado dissipated, 415 residences and 127 businesses, including several of the rented townhouses, had suffered tornado damage. Damage costs were estimated at near \$11,750,000.

Taylor County
8 S Butler
Pottersville

29 0840EST 0 0 5 ? Thunderstorm Winds

In southern Taylor County, near Butler and Pottersville, many trees were uprooted. At Butler, two barns were blown down. At Pottersville, several mobile homes and houses were damaged by the wind and uprooted trees.

Talbot County
Countywide
1 W Talbotton

29 0840EST 0 0 3 ? Thunderstorm Winds
29 0900EST 0 0 3 ? Thunderstorm Winds

Over Talbot County, many trees and large limbs were blown down by thunderstorm winds for about an hour. Numerous power outages developed over the county.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Harris County	29	0900EST		0	0	4	?	Thunderstorm Winds
Countywide	29	0900EST		0	0	4	?	Thunderstorm Winds
Hamilton								

Scattered trees and limbs were blown down in Hamilton and at other locations in Harris County. Uprooted trees damaged several homes in southern Harris County. At Hamilton, a radio tower was blown down. Outages developed over most of the town after utility lines were torn down.

Fulton County	29	0915EST		0	0	4	?	Thunderstorm Winds
Alpharetta								
Atlanta								
De Kalb County	29	0920EST		0	0	3	?	Thunderstorm Winds
Decatur								
Stone Mountain								
Gwinnett County	29	0940EST		0	0	3	?	Thunderstorm Winds
Lawrenceville								

Large limbs and trees were blown down by winds over De Kalb, Fulton, and Gwinnett Counties. Utility lines were torn down and outages developed. At Alpharetta, a tree fell on a house.

Troup County	29	0941EST		0	0	5	?	Thunderstorm Winds
La Grange								

In La Grange, thunderstorm winds tore chimneys off several homes. Several homes had roof damage and the siding was ripped off a few buildings. Numerous trees were uprooted and many power lines were torn down. An apartment complex sustained \$50,000 in damage, due to the storm.

Monroe County	29	0945EST		0	0	3	?	Thunderstorm Winds
2 N Forsyth								

Scattered power outages occurred after thunderstorm winds pushed trees onto the lines.

Jasper County	29	0955EST		0	0	4	?	Thunderstorm Winds
5 W Monticello	29	1005EST		0	0	4	?	Thunderstorm Winds
2 W Monticello								

A thunderstorm produced downburst winds as it moved east along Georgia Highway 16. The strong winds uprooted and snapped numerous trees and several power poles across the sparsely populated area. Electrical service was interrupted.

In the wooded area, three homes were damaged by falling trees; one mobile home was damaged beyond repair. Just outside of Monticello, a large chicken house on Highway 16 lost its roof.

Forsyth County	29	1000EST		0	0	4	?	Lightning
Cumming	29	1000EST		0	0	3	?	Thunderstorm Winds
Cumming								
Countywide								

A lightning strike set a house afire in Cumming and caused extensive damage. High winds uprooted several trees over southern Forsyth County, the western shore of Lake Lanier, and around Cumming. Widespread electricity outages developed. Several roadways were blocked by downed trees.

Harris County	29	1000EST		0	0	3	?	Thunderstorm Winds
Cataula	29	1015EST		0	0	3	?	Thunderstorm Winds
Countywide								
Muscogee County	29	1000EST		0	0	3	?	Thunderstorm Winds
Columbus	29	1020EST		0	0	3	?	Thunderstorm Winds
Columbus								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Chattahoochee County

Ft. Benning Army Reservation	29	1000EST			0	0	3	?	Thunderstorm Winds
Countywide	29	1020EST			0	0	3	?	Thunderstorm Winds

Strong thunderstorm winds caused damage over the three-county area for about an hour after 1000 EST. Numerous trees and large tree limbs were torn down. Many roadways were blocked. Considerable damage was concentrated over the southern portion of Harris County around Cataula and Columbus. Several large signs were damaged in Columbus. Numerous power outages developed over all three counties, mainly at Cataula, Columbus, and Fort Benning Army Reservation.

Meriwether County Manchester

	29	1025EST			0	0	4	?	Thunderstorm Winds
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Tree limbs were blown down onto utility lines, resulting in outages over Manchester. Several homes were damaged when trees fell onto the structures.

Talbot County Talbotton Woodland

Talbotton	29	1030EST			0	0	4	?	Thunderstorm Winds
Woodland	29	1030EST			0	0	4	?	Thunderstorm Winds

Thunderstorm winds downed numerous trees over Talbot County, mainly around Talbotton and Woodland. An airplane hangar fell onto a plane near U.S. Highway 80. At Woodland, a large tree fell across Georgia Highway 41 and damaged a passing truck.

Henry County 3 ESE Locust Grove Pike County Countywide

3 ESE Locust Grove	29	1040EST			0	0	0	?	Funnel Cloud
Countywide	29	1043EST			0	0	3	?	Thunderstorm Winds

Scattered tree limbs were downed by thunderstorm winds.

Jackson County 2 S Maysville

2 S Maysville	29	1105EST			0	0	3	?	Thunderstorm Winds
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One tree and a few limbs were downed by winds off Georgia Highway 82 near Maysville.

Muscogee County Columbus

Columbus	29	1105EST	0.1	20	0	0	3	?	Tornado (F0)
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A small tornado developed over northern Columbus and briefly touched down. Very large trees along a bypass were twisted and uprooted. One large billboard sign was demolished. The path length was about an eighth of a mile.

Chattahoochee County Ft. Benning Army Reservation

Ft. Benning Army Reservation	29	1115EST			0	0	3	?	Thunderstorm Winds
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Harris County Hamilton Waverly Hall

Hamilton	29	1115EST			0	0	3	?	Thunderstorm Winds
Waverly Hall	29	1115EST			0	0	4	?	Flash Flood

Muscogee County Columbus Columbus Green Island Hills Woodland

Columbus	29	1115EST			0	0	4	?	Flash Flood
Woodland	29	1115EST			0	0	3	?	Thunderstorm Winds

Thunderstorm winds downed numerous trees and large limbs over the three-county area for about an hour after 1115 EST. Numerous power outages resulted.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Flash floods developed over Columbus. Along the Osshatchee Creek near Waverly Hall, heavy rainfall caused minor flooding in several homes.

Monroe County	29	1140EST			0	0	?	?	Funnel Cloud
3 SW Forsyth	29	1140EST			0	0	3	?	Thunderstorm Winds
Forsyth									

Two funnel clouds were spotted southwest of Forsyth. Strong winds downed tree limbs and power lines in Forsyth.

Crawford County	29	1145EST			0	0	3	?	Thunderstorm Winds
Knoxville									
Roberta									

Numerous trees were uprooted at Knoxville, Roberta, and along U.S. Highway 80, disrupting traffic. Power outages developed.

Upson County	29	1149EST			0	0	?	?	Funnel Cloud
Thomaston									
Baldwin County	29	1200EST			0	0	5	?	Thunderstorm Winds
Milledgeville									
Countywide	29	1200EST			0	0	4	?	Thunderstorm Winds

Strong winds uprooted numerous trees across Baldwin County. Across the county, especially southwestern Baldwin County, damage occurred to poultry houses and other farm buildings. Numerous roads were blocked and traffic was disrupted. At Milledgeville, the winds ripped the roof off a store near Georgia Highway 49. In the same area, winds damaged several other businesses and homes. Windows were blown out at one home and its contents were damaged. A mobile home was demolished when two trees crushed it.

Bibb County	29	1200EST			0	0	4	?	Thunderstorm Winds
Macon									

Numerous trees were damaged or uprooted across Macon. About 10,000 residents were left without power. The strong winds blew out windows at several locations and caused considerable roof damage at a school in southwestern Macon. Several vehicles were damaged by uprooted trees.

Crawford County	29	1200EST			0	0	4	?	Lightning
Roberta									
4 W Roberta	29	1215EST			0	0	4	?	Thunderstorm Winds

Lightning set a utility building on fire and destroyed several appliances in the building. The fire's heat damaged a nearby mobile home.

A small fire started when a tree fell on a power line. Several mobile homes were blown off their foundations west of Roberta.

Jones County	29	1215EST			0	0	5	?	Thunderstorm Winds
3 S Gray									
2 SE James	29	1215EST			0	0	4	?	Thunderstorm Winds

Near Gray, several homes and other buildings had roof and structural damage after downburst winds uprooted numerous trees. The winds blew the roof off dugouts at the city's recreational complex. Power outages developed across Gray.

Scattered damage from the winds and fallen trees occurred across Jones County. Just southeast of James, trees tore down power lines and caused outages, around Georgia Highways 49 and 18. Damage costs across the county were estimated at near \$130,000.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Hancock County
Countywide 29 1215EST 0 0 3 ? **Thunderstorm Winds**
 Scattered trees were uprooted over Hancock County and caused minor roof damage to houses and a few power outages.

Peach County
Byron 29 1220EST 0 0 ? ? **Hail (0.75)**
Houston County
Warner Robins 29 1230EST 0 0 ? ? **Hail (0.88)**
Washington County
Countywide 29 1300EST 0 0 4 ? **Thunderstorm Winds**
Warthen 29 1300EST 0 1 4 ? **Thunderstorm Winds**
Sandersville 29 1300EST 0 0 3 ? **Thunderstorm Winds**

Strong winds uprooted or snapped numerous trees at 16 locations in Washington County. Power lines were torn down by the trees, debris, and winds, resulting in many power outages. Several small structures were damaged over the county. Near Georgia Highway 15 at Warthen, winds took the shingles off a house and the roof off a barn; one vehicle was damaged by an uprooted tree; one person was injured when a mobile home was flipped over by the winds. In Sandersville, the winds damaged a billboard and caused minor roof damage to a church.

Harris County
Pine Mountain 29 1300EST 0 0 3 ? **Thunderstorm Winds**
Countywide 29 1320EST 0 0 3 ? **Thunderstorm Winds**
Muscogee County
4 E Columbus 29 1300EST 0 0 3 ? **Thunderstorm Winds**
Midland 29 1320EST 0 0 3 ? **Thunderstorm Winds**
Upatoi

Numerous trees fell onto power lines over Harris and Muscogee Counties during the storm. Many outages developed, mainly at Midland, Pine Mountain, Columbus, and Upatoi.

Twiggs County
Southern Twiggs 29 1308EST 0 0 3 ? **Thunderstorm Winds**
County
Wilkinson County
Countywide 29 1315EST 0 0 3 ? **Thunderstorm Winds**

Scattered trees were blown down over the two-county area. Utility outages were widespread after lines were torn down, trees were downed, and the winds.

Chattahoochee County
Ft. Benning Army 29 1345EST 0 0 ? ? **Funnel Cloud**
Reservation

Marion County
20 SSW Buena 29 1410EST 0 0 3 ? **Thunderstorm Winds**
Vista
 Large trees were uprooted by the winds and power outages occurred.

Richmond County
Augusta 29 1415EST 0 0 4 ? **Flash Flood**
 Flash floods developed over Augusta in several areas and water entered a few homes.

Chattahoochee County
Cusseta 29 1440EST 0 0 3 ? **Thunderstorm Winds**
Ft. Benning Army 29 1440EST 0 0 3 ? **Thunderstorm Winds**
Reservation

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

GEORGIA Cont'd

Scattered large trees were uprooted by strong winds. Many power lines were torn down; outages resulted.

Talbot County
3 ENE Geneva 29 1500EST 0 0 4 ? **Thunderstorm Winds**

Along U.S. Highway 80 between Geneva and Junction City, many large trees were uprooted or broken. A small shed was damaged by the winds.

Muscogee County
Upatoi 29 1510EST 0 0 3 ? **Thunderstorm Winds**

Uprooted trees and limbs pulled power lines down around U.S. Highway 80; outages developed.

Laurens County
Dublin
Countywide 29 1515EST 0 0 4 ? **Thunderstorm Winds**

A few trees were uprooted over Laurens County and in Dublin by strong winds. An uprooted tree fell on a Boy Scout camphouse and destroyed it; damage was estimated at near \$5,000. In eastern Laurens County, a shed was destroyed.

Colquitt County
Moultrie 29 1715EST 0 0 3 ? **Thunderstorm Winds**

Strong winds uprooted several trees in Moultrie, resulting in minor property damages and isolated power outages.

Lowndes County
Countywide
Valdosta 29 1715EST 0 0 3 ? **Thunderstorm Winds**

Strong winds pushed several trees onto power lines. Scattered outages developed over Lowndes County, including Valdosta.

Jeff Davis County
Hazelhurst 29 1800EST 0 0 3 ? **Thunderstorm Winds**

Coffee County
Nicholls 29 1800EST 0 0 3 ? **Thunderstorm Winds**

12 E Douglas 29 1815EST 0 0 3 ? **Thunderstorm Winds**

Atkinson County
Pearson 29 1830EST 0 0 3 ? **Thunderstorm Winds**

Pearson 29 1830EST 0 0 3 ? **Flash Flood**

Toombs County
Vidalia 29 1830EST 0 0 3 ? **Thunderstorm Winds**

Countywide

Berrien County
Countywide 29 1845EST 0 0 3 ? **Thunderstorm Winds**

Tattall County
5 SE Reidsville 29 1900EST 0 0 3 ? **Thunderstorm Winds**

Appling County
Baxley 29 1915EST 0 0 3 ? **Thunderstorm Winds**

Strong winds damaged and uprooted numerous trees over southeastern Georgia. The falling limbs, trees, and winds tore down utility lines. Scattered interruptions occurred over the area. Flash flooding developed briefly at Pearson.

Near Nicholls in Coffee County, a chicken house lost its tin roof. One house at Pearson was damaged when a large tree fell on it.

Numerous rural roads were blocked. Extensive traffic problems developed around Vidalia, in Tattall County between Reidsville and Glenville, and around Baxley in Appling County.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Bryan County
2 SW Richmond Hill 29 2100EST 0 0 3 ? Thunderstorm Winds
A few trees were uprooted around Richmond Hill.

IDAHO

Southern Idaho 01 Unknown-31 0 0 ? ? Extreme Drought
Southern Idaho Mountains 01 Unknown-04 0 0 0 0 Snow

Between 1 and 3 feet of new snow accumulated during the first 4 days of March, revitalizing winter recreation at mountain ski resorts.

IDZ009-006-012 Idaho Panhandle Southern Idaho 01 0000MST-1600MST 0 0 4 0 Winter Storm

High winds and heavy snow began on the evening of February 28th in the north and moved into the southern mountains with 5 to 11 inches of snow. Damaging winds occurred in Valley County.

IDZ009 Northern Idaho 02 1000PST 0 0 0 0 Heavy Snow
Five inches of snow fell overnight.

IDZ001-004 Southern Idaho 02 1700MST-1900MST 0 0 4 0 High Winds (35G45)

High winds were reported as a cold front passed through the region.

IDZ008 Northern Idaho 02 1830PST-1930PST 0 0 4 0 Winds

Cold front winds blew down trees in Moscow.

IDZ011 Central Idaho 03 0500PST 0 0 0 0 Heavy Snow
Seven inches of snow accumulated during the night.

IDZ001-002-003-004-005-006-007-008-012, Statewide Custer County 03 1200MST-1800MST 0 0 5 0 High Winds (G51)
03 1600MST 0 0 4 0 Wet Snow

Six to twelve inches of wet snow, warming temperatures, and winds set off landslides that plagued State Highway 75, between Stanley and Challis.

IDZ007 South-Central Mountains 04 0500MST-05 0500MST 0 0 0 0 Heavy Snow

The Sun Valley ski resort on Bald Mountain received 13 inches of snow.

IDZ007 South-Central Mountains 04 0800MST 0 0 0 0 Heavy Snow
Twelve inches of snow fell within 24 hours at Ketchum.

IDZ004-007-001-002-003-004 Southern Idaho 04 1600MST 0 0 5 0 High Winds (G60)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Power lines snapped, wet snow deslodged a Volkswagen-size boulder that rolled onto Highway 21, 20 miles east of Lowman. Widespread damage occurred to utility buildings, patios, roofs.

Ada County
Boise

04 1635MST 0 0 0 0 Hail (0.75)

Lima bean-size hail pelted northwestern Boise.

IDZ007
South-Central
Idaho

03 0500MST-
04 1700MST 0 0 0 0 Heavy Snow

Twenty-two inches of snow fell in 36 hours at Sun Valley.

Valley County
McCall

04 1745MST 0 0 5 0 Thunderstorm Winds
Hail

Several roads were blocked by numerous blown down trees. A hangar door was blown off at the McCall airport. A hailstorm dislodged boulders that rolled onto Highway 55.

Payette County

04 1800MST 0 0 4 0 Thunderstorm Winds

Thirty trees were blown down onto Highway 55, between New meadows and McCall. A tree was blown down across U.S. Highway 95, 6 miles south of New Meadows. Landslides were associated with wind and rain.

Cassia County
Twin Falls
Power County
Pocatello

04 2038MST 0 0 0 0 Thunderstorm Winds (G60)

04 2217MST 0 0 0 0 Thunderstorm Winds (G54)

An apparent microburst from a thunderstorm to the north reached the airport.

IDZ001
Southwestern Idaho

06 0730MST 0 0 5 0 Snow

Numerous vehicular accidents in Boise during morning rush-hour traffic were attributed to a light snowfall.

IDZ003-004
Southeastern Idaho

06 0900MST-
1500MST 0 0 0 0 Heavy Snow

Four inches of snow fell in eastern Pocatello, and 15 inches fell at the Pomerelle ski resort south of Burley.

IDZ003
Southeastern Idaho

10 1200MST-
1700MST 0 0 0 0 Heavy Snow

Four inches of snow fell during the afternoon.

IDZ003
Southeastern Idaho

11 1500MST-
1800MST 0 0 0 0 High Winds

Winds gusted over 50 mph on Interstate 84 southeast of Burley.

IDZ009
Idaho Panhandle

12 1700PST 0 0 0 0 Heavy Snow

Seven inches of snow fell.

IDZ007-008-009
South-Central

13 0800MST 0 0 0 0 Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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									
Mountains and Idaho Panhandle									
		Heavy snowfall of up to 10 inches fell overnight.							
IDZ007	23	1700MST			0	0	0	0	Heavy Snow
South-Central Mountains		Galena Summit (elevation of 8,701 feet) was closed by 9 inches of new snow between Ketchum and Stanley.							
Cassia County									
20 E Burley	25	1255MST-1335MST			0	0	0	0	Thunderstorm Winds (G56)
		Visibility on Interstate 84 was reduced to zero in blowing dust just south of the Interstate 86 junction. Pea-size hail was also reported.							
IDZ003									
Southeastern Idaho	25	1300MST-1630MST			0	0	4	0	High Winds
		Power outages in Bingham County were associated with strong winds.							
Bonneville County									
Idaho Falls	25	1545MST			0	0	0	0	Thunderstorm Winds (G50)
Clark County									
Dubois	25	1600MST	1.0	70	0	0	4	0	Tornado (F1)
		A tornado picked up a metal tool shed housing a riding lawnmower and other tools and hurled it into the Small Cemetery breaking headstones. The parent thunderstorm cell formed at Twin Falls and moved northeastward along the Snake River Plain to the Montana border.							
ILLINOIS									
ILZ001-005-007-008									
Northern Third of Illinois	12	0400CST-			0	0	7	?	Winter Storm
	13	1200CST							
		The most severe snow and ice storm so far this season started during the early morning of the 12th and continued through noon on the 13th, and was at times accompanied by winds to 35 mph. Snow falls to 12 inches were reported in Whiteside County of northwestern Illinois. At least 8 inches of snow and ice was reported in Kankakee and Iroquois Counties of northeastern Illinois. Chicago Metropolitan snow depths ranged from 2 to 4 inches north, to 8 inches far south. Beside auto and air traffic problems associated with snow removal, a major problem was downed power lines, especially in Kankakee, Iroquois, and Grundy Counties. This caused a large part of the expense and distress for the storm. In Kankakee County, two people died while shoveling snow, and 47,000 people were without electric service through the 14th. Near Morris in Grundy County, a large snowplow was destroyed by a train after getting stuck on railroad tracks. For Grundy County, the storm started at 0500 CST on the 12th, and costs for property damage and emergency services were expected to exceed \$5 million.							
Crawford County									
Oblong	21	2242CST			0	0	?	?	Hail (0.75)
Robinson	21	2300CST			0	0	4	?	Thunderstorm Winds Hail (0.75)
		Hail (0.75 inch) fell and power lines were downed by thunderstorm winds.							
Johnson County									
	22	0011CST			0	0	0	?	Thunderstorm Winds
		Channel 12 Television Station reported scattered damage to trees in the county.							

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ILLINOIS Cont'd

Massac County Northeastern Portion	22	0030CST			0	0	5	0	Thunderstorm Winds
A mobile home was flipped over and a large house nearly destroyed by thunderstorm winds. Three people in the mobile home sustained only minor injuries, even though the home was rolled 50 to 60 feet. There was other damage to farm buildings in northeastern Massac County.									
Randolph County Chester	21	1550CST			0	0	0	0	Hail (0.75)
Dime-size hail was reported by the Randolph County Sheriff's Office. There were also reports of wind gusts to 50 mph and hail covering the ground.									
McLean County	22	2140CST			0	0	0	0	Thunderstorm Winds (G53)
Bloomington Control Tower reported winds to 61 mph.									
Franklin County Benton	22	Evening			0	0	4	0	Lightning
Two homes sustained heavy fire damage that was caused by lightning.									
Livingston County	22	2210CST			0	0	5	0	Thunderstorm Winds
At Fairbury, thunderstorm winds caused heavy damage to homes and power lines. Buildings were damaged at Forrest.									
Kankakee County Reddick	22	2235CST			0	0	2	0	Thunderstorm Winds (G52)
The Illinois State Police reported rocks blown across the road near Reddick by winds at least 60 mph. Other scattered damage occurred in Kankakee County.									
Iroquois and Kankakee Counties	22	2251CST	9.0	100	0	0	6	0	Tornado (F1)
A tornado touched down at a farm in far northern Iroquois County at 2251 CST, then skipped northeast to the southwestern edge of the city of Kankakee. At the farm, a home was badly damaged, a hay barn destroyed, and other structures damaged. Southwest of Kankakee, at Kankakee High School, a sports equipment trailer was destroyed, then within a mile of downtown Kankakee, at Governor Small Memorial Park, at least 15 trees were damaged. The tornado lifted, and was later reported as a funnel cloud over Bradley, a couple miles to the northeast of Kankakee.									
Vermilion County	22	2313CST	1.0	50	0	0	6	?	Tornado (F1)
A rope-like tornado apparently extended to just 30 to 40 feet off the ground for most of its existence. It touched down briefly in Tilton causing extensive damage to 10 homes, a liquor store, and the city hall/fire station complex. It continued to the northeast, where it touched down for the last time in southwestern Danville causing damage to signs, store windows, and trees. Total damage was estimated at \$975,000.									
Hancock County West Point	26	2140CST			0	0	?	?	Hail (0.75)
Carthage	26	2145CST			0	0	?	?	Hail (0.75)
McDonough County 1 ESE Blandinsville	26	2158CST			0	0	?	?	Hail (0.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Peoria County Near Trivoli	26	2250CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds blew a car off the road.									
Knox County Galesburg	27	0005CST			0	0	?	?	Hail (1.00)
La Salle County Streator	27	0005CST			0	0	?	?	Hail (0.75)
Knox County Galesburg	27	0011CST			0	0	?	?	Hail (1.00)
Grundy County Verona	27	0015CST			0	0	?	?	Hail (0.75)
Will County	27	0023CST			0	0	?	?	Hail (0.75)
La Salle County 1 W Tonica	27	0115CST			0	0	?	?	Hail (0.75)
		Estimated							
Near Ottawa	27	0117CST			0	0	?	?	Hail (0.75)
Streator	27	0134CST			0	0	?	?	Hail (1.00)
Cook County O'Hare Airport	27	0203CST			0	2	?	?	Lightning
Two men were struck by lightning while standing beside a hangar, both were taken to the hospital in critical condition.									
Southeastern Portion	27	0235CST			0	0	?	?	Hail (1.00)
Kane County Elgin	27	0710CST			0	0	4	0	Thunderstorm Winds
		Estimated							
Near the junction of Randall Road and Route 20, in southwestern Elgin, thunderstorm winds turned over a truck, downed power lines, and tore limbs off trees.									
Cook County Barrington Hills	27	0720CST			0	0	5	0	Thunderstorm Winds
		Estimated							
Near the junction of Routes 59 and 62, thunderstorm winds caused damage to 16 houses.									
Stephenson County 5 SW Freeport	27	1309CST			0	0	?	?	Hail (0.75)
Carroll County Mt. Carroll	27	1310CST			0	0	?	?	Hail (1.75)
Whiteside County 9 S Rock Falls	27	1330CST			0	0	?	?	Hail (1.75)
Will County Lewis University	27	1345CST			0	0	4	0	High Winds
Winds damaged a roof at the College of Nursing.									
Lee County Dixon	27	1346CST			0	0	?	?	Hail (1.50)
Winnebago County Rockford Airport	27	1349CST			0	0	?	?	Hail (0.75)
ILZ006-012 Central Illinois	27	1350CST- 2150CST			0	0	5	?	High Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

ILLINOIS Cont'd

An intense low-pressure system, which caused severe weather in northern Illinois, caused high winds in central and eastern Illinois. At Springfield Weather Service Office, at 2120 CST, winds gusted to 62 knots (71 mph), for their highest peak wind recorded for March. Sustained winds were in the 35 to 48 knots (40 to 55 mph) range. At 1700 CST in Salem (Marion County), a heavy Gantry crane was toppled; damage was estimated at \$70,000.

Boone County Belvidere	27	1408CST			0	0	?	?	Hail (0.75)
McHenry County Harvard	27	1420CST			0	0	?	?	Hail (0.88)
Woodstock	27	1421CST			0	0	?	?	Hail (0.88)
Boone County Belvidere	27	1425CST			0	0	?	?	Hail (1.00)
La Salle County Ottawa	27	1445CST			0	0	?	?	Wall Cloud

A National Weather Service employee reported a possible tornado forming from a wall cloud.

McHenry County Woodstock	27	1453CST			0	0	?	?	Hail (1.00)
Woodstock	27	1554CST			0	0	?	?	Thunderstorm Winds (G54)

McHenry County Emergency Service and Distaster Agency reported 62-mph winds.

De Kalb County De Kalb	27	1503CST			0	0	?	?	Hail (1.75)
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Northern Illinois University personnel reported that hail covered the ground.

Adams County Quincy	27	1515CST			0	0	?	?	High Winds (G58)
Peoria County Peoria	27	1516CST			0	0	?	?	Thunderstorm Winds (G50)
Kane County	27	1522CST			0	0	?	?	Hail (1.00)
Marshall and Peoria Counties	27	1530CST			0	0	?	?	Thunderstorm Winds

Scattered damage occurred throughout Marshall and Peoria Counties because of thunderstorm winds combined with strong gradient winds.

Cook County Wheeling	27	1535CST			0	0	5	0	Thunderstorm Winds
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Thunderstorm winds caused heavy damage to aircraft at Pal-Waukee Airport. Four aircraft were destroyed, and another damaged.

Du Page County Eola	27	1550CST			0	0	3	0	Thunderstorm Winds
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Thunderstorm winds caused damage to a school roof.

Will County 7 SW Naperville	27	1550CST	3.0	50	0	0	0	0	Tornado (F0)
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A tornado briefly touched down west of Route 59, and again near the junction of the Naperville-Plainfield Road and 95th Street.

Du Page County Downer's Grove	27	1553CST			0	0	?	0	Hail (0.75)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

ILLINOIS Cont'd

**Will and Cook Counties
Romeoville
Lemont**

27 1555CST 15.0 200 0 7 7 0 Tornado (F3)

At 1555 CST, this tornado caused damage near Renwick and Weber Roads, southwest of Romeoville. Homes sustained minor damage and antenna damage. The tornado then touched down at Romeoville High School Athletic Field, where damage was done to the concession building, press box, and the bleachers. The tornado moved northeast and caused damage to trees and signs at Route 53 and 135th Street. It crossed the Des Plains River and the canal causing damage in an industrial area. The tornado unroofed a house at the southeastern corner of 127th and Smith Road. On the northern side of 127th, a roof was peeled off an equipment building and slammed into a 263-foot-tall microwave tower, where winds with debris collapsed the tower. In Lemont, the tornado demolished a barn north of Roberta and east of Timerline Roads as it moved northeast, then damaged power lines and garages. It moved across McCarthy Road and on the eastern side of Houston Street; a garage was destroyed, and a house was knocked off its foundation and its brick peeled off. The tornado continued east-northeast into McCarthy Pointe, where the most severe damage occurred. Two homes were destroyed and several severely damaged. A nursing home suffered heavy damage to roofs, buildings, and trees. The Retirement Coach Homes had severe roof and wall damage. Then the tornado weakened, but damaged trees and power lines along Main Street. It crossed railroad tracks just west of Parker Road and demolished an industrial building. Spotters saw the tornado at Routes 83 and 171 where trees were damaged. The tornado dissipated in the forest preserve south of Willow Springs, 7 miles west of Oak Lawn. The funnel was later observed over Burbank and near Midway Airport, but no other significant damage was reported. The entire path was about 15 miles. On the Fujita Scale, the tornado was F0 to F1 during the first 7 miles, F2 through much of Lemont, briefly reached F3 at Peiffer and Warner Streets, and at McCarthy Pointe. It diminished to F1 to F0 intensity east of Walker Road. Estimated damage was \$8 million. No fatalities were reported and only a few people were injured; none critically.

Cook County 27 1556CST 0 0 ? 0 Thunderstorm Winds (G73)

At O'Hare Airport, thunderstorm winds gusted from the southwest at 84 mph.

Skokie 27 1608CST 0 0 ? ? Hail (0.75)

**Kankakee County
Manteno**

27 1610CST 0.5 50 0 0 0 0 Tornado (F1)

Cook County

Skokie 27 1613CST 0 0 ? ? Hail (1.00)

Park Forest 27 1630CST 0 0 4 0 Thunderstorm Winds

Chicago Heights

Thunderstorm winds caused scattered damage to buildings and power lines throughout the southern part of Cook County.

**Will County
Monee**

27 1637CST 0.5 50 0 0 3 0 Tornado (F0)

A tornado damaged trees and buildings in the southern side of Monee.

ILZ006-007-008-009-010-011-012

27 1651CST 0 0 5 ? High Winds (G59)

During the afternoon and evening, strong gradient winds caused scattered damage over much of central Illinois. At Peoria National Weather Service Office, the wind gusted to 68 mph at 1651 CST. At Salem in Marion County, a heavy Gantry crane was toppled at 1700 CST; damage was estimated at \$70,000.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

INDIANA

INZ001-002-003-004-005-006-007-009-010, Northern Indiana

12	1800EST-								
13	2100EST				0	?	8	?	Ice Storm Heavy Snow

A destructive ice storm coated much of northern Indiana with 1 to 3 inches of ice. Six to twelve inches of snow fell in a band across far northern Indiana. The heaviest snow fell in the Plymouth area, where a foot of snow was reported. A state of emergency was declared in 18 northern Indiana counties. At the height of the storm around 200,000 homes were without power. There was widespread damage to trees, and thousands of wooden utility poles were snapped or toppled. Over 100 steel power line towers were also destroyed. During the storm easterly winds gusted to around 40 mph, and this helped contribute to the widespread damage. Many roads in north central Indiana were closed due to downed limbs, trees, and power lines. Some rural areas remained without power until the first part of April. Total damage was estimated between \$80 and \$100 million.

Warrick County
Newburgh
2 N Yankeetown
Booneville

21	1955EST				0	0	6	0	Hail (2.00)
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Considerable damage to over 100 homes, and hundreds of automobiles was caused by 2-inch-diameter hail.

Spencer County
Midway
Perry County
5 NW Tell City
Tell City
Posey County
Wadesville
Vanderburgh County
10 N Evansville
Daviess County
Plainville
Clark, Floyd, and
Harrison Counties

21	2005EST				0	0	?	0	Hail (1.75)
21	2034EST				0	0	?	0	Hail (1.75)
21	2040EST				0	0	?	0	Hail (1.75)
21	2215EST				0	0	0	0	Hail (0.75)
21	2325EST				0	0	0	0	Hail (0.75)
21	2350EST				0	0	?	0	Hail (1.75)
22	1735EST				0	0	4	0	Flash Flood

Between 1.50 and 2 inches of rain fell in a 2-hour period on already saturated ground. This rain forced many creeks and streams out of their banks, flooding streets and roads across the area. In Clarksville, several homes and businesses were evacuated.

Warren County
West Lebanon

23	0048EST				0	?	2	0	Thunderstorm Winds
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The sheriff's office reported windows were blown out of a mobile home.

Lake County
Hammond
Crown Point
Porter County
Burns Harbor
Lake County
Northeastern
Side of Gary
La Porte County
1 E Michigan City
La Porte County
Springville
2 N La Porte

27	0340EST				0	0	?	?	Hail (1.00)
27	1745EST				0	0	0	0	Hail (0.75)
27	1745EST				0	0	?	0	Hail (1.00)
27	1755EST				0	0	?	0	Hail (2.00)
27	1755EST				0	0	?	0	Hail (1.75)
27	1802EST				?	?	0	0	Funnel Cloud
27	1802EST				0	0	?	0	Hail (2.75)

Baseball-size hail was reported on Interstate 80/90, 2 miles north of La Porte, and a funnel cloud was reported by the sheriff's office in Springville.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Lake County Calumet Township	27	1817EST			0	0	4	0	Thunderstorm Winds (G56)
			A 180-foot tower was downed by 65-mph winds.						
Carroll County Yeoman	27	1858EST			0	0	?	0	Hail (1.00)
Starke County Hamlet	27	1900EST			0	0	?	0	Hail (0.75)
Pulaski County Winamac	27	1900EST			0	0	?	0	Hail (0.75)
Tippecanoe County Ash Grove	27	1910EST	Short	10	0	0	?	0	Tornado (F0)
			A tornado touched down briefly at Ash Grove.						
La Porte County Hanna	27	1910EST			0	0	?	0	Hail (0.75)
St. Joseph County Countywide	27	1910EST			0	0	?	0	Thunderstorm Winds Hail (0.75)
			Ten utility poles and numerous trees were downed on Day Road just east of Grape Road in Mishawaka. A roof was blown off a house and a wall caved in at Elm and Taylor Roads in southern St. Joseph County.						
South Bend	27	1915EST			0	0	?	0	Hail (0.75)
			Hail was reported on Ash Road.						
Cass County Countywide	27	1925EST	Short	10	0	0	?	0	Tornado (F0)
			The State Police reported a brief tornado touchdown near the intersection of 500 East and 700 North.						
12 NE Logansport	27	1926EST			0	0	?	0	Hail (1.00)
Elkhart County Nappanee	27	1928EST			0	0	0	0	Thunderstorm Winds
			Large tree limbs were blown down.						
Kosciusko County Syracuse	27	1935EST			0	0	?	0	Thunderstorm Winds
			Large trees and power lines were downed.						
Elkhart County 4 S Goshen	27	1940EST			0	0	?	0	Thunderstorm Winds (G50)
			A 1-foot-diameter tree was downed and a wind gust to 58 mph was reported by an amateur radio operator.						
Wabash County	27	1943EST			0	0	0	0	Hail (0.75)
			Three-quarter-inch hail was reported between Roan and Akron.						
Kosciusko County	27	1945EST			0	0	?	0	Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

INDIANA Cont'd

Hamilton County
Westfield 27 1952EST 0 0 ? 0 Thunderstorm Winds (G70)

An 81-mph wind gust was measured in Westfield.

Carroll County 27 1959EST 0 0 ? 0 Thunderstorm Winds (G52)

Whitley County

Collins 27 2000EST 0 0 0 0 Hail (0.75)

2 NE Columbia City 27 2002EST 0 0 ? 0 Hail (1.00)

Marion County

Indianapolis 27 2000EST 0 0 3 0 Thunderstorm Winds

A school roof was damaged on the northwestern side of Indianapolis.

Madison County

Alexandria 27 2016EST 0 0 ? 0 Hail (1.75)

Alexandria 27 2020EST 0 0 ? 0 Hail (1.75)

2 N Alexandria 27 2020EST 0.1 20 0 0 3 0 Tornado (F0)

A tornado touched down briefly, and downed trees and utility poles. There was also some damage to small barns.

Steuben County

Ashley Metz 27 2020EST-2039EST 14.6 200 1 6 7 ? Tornado (F2)

The path of the tornado was intermittent, with ten separate touchdowns noted in Steuben County. The first touchdown occurred just northeast of Ashley, and the last near the Williams County and the Ohio state line just northeast of Metz. The tornado then crossed into Ohio. Highest winds occurred just northeast of Ashley, and near Metz. The tornado produced damage to 62 homes and mobile homes, with 13 single family homes destroyed, and 5 mobile homes destroyed. Total damage was approximately \$5 million. A woman was killed in a mobile home between Pleasant Lake and Metz. (F49M)

De Kalb County

Garrett 27 2021EST 0 0 ? 0 Hail (1.00)

Whitley County

6 E Columbia City 27 2022EST 0 0 ? 0 Hail (1.00)

Delaware County

Muncie 27 2025EST 0 0 ? 0 Thunderstorm Winds (G53)

The Ball State Weather Station measured gust of 61 mph.

Wabash County

27 2025EST 0 0 4 0 Thunderstorm Winds

A barn was blown down injuring livestock, and a mobile home was blown off its foundation.

Madison County

3 SW Summitville 27 2028EST 0 0 3 0 Thunderstorm Winds

A garage was blown down on State Road 9 southwest of Summitville.

Anderson

27 2030EST 0 0 4 0 Thunderstorm Winds

The roof was blown off the Best Western Motel in Anderson.

INZ001-002-003-004-005-006-007-008-009-010

27 2030EST-28 0200EST 1 0 5 0 Gradient Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Northern and Central Indiana

After the passage of severe thunderstorms, strong gradient winds gusting up to 70 mph caused considerable damage over central and northern Indiana. Some measured wind gusts included 61 mph at Castleton, 62 mph at Martinsville, 59 mph at Fort Wayne, 63 mph at Marshall, and 70 mph at Wabash. The Moose Lodge was damaged in Lebanon, and the roof was blown off the U.S. Customs building on the northwestern side of Indianapolis. Greenhouses were blown over in Wabash, and a mobile home was blown off its foundation in Huntington County. In Fort Wayne windows were blown out, and part of a gym roof was blown off. A 44-year-old man in Fort Wayne was killed when the moped he was riding was blown over. (M44V)

Delaware County

5 N Muncie	27	2031EST			?	?	0	0	Funnel Cloud
Muncie	27	2031EST			0	0	?	0	Thunderstorm Winds (G57)
Allen County									
2 W Leo	27	2034EST			0	0	?	0	Hail (0.75)
De Kalb County									
2 S Ashley	27	2035EST			1	0	3	0	Thunderstorm Winds

A truck driver was killed when thunderstorm winds blew the tractor-semitrailer over on Interstate 69. (M41V)

Grant County Marion

	27	2040EST			0	0	3	0	Thunderstorm Winds
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A mobile home was blown over, and trees were uprooted in southwestern Marion.

Delaware County Muncie

	27	2045EST			?	?	0	0	Funnel Cloud
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A funnel cloud was reported by the state police on the northern side of Muncie.

Allen County Fort Wayne

	27	2049EST			0	0	0	0	Thunderstorm Winds Hail (0.75)
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Three-quarter-inch hail occurred on the northern side of Fort Wayne. Large trees were downed in the central section of Fort Wayne.

Blackford County

	27	2055EST			0	0	3	0	Thunderstorm Winds
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Trees and power lines were blown down across the county.

Grant County

	27	2100EST			0	0	3	0	Thunderstorm Winds
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Trees and power lines were blown down in eastern and southern Grant County.

Jay County

	27	2100EST			0	0	3	0	Thunderstorm Winds
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Trees and power lines were blown down in Portland. A spotter reported 60 mph winds near Redkey.

Delaware County

Muncie	27	2100EST			0	0	?	0	Hail (1.00)
Wayne County	27	2115EST			0	0	4	0	Thunderstorm Winds

A porch was blown off a house in Economy, and a television tower was blown down in Cambridge City. On the northern side of Richmond, trees were blown down, and a roof was blown off an old school house.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

INDIANA Cont'd

Hancock County	27	2120EST			0	0	?	0	Thunderstorm Winds
Trees were downed by thunderstorm winds.									
Henry County New Castle	27	2122EST			0	0	3	0	Thunderstorm Winds
Trees were downed and garages were damaged near New Castle.									
Hancock County Shirley	27	2125EST			0	0	?	0	Thunderstorm Winds
Large signs were blown down along Interstate 70 near Shirley.									
Wayne County	27	2200EST			0	0	?	0	Thunderstorm Winds
Trees were downed by thunderstorm winds.									

IOWA

IAZ003-007-008 010-011-012-013 014-015, ILZ004 Southeast Iowa	02 06	0000CST- 0600CST			0	0	4	0	Flooding
Rainfall of 0.50 to 1.50 inches fell over the southeastern half of Iowa. Since the ground was frozen at the time, much of the rainfall quickly ran off into rivers. Flooding was widespread, but relatively minor. Most of the flooding was restricted to lowlands. A few roads in eastern-central Iowa were affected but not enough to require closure.									
IAZ001-004-005- SDZ018 Northwestern Iowa	05	1500CST- 2000CST			0	0	4	0	High Winds
Strong northwesterly winds moved into extreme northwestern Iowa in the wake of an Arctic cold front. Winds were generally sustained between 25 and 40 mph, with occasional gusts between 50 and 55 mph. Damage was quite minor.									
IAZ001-002-003- 005-006-007-008-011 ILZ004, Northern and Eastern Iowa	12 12	1000CST- 0300CST			0	0	4	0	Snow Heavy Snow
An intense low-pressure system moved across northern Missouri during the daytime hours of the 12th. As the storm began, most of the precipitation was in the form of rain. Some ice pellets and freezing rain fell over the far northern and northeastern counties. During the afternoon, the rain changed over to snow over the northern half of Iowa. Heavy snow fell for a brief time over the northwest, then the action shifted east. Iowa received from 5 to 8 inches of snow in the north-central into east-central portions. The northeast was the hardest hit, with 8 to 12 inches of snow. During the evening hours of the 12th, Dubuque reported a snowfall accumulation rate of 2 inches per hour. Travel was not recommended over northeast Iowa, but no roads were closed. Blowing and drifting was a problem, as northeasterly winds of 20 to 45 mph buffeted the state. The high winds caused near blizzard conditions over northeastern Iowa, with visibility reduced to near zero at times, and producing drifts 6 feet deep. Elsewhere across the state, amounts were quite light. Very little fell over the southwestern third of Iowa. Snowfall amounts were between 1 to 4 inches from west-central, through central, into southeastern Iowa.									
Franklin County Geneva	12	2000CST			0	0	4	0	Lightning
Lightning struck a barn near Geneva during the evening of the 12th. The barn was burned to the ground, killing an undetermined number of hogs and chickens.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

IAZ007-010-011- 17 1800CST-
014-ILZ004 21 1200CST 0 0 4 0 Flood
Eastern Iowa

Soils were nearly saturated over eastern Iowa when additional rainfall occurred. To make matters worse, the rain fell on snow-covered ground. Rainfall totals were in the 0.25- to 0.75-inch range, which was enough to cause minor flooding along the Wapsipinicon, Iowa, Cedar, and Skunk Rivers. Flooding was generally limited to agricultural lands, as rivers rose from 1 to 4 feet over flood stage.

Adams County 18 1900CST 0 0 2 0 Hail (0.75)
Corning

Thunderstorms developed over southwestern Iowa during the early-evening hours of the 18th, bringing the seasons first severe weather. Most of the storms produced pea- to marble-size hail; however, one became severe as it moved through Corning. Dime-size hail was reported as the storm moved through the community.

IAZ009-010-022- 20 0900CST-
012-013-014 1800CST 0 0 4 0 High Winds
Southern Iowa

Strong southerly winds began by midmorning, and continued through the day. Winds were generally between 25 and 45 mph with occasional gusts between 50 to 60 mph. Damage was generally quite minor, being restricted to sign damage for the most part.

Cass County Lyman	22	1440CST			0	0	3	0	Hail (0.88)
Adair County 1 S Adair	22	1500CST			0	0	4	0	Thunderstorm Winds (G50+)
Guthrie County Casey	22	1520CST	0.1	20	0	0	2	0	Tornado (F0)
Polk County 9 NW Des Moines Airport	22	1545CST			0	0	3	0	Hail (1.00)
Boone County 1 NE Berkley Ogden	22	1554CST- 1605CST	7.0	50	0	0	5	0	Tornado (F2)
Warren County 6 S Indianola	22	1605CST			0	0	0	0	Funnel Clouds
Story and Hardin Counties 1 W Huxley 3 NW Eldora	22	1620CST- 1725CST	43.0	70	0	0	6	0	Tornado (F3)

A tornado of F3 intensity touched down in rural Story County.

Boone County Slater	22	1620CST			0	0	2	0	Hail (0.88)
Story County Kelly	22	1642CST	0.1	20	0	0	2	0	Tornado (F0)
Marshall County Marshalltown	22	1700CST			0	0	4	0	Hail (1.75)
Davis County 2 W West Grove	22	1720CST			0	0	4	0	Thunderstorm Winds (G50+)
Hardin and Grundy Counties 1 E Whitten 5 S Parkersburg	22	1725CST- 1748CST	20.0	50	0	0	5	0	Tornado (F2)
Davis County Lake Wapello	22	1725CST			0	0	2	0	Hail (0.75)
8 SE Pulaski	22	1750CST			0	0	0	0	Funnel Cloud

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

Jasper County Lynnville	22	1730CST			0	0	4	0	Thunderstorm Winds (G50+)
Hardin County 1 NW to 2.5 N Buckeye	22	1730CST- 1733CST	2.0	25	0	0	5	0	Tornado (F1)
Grundy County 6 SSE Ackely	22	1740CST			0	0	5	0	Thunderstorm Winds (G70)
Conrad	22	1740CST			0	0	4	0	Thunderstorm Winds (G50+)
3 W Grundy Center	22	1750CST			0	0	4	0	Thunderstorm Winds (G50+)
Hardin County 2.5 N Eldora	22	1745CST			0	0	4	0	Thunderstorm Winds (G50+)
Tama County Gladbrook	22	1800CST			0	0	4	0	Thunderstorm Winds (G50+)
Iowa County 4 N Marengo	22	1816CST	0.1	20	0	0	3	0	Tornado (F0)
Black Hawk County Waterloo	22	1830CST			0	0	3	0	Thunderstorm Winds (G50+)
Bremer County Denver	22	1840CST			0	0	4	0	Thunderstorm Winds (G60)
Johnson County Iowa City	22	1853CST			0	0	4	0	Thunderstorm Winds (G50+)
Washington County 2 W Riverside	22	1859CST			0	0	4	0	Thunderstorm Winds (G50+)
Buchanan County 2.5 S Stanley	22	1900CST			0	0	4	0	Thunderstorm Winds (G50+)
Fayette County 1.5 S Hawkeye	22	1900CST			0	0	4	0	Thunderstorm Winds (G50+)
1.5 N West Union	22	1900CST			0	0	4	0	Lightning
1 SW West Union	22	1910CST			0	0	3	0	Thunderstorm Winds (G50+)
Johnson and Cedar Counties 3.5 NE Lone Tree	22	1910CST- 1930CST	14.0	80	0	0	5	0	Tornado (F2)
4 E Springdale									
Cedar County West Branch	22	1915CST			0	0	0	0	Funnel Cloud
6 N West Liberty	22	1915CST			0	0	4	0	Thunderstorm Winds (G50+)
Tipton	22	1915CST			0	0	4	0	Thunderstorm Winds (G65)
Delaware County 2.5 W Ryan	22	1925CST- 2000CST	17.0	80	0	1	5	0	Tornado (F2)
Greeley									
Cedar County 1.5 E Lowden	22	1930CST	0.1	20	0	0	3	0	Tornado (F1)
1.5 E Lowden	22	1930CST			0	0	3	0	Hail (0.75)
Mechanicsville	22	1945CST			0	0	3	0	Thunderstorm Winds (G50+)
Muscatine County 4 SW West Liberty	22	1945CST			0	0	4	0	Thunderstorm Winds (G75)
Clayton County 3 N Guttenberg	22	1950CST			0	0	4	0	Thunderstorm Winds (G75)
Jackson County Maquoketa	22	1955CST			0	0	5	0	Thunderstorm Winds (G61)
Delaware County Hopkinton	22	2000CST	0.1	20	0	0	3	0	Tornado (F0)

This tornado was actually considered to be a gustnado.

Clinton County 3 N Wheatland 2 S Elwood	22	2000CST- 2012CST	7.0	60	0	0	6	0	Tornado (F2)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

IOWA Cont'd

Scott County Davenport	22	2000CST			0	0	5	0	Thunderstorm Winds (G60)
Jackson County Andrew	22	2005CST			0	0	4	0	Thunderstorm Winds (G50+)
Clinton County Clinton	22	2013CST			0	0	4	0	Thunderstorm Winds (G52)
Wheatland	22	2030CST			0	0	3	0	Thunderstorm Winds (G50)
Clinton	22	2030CST			0	0	3	0	Thunderstorm Winds (G50)

An intense low pressure system moved across Nebraska, through central, into northeastern Iowa, bringing in warm and unstable air ahead of it. A dry line moved across the plains, setting off a line of thunderstorms in western Iowa by the midafternoon hours. The line quickly became severe and spawned several tornadoes across central into east-central Iowa. Most of the tornadoes were quite small and did little damage. An example was the one in Guthrie County, which was only on the ground briefly and caused no damage. The first significant tornado touched down in Boone County. It caused considerable damage southwest of the Ogden area. Fortunately, it tracked through mostly rural areas and damage was limited to farm buildings; nearly destroying several. The strongest tornado developed in Story County of central Iowa. The storm that spawned this storm dropped quarter-size hail over the northwestern part of the Des Moines metropolitan area shortly before the tornado formed. It formed along a squall line that formed into what is known as a line echo wave pattern. The tornado formed on the crest of this pattern and traversed over 40 miles before dissipating northwest of Eldora in Hardin County. Considerable damage occurred on several farmsteads as the tornado tracked through rural areas. The tornado was at its peak strength in rural Story County. There was quite a bit of damage to buildings and trees in the city of Nevada, and also to the west and northwest of Eldora. Reports from around the Nevada area indicate that the funnel was about 1,000 feet wide as it passed south and east of the city of Nevada itself. Between \$750,000 and \$1,000,000 in damage was done to a country club and a grain company there. In the Nevada area, a total of 19 residences were also damaged. There was a secondary line of thunderstorms just to the west of the main line which produced a small tornado near Kelly, and also near Buckeye. Another strong tornado formed in Grundy County which took the roofs off of several buildings along its path. High winds in northwestern Grundy County caused extensive damage to one house, with all of the windows and doors blown out and uprooting several large trees. Similar damage occurred at Denver, in Bremer County, with windows blown out and two mobile homes blown off of their foundations. Although most of the tornadoes in east-central Iowa were of the small variety, one was quite strong in Delaware County. Damage was reported to several homes; one mobile home was destroyed injuring one person. Another quite strong tornado touched down in Clinton County north of Wheatland, striking a farm there. Several buildings were destroyed there, with significant damage done to a newer house. Farther northeast, another farmstead was struck. The tornado moved the house 0.5 inch off of its foundation. Extensive damage occurred east of Springdale, in Cedar County, as a tornado tracked from Johnson County into southern Cedar County. A small tornado touched down in Hopkinton. This tornado was actually a gustnado - or a tornado that formed along the gust front of the line of thunderstorms. During the late afternoon and evening hours, reports of 50 to 55 mph winds and marble- to slightly-larger-size hail were received all along the line. Only spotty severe reports were received, but hail was 1.0 inch or less in diameter in most areas. Golf ball-size hail fell in Marshalltown, breaking the windshields of a few cars there. High winds did cause extensive damage in the Iowa City area. Many trees were downed, and winds were strong enough to take power lines down in the city. In Muscatine County, the roof of a house was taken off by high winds southwest of West Liberty, while to the north, a barn roof was taken off in Cedar County. Other damage reports from high winds include the roof being blown off a house in Clayton County, and a tractor-semitrailer being overturned and blown off the highway south of Adair. High winds actually struck Clinton County twice. After the initial gust of wind and the tornado, outflow winds behind the storm blew across a large part of the county. North of West Union, lightning struck a house and caused a fire that left the home completely gutted. The storms moved east of Iowa by midevening.

IAZ001-005-006	22	2300CST-							
Northwestern Iowa	23	1200CST			0	0	4	0	Snow Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

The same intense low that brought the severe weather to Iowa earlier in the day resulted in heavy snow by midnight. As the low moved across northeastern Iowa, cold air was drawn south into Iowa. Rain changed over to snow, with 4 to 8 inches of heavy wet snow accumulating over parts of northwestern Iowa. The heaviest snow fell from about Spencer north. Eight inches of snow was reported in the Spirit Lake area causing roads to become very hazardous. There were many reports of downed trees and power lines, as the heavy wet snow clung to everything.

IAZ002-003-008-
010-011-014-015
ILZ004, Eastern
Iowa

23 0000CST-
31 2400CST 0 0 5 0 Flood

Just about the time when rivers were about to fall below flood stage, additional rains came to Iowa. On the 22nd and early part of the 23rd, 0.33 to 0.66 inch of rain fell over the southeastern part of Iowa. The heaviest rainfall total was at Gilman, in Marshall County, with 4.16 inches. Anywhere from 1 to 2 inches of rain, and some snow, fell over the upper reaches of several rivers across northern and northwestern Iowa. Once again, the flooding was largely restricted to agricultural lands. On the 27th, additional rains came to Iowa measuring anywhere from 0.50 inch to 1.25 inches. The additional rains served to keep rivers over flood stage in several areas through month's end and even into early April. There was considerable minor flooding throughout the month over the southeastern part of Iowa with many streams having multiple crests. The most significant flooding occurred along the Lower Wapsipipicon, the Iowa above the Coralville Dam, and the North Racoon Rivers. Precipitation for the month averaged 4.21 inches for the state average, which was second only to the 4.32 inches in March of 1990 for the wettest March in the 119 years of records. East-central Iowa had an average of 5.63 inches, making it the wettest March on record there.

Davis County 3 SE Bloomfield	26	2000CST	0	0	4	0	Thunderstorm Winds (G50+)
Harrison County Woodbine	26	2255CST	0	0	4	0	Hail (1.50)
Pottawattamie County Council Bluffs	26	2325CST	0	0	4	0	Thunderstorm Winds (G50+)

Thunderstorms developed over Iowa from southeastern into west-central Iowa, then south into northwestern Missouri. Most of the storms were not severe. High winds from one storm destroyed several farm buildings south and east of Bloomfield. The buildings were strewn across the farm fields there. A few storms were severe in western Iowa. Hail measuring 1.5 inches in diameter, pelted the Woodbine area. High winds in the Council Bluffs area downed several power poles.

Lee County Keokuk	27	0420CST	0	0	6	0	Thunderstorm Winds (G75)
Louisa County 5 W Wapello	27	0430CST	0	0	4	0	Thunderstorm Winds (G50+)
Lee County Keokuk	27	0440CST	0	0	0	0	Funnel Cloud
Scott County Eldridge	27	0450CST	0	0	4	0	Thunderstorm Winds (G50+)

A line of thunderstorms raced across southeastern Iowa. As the line moved through the Keokuk area, high winds caused considerable damage around the city. The roof was torn off of a church school gymnasium with damage estimates of about \$250,000. A roof was also torn off of a manufacturing company in Keokuk at an estimated cost of \$300,000. Total damage in the city of Keokuk itself was nearly \$1 million. This same line extended up into Louisa County. Damage was reported west of Wapello, with mobile homes overturned, a barn demolished, and numerous large trees downed by high winds. In Scott County, high winds ripped the roof off an industrial building, causing an estimated \$42,500 in damage.

IZA001-004-005
Northwestern Iowa

27 0800CST-
1700CST 0 0 3 0 Snow
Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

An intense low pressure system tracked across Iowa drawing cold air south on the back side of the low. Snow began to fall over the northwestern counties shortly after daybreak. At first, the snow was mixed with ice pellets and freezing rain. This mixture did not last very long and did not cause serious problems, since ground temperatures were well above freezing. Snow amounts were generally between 3 to 6 inches with the heaviest occurring in a 40-mile wide area extending from Sioux City, on to the northeast. Thunder accompanied the snow, with 3 inches of snow falling in 1 hour at the Sioux City Airport. Visibilities were reduced to near zero by strong northwesterly winds of 25 to 45 mph. Conditions improved rapidly during the late afternoon. Snow amounts on either side of the heavy snow band dropped off rapidly, with amounts generally less than 2 inches.

Marshall County Gilman

27 0008CST 0 0 4 0 Hail (1.75)

A line of thunderstorms moved across Iowa during the evening and early-morning hours. Most of them were not severe; one cell became severe and dropped golf ball-size hail near Gilman.

Clayton County Elkport

27 0245CST 0 0 5 0 Lightning

A thunderstorm moved through the Elkport area during the early-morning hours. Lightning struck a barn there, setting it on fire. Damage was placed at \$60,000, as the barn and its contents were nearly completely destroyed. The farmer was able to evacuate the livestock.

Dubuque County Bernard 2 W La Motte Dubuque Airport Dubuque and Jackson Counties 1 SW to 0.25 NE Zwingle

27 1215CST 0 0 0 0 Funnel Cloud
27 1215CST 0 0 0 0 Funnel Cloud
27 1217CST 0 0 3 0 Hail (0.75)
27 1218CST-
1221CST 1.3 100 0 1 5 0 Tornado (F2)

A line of thunderstorms developed along the dry line as it moved into northeastern Iowa. Dime-size hail fell at the Dubuque Airport. Two funnel clouds were observed in southern Dubuque County. Shortly after that, a tornado developed near Zwingle. Damage was quite extensive at Zwingle, with one house knocked off its foundation, several cars were overturned, and trees were ripped apart. One injury occurred as a shed collapsed on a man in rural Zwingle.

KANSAS

Shawnee County 3 SE Topeka

01 1635CST 2.0 10 0 0 5 0 Tornado (F0)

A small tornado formed when small thunderstorms developed rapidly over Topeka. The tornado knocked a pontoon boat over and pulled a section of a wall out of a house. One half mile east another house was damaged when the tornado pulled the corner of the roof off, turned it and set it down in the back yard.

Douglas County Clinton Reservoir 2 W Eudora

01 1645CST 0 0 0 0 Funnel Cloud
01 1700CST 1.0 10 0 0 4 0 Tornado (F0)

A funnel cloud was sighted over Clinton Reservoir in Douglas County and a tornado formed and produced damage to a mobile home near Eudora.

Greenwood County 2 W Eureka Lyon County 1 S Emporia

26 1550CST 0 0 0 0 Hail (0.75)
26 1606CST 0 0 4 4 Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

KANSAS Cont'd

Emporia	26	1610CST			0	0	4	0	Thunderstorm Winds (G70)
6 S Emporia	26	1615CST			0	0	4	0	Hail (1.50)
Douglas County									
Lawrence	26	1620CST			0	0	5	0	Hail (2.00)
Coffey County									
Ottumwa	26	1625CST			0	0	4	4	Hail (1.50)
Burlington	26	1630CST			0	0	4	4	Hail (1.50)
Osage County									
4 S Burlingame	26	1630CST			0	0	4	4	Hail (3.00)
Lyon County									
Miller	26	1635CST			0	0	4	4	Hail (1.50)
Douglas County									
Lawrence	26	1640CST			0	0	7	4	Hail (3.00)

Over \$18 million in damage occurred to cars and homes in the Lawrence area. Several of the buildings at the University of Kansas sustained broken windows as well as many of the car dealerships.

Pratt County									
10 WNW to 10 NNW Pratt	26	1643CST	9.0	30	0	0	0	0	Tornado (F0)
Osage County									
Carbondale	26	1643CST			0	0	5	4	Hail (2.50)
Overbrook	26	1645CST			0	0	5	5	Hail (3.00)
Comanche County									
5 S Coldwater	26	1648CST			0	0	0	0	Hail (1.75)
Pratt County									
4 S Cullison	26	1650CST			0	0	0	0	Funnel Cloud
Osage County									
2 E Burlingame	26	1650CST			0	0	6	4	Hail (2.00)
Wyandotte County									
142nd and Riverview	26	1653CST			0	0	0	0	Hail (0.75)
Bonner Springs	26	1655CST			0	0	0	0	Hail (1.00)

Windshields were broken and cars were dented when large hail fell across Wyandotte County.

Stafford County									
3 S to 2.5 E Radium	26	1655CST	3.0	20	0	0	0	0	Tornado (F0)
Douglas County									
8 W Lawrence	26	1655CST			0	0	5	0	Hail (2.00)
Shawnee County									
1 S Auburn	26	1655CST			0	0	5	0	Hail (1.50)
Auburn	26	1655CST			0	0	4	4	Hail (2.00)
Wyandotte County									
Piper	26	1658CST			0	0	0	0	Hail (0.75)
1 W Bonner Springs	26	1700CST			0	0	0	0	Thunderstorm Winds (G56)
Shawnee County									
4 SE Topeka	26	1700CST			0	0	0	0	Hail (0.75)
Leavenworth County									
4 SW Basehor	26	1703CST			0	0	3	3	Hail (1.50)
Along I-70	26	1704CST			0	0	3	3	Hail (1.50)

At times, the hail was 2 inches deep in Leavenworth County.

Leavenworth County									
Parallel Parkway and K-7	26	1705CST			0	0	3	0	Hail (1.25)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

KANSAS Cont'd

Parallel Parkway and 99th Barton County	26	1713CST			0	0	3	0	Hail (1.25)
Clafin Shawnee County	26	1713CST			0	0	3	0	Hail (0.75)
3 N Topeka Wyandotte County	26	1713CST			0	0	0	0	Hail (0.75)
Riverview and 67th Franklin County	26	1715CST			0	0	0	0	Hail (1.00)
Williamsburg Wyandotte County	26	1720CST			0	0	0	0	Hail (1.00)
Parallel Parkway and I-635 Barber County	26	1725CST			0	0	3	0	Hail (1.50)
5 SW Medicine Lodge Douglas County	26	1730CST			0	0	0	0	Hail (1.00)
Baldwin City Franklin County	26	1730CST			0	0	4	0	Hail (2.00)
Ottawa	26	1730CST			0	0	4	0	Hail (2.00)
Ottawa	26	1730CST			0	0	5	0	Thunderstorm Winds (G65)
Leavenworth County									
Linwood	26	1735CST			0	0	0	0	Hail (1.00)
Linwood	26	1735CST			0	0	0	0	Thunderstorm Winds (G56)
Johnson County									
De Soto	26	1740CST			0	0	3	0	Thunderstorm Winds (G70)

Five utility poles were blown down in De Soto.

Ellsworth County 10 NW Ellsworth	26	1740CST			0	0	3	0	Hail (0.75)
Lincoln County Vesper	26	1740CST			0	0	4	0	Hail (3.00)
Douglas County 1 SW Lawrence	26	1740CST			0	0	4	0	Thunderstorm Winds (G70)
Jefferson County Perry Lake	26	1740CST			0	0	4	0	Hail (1.50)
Pratt County 2.5 NW to 4 N Preston	26	1745CST	3.0	50	0	0	4	0	Tornado (F1)

A tornado hit a mobile home, and took the roof and sides off a machine shed.

Jefferson County Valley Falls	26	1745CST			0	0	4	0	Hail (1.50)
Reno County 3 W Turon 1 W Abbyville 9 N Abbyville	26	1755CST	26.0	220	0	1	5	3	Tornado (F3)

The first tornado touched down in Pratt County and moved to the northeast, crossing into southwestern Reno County at 1755 CST, 3 miles west of Turon. The tornado grew in size and destroyed four homes and many outbuildings from 1 mile north of Turon, to Abbyville. Six miles north of Abbyville, a truck driver was injured when the tornado pulled him out of his truck and then the vehicle rolled over his ankle. The tornado dissipated north of Abbyville around 1840 CST. A second tornado formed from the same thunderstorm (see Reno County report at 1845 CST).

Leavenworth County 1 E Linwood	26	1757CST			0	0	4	0	Thunderstorm Winds (G73)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

KANSAS Cont'd

Eighty-mph winds damaged five homes and one business building, downed trees, and broke windows out of several homes.

Mitchell County										
5 SW Simpson	26	1810CST				0	0	4	0	Hail (2.00)
6 E Beloit	26	1820CST				0	0	4	0	Hail (2.50)
Scottsville	26	1828CST				0	0	4	0	Hail (2.50)
Cloud County										
Jamestown	26	1835CST				0	0	4	0	Hail (3.00)
Republic County										
Scandia	26	1840CST				0	0	4	0	Hail (2.00)
Reno County										
9 SW Hutchinson	26	1845CST	13.0	300		0	5	7	3	Tornado (F4)
6 E Nickerson										

After the first tornado dissipated, a second one formed at 1845 CST west-southwest of Hutchinson moving north-northeast. The tornado damaged several rural homes before striking with full force at Willowbrook. Thirteen homes were destroyed with 11 others having significant damage. The two tornadoes were responsible for destroying 23 homes, 96 farm buildings, 33 automobiles, and 6 tractors. Twelve homes were declared uninhabitable, and 23 others had lesser amounts of damage. Total damage from the two tornadoes was estimated between \$10 and \$20 million.

Republic County										
Munden	26	1855CST				0	0	3	0	Hail (0.75)
McPherson County										
1 SW Inman	26	1920CST	2.0	100		0	0	4	0	Tornado (F1)

A tornado touched down southwest of Inman and moved east across open county, knocking down eight power poles.

Kingman County										
1 NE Adams	26	1928CST	1.0	50		0	0	3	0	Tornado (F0)
McPherson County										
3 NE Roxbury	26	1950CST				0	0	3	0	Thunderstorm Winds (G52)
5 SE Roxbury	26	1950CST	1.0	10		0	0	3	0	Tornado (F0)

A small tornado touched down briefly, and produced some minor damage.

Sedgwick County										
10 S Cheney	26	1950CST	2.0	75		0	0	0	0	Tornado (F0)
Dickinson County										
1.75 N Elmo	26	2015CST				0	0	3	0	Wind Damage

Several farm buildings were damaged by thunderstorm winds.

Russell County										
Lake Wilson	26	2030CST				0	0	3	0	Hail (1.25)
Sumner County										
4 S South Haven	26	2113CST	16.0	100		0	0	5	0	Tornado (F2)
2 S Geuda Springs										

A tornado crossed the Oklahoma/Kansas border 4 miles south of South Haven and moved northeast to 2 miles south of Geuda Springs where it crossed into Cowley County (see report at 2130 CST). A double-wide mobile home was destroyed 3 miles southeast of South Haven, and several power poles and farm buildings were also destroyed.

Lincoln County										
Shady Rock	26	2125CST				0	0	3	0	Hail (0.75)
Cowley County										
1 S Hackney	26	2128CST				0	0	4	3	Hail (2.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

KANSAS Cont'd

Cowley County
 2 S Geuda Springs
 6 N Arkansas
 City 26 2145CST 7.0 100 0 0 5 0 Tornado (F2)
 A tornado crossed into Cowley County and destroyed several grain bins and farm buildings.

Russell County
 Lake Wilson 26 2145CST 0 0 4 0 Hail (3.00)
Cowley County
 5 WSW Eaton 26 2145CST 15.0 200 0 6 6 4 Tornado (F3)
 6 NE Cambridge

A tornado touched down 5 miles west-southwest of Eaton, which is 11 miles east of Winfield. It moved northeast and hit the town of Cambridge at 2200 CST where it destroyed 14 homes and injured six people and severely damaged 14 other homes. The roof of the school gym and senior citizen center sustained major damage, and the water tower was destroyed. Damage was estimated at \$1 million.

Ottawa County
 Delphos 26 2156CST 0 0 4 0 Hail (2.75)
 7 NW Minneapolis 26 2200CST 0 0 4 0 Hail (2.00)
Cloud County
 Miltonvale 26 2210CST 0 0 3 0 Hail (1.25)
 13 S Concordia 26 2212CST 0 0 4 0 Hail (2.50)
Kingman County
 St. Leo 26 2215CST 0 0 3 0 Thunderstorm Winds (G60)

A shed was completely destroyed and a barn damaged in St. Leo.

Cloud County
 Glasco 26 2228CST 0 0 3 0 Hail (0.75)
Ottawa County
 12 N Minneapolis 26 2228CST 0 0 4 0 Hail (3.00)
Pratt County
 6 S Pratt 26 2240CST 0 0 0 0 Hail (1.00)
Reno County
 Turon 26 2245CST 0 0 2 0 Hail (0.75)
Clay County
 10 W Clay Center 26 2247CST 0 0 4 0 Hail (1.50)
Elk County
 2 SW Fall River 26 2300CST 0 0 4 2 Hail (3.00)
KSZALL
 26 2300CST 0 3 6 6 High Winds (G80)
Entire State

High winds caused damage to homes across the state. Winds gusted over 80 mph in the southwest, and gusted to between 60 and 70 mph across the rest of the state. Three mobile homes were destroyed in Kingman County, roofs were torn off in the Dodge City and Garden City areas, and several cars and homes were damaged in the Fort Scott area. Total damage estimate from the high wind episode was \$1.5 million. The most common damage was snapped utility poles, trees blown over, and roof and window damage. One mobile home was destroyed in Dodge City, and another flipped over in Garden City. Winds subsided over eastern Kansas around 1600 CST on the 27th.

Marshall County
 Frankfort 26 2300CST 0 0 5 0 Hail (1.00)
Nemaha County
 Baileyville 26 2300CST 0 0 0 0 Hail (0.75)
Clay County
 Morganville 26 2304CST 0 0 4 0 Hail (1.75)
Greenwood County
 1 N Fall River 26 2305CST 0 0 4 2 Hail (3.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

KANSAS Cont'd

Riley County Randolph	26	2305CST			0	0	4	0	Hail (1.50)
Wilson County Coyville	26	2310CST			0	0	4	2	Hail (3.00)

Baseball-size hail fell in a 5-mile-wide swath in northeastern Elk, southeastern Greenwood, and southwestern Wilson Counties.

Wilson County Fredonia	26	2310CST			0	0	0	0	Thunderstorm Winds (G60)
Clay County 2 S Clifton	26	2315CST			0	0	0	0	Funnel Cloud
Washington County 4 E Palmer	26	2315CST			0	0	4	0	Hail (1.50)
Clifton	26	2318CST			0	0	3	0	Hail (0.75)
Woodson County Toronto Lake	26	2320CST			0	0	3	0	Hail (2.00)
Washington County Greenleaf	26	2327CST			0	0	3	0	Hail (0.75)
Reno County 5 W Pretty Prairie	26	2333CST			0	0	3	0	Hail (2.00)
Riley County Fort Riley	26	2335CST			0	0	0	0	Thunderstorm Winds (G64)
Washington County 11 SE Greenleaf	26	2340CST			0	0	4	0	Hail (1.50)

Severe thunderstorms developed in the late afternoon on March 26th producing mostly large hail and strong winds. The hail damaged homes and cars across much of north-central Kansas. The storms dissipated around midnight.

Woodson County Yates Center	26	2340CST			0	0	2	0	Thunderstorm Winds (G60)
Marshall County Frankfort	26	2340CST			0	0	4	0	Hail (1.50)
Allen County 1 W Humbolt 3 SE Iola	26	2345CST	8.0	100	0	1	6	7	Tornado (F2)

A tornado touched down on the western side of Humbolt and moved to the northeast, destroying 3 mobile homes, 7 permanent homes, and damaging 60 other homes. One person was slightly injured by glass. Total property damage was estimated at \$500,000.

Marion County 4 E Peabody 1 N Florence	26	2345CST	8.0	10	0	0	3	0	Hail (F0)
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A small tornado skipped along a 7-mile path damaging two homes.

McPherson County Canton	26	2350CST			0	0	3	0	Hail (0.75)
Canton	26	2350CST			0	0	3	0	Thunderstorm Winds (G52)
Allen County Iola	26	2350CST			0	0	2	0	Thunderstorm Winds (G60)
Reno County 2 S Haven	26	2350CST	1.0	50	0	0	2	0	Tornado (F0)
Nemaha County Baileyville	26	2350CST			0	0	4	0	Hail (1.50)
Centralia	26	2355CST			0	0	5	0	Hail (2.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

KANSAS Cont'd

Harvey County Burrton	27	0000CST			0	0	2	0	Hail (0.75)
Burrton	27	0000CST			0	0	2	0	Hail (0.75)
Marshall County Lillis	27	0001CST			0	0	0	0	Hail (1.50)
Allen County Mildred	27	0010CST			0	0	2	0	Thunderstorm Winds (G60)

Trees were blown down.

Harvey County Newton	27	0010CST			0	0	3	0	Thunderstorm Winds (G60)
Morris County Council Grove	27	0015CST			0	0	0	0	Hail (0.75)
White City	27	0015CST			0	0	5	0	Thunderstorm Winds (G70)

Strong thunderstorm winds destroyed a barn and silo southeast of White City.

Shawnee County Silver Lake	27	0018CST			0	0	4	0	Hail (1.00)
Brown County 3 E Sabetha	27	0025CST			0	0	0	0	Thunderstorm Winds (G62)
Shawnee County Dover	27	0025CST			0	0	4	0	Hail (1.00)
Waubausee County Harveyville	27	0025CST			0	0	0	0	Hail (1.00)
Chase County 2 N Cedar Point Elmdale	27	0030CST	11.0	50	0	0	4	2	Tornado (F1)

A small tornado skipped along an 11-mile path damaging a house 2 miles north of Cedar Point. At 0035 CST, the tornado destroyed a cabin 4 miles north of Clements. At 0045 CST, the tornado damaged two garages and a double-wide mobile home in Elmdale. Total damage was estimated at \$50,000.

Brown County Powhattan	27	0030CST			0	0	0	0	Hail (1.00)
Hiawatha	27	0035CST			0	0	4	0	Hail (1.50)
Waubausee County Eskridge	27	0035CST			0	0	4	0	Hail (1.00)
Lyon County Admire	27	0110CST			0	0	0	0	Hail (1.00)
Waubausee County 4 E Alma	27	0110CST			0	0	0	0	Hail (1.00)
Shawnee County 4 N Rossville	27	0115CST			0	0	0	0	Thunderstorm Winds (G65)
Osage County Osage City	27	0120CST			0	0	4	0	Hail (1.50)
Shawnee County 4 W Topeka	27	0135CST			0	0	4	0	Hail (1.50)
2 SW Topeka	27	0141CST			0	0	4	0	Hail (1.50)
Leavenworth County 8 W Leavenworth	27	0210CST			0	0	0	0	Hail (0.75)
Tonganoxie	27	0220CST			0	0	0	0	Hail (0.75)
Shawnee County 2 N Topeka	27	0230CST			0	0	0	0	Hail (1.00)
Douglas County Lecompton	27	0235CST			0	0	4	0	Hail (1.50)
Jefferson County Perry Lake	27	0255CST			0	0	4	0	Hail (1.50)
Valley Falls	27	0305CST			0	0	4	0	Hail (1.50)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

KANSAS Cont'd

Thunderstorms produced large damaging hail over northeastern Kansas. Lawrence, the most affected area sustained \$18 million in damage to cars and homes from baseball-size hail.

KENTUCKY

Breckinridge County	21	2010CST			0	0	0	0	Hail (0.75)
Union County	21	2135CST			0	0	0	0	Hail (0.75)
Green County									
Countywide	22	0110EST			0	0	0	0	Hail (0.75)
Greensburg	22	0121EST			0	0	0	0	Hail (1.25)
Casey County									
25 N Liberty	22	0212EST			0	0	0	0	Hail (1.00)
Webster County									
3 S Clay	22	0115CST			0	0	4	0	Thunderstorm Winds

Thunderstorm winds damaged a house and uprooted several trees.

Allen County									
Halifax	22	0330CST			0	0	2	0	Thunderstorm Winds

Strong thunderstorm winds downed trees in the Halifax area.

Carter, Boyd, and Greenup Counties	22	0815CST			0	0	5	1	Flash Flood
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Between 2 and 3 inches of rain fell in a short time, forcing many creeks and streams out of their banks. Many roads were covered with water and several homes were evacuated.

Hickman County									
Clinton	22	0925CST			0	0	0	0	Hail (1.00)
Graves County									
2 W Mayfield	22	0935CST			0	0	2	0	Hail (1.75)
Hickman County	22	0945CST			0	0	3	0	Thunderstorm Winds

Strong winds downed trees throughout the county.

Muhlenberg County	22	1020CST			0	0	3	0	Thunderstorm Winds
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Strong thunderstorm winds downed trees between Beechmont and Dunmoor.

Christian County									
5 W Hopkinsville	22	1020CST			0	0	0	0	Hail (0.75)
10 W Hopkinsville	22	1030CST			0	0	0	0	Hail (1.00)
Mannington	22	1038CST			0	0	0	0	Hail (0.75)
Union County									
3 N Uniontown	22	1133CST			0	0	2	0	Thunderstorm Winds

Thunderstorm winds uprooted large trees.

Henderson County									
Corydon	22	1152CST			0	0	0	0	Hail (0.75)
5 E Corydon	22	1208CST			0	0	3	0	Hail (3.00)
Henderson and Union Counties	22	1200CST- 1400CST			0	0	5	0	Flash Flood

Heavy thunderstorm rains flooded many highways and roads in the area. Considerable damage occurred at the Morganfield Wal-Mart Shopping Center when 4 feet of water filled the shopping center's parking lot. Several stores had water inside the stores as well. Waist deep water was also reported on many streets in Henderson.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

KENTUCKY Cont'd

Jefferson County	22	1510EST			0	0	2	0	Thunderstorm Winds Strong thunderstorm winds blew down several trees in Louisville.
Shelby County	22	1530EST			0	0	5	1	Thunderstorm Winds West of Bagdad, three barns and one machine shed were destroyed by strong thunderstorm winds. Near Shelbyville, several trees were blown down and some houses were damaged.
Jefferson and Oldham Counties	22	1540EST			0	0	4	0	Flash Flood From 1.50 to 2 inches of rain fell in 0.5 hour, flooding many roads in both counties. Several cars were stranded in the high water in downtown Louisville.
McLean and Daviess Counties	22	1700CST-1900CST			0	0	3	0	Flash Flood Thunderstorm rains flooded several roads within the city of Owensboro. Hicks Road, Pond Drain Road, and Beech Grove Road were also closed in McLean County.
Christian County Oak Grove	22	1730CST			0	0	4	0	Thunderstorm Winds Thunderstorm winds downed a few tree limbs which damaged a roof on a house.
Todd, Logan, and Warren Counties 6.5 SE Trenton to Auburn and Richardsville	22	1750CST-1840CST	25.0	400	1	12	6	3	Tornado (F2) The tornado first touched down about 6.5 miles southeast of Trenton and was on the ground for about 1.5 miles, destroying a mobile home and a barn. The tornado touched down again about 0.5 mile southwest of Allensville damaging at least 12 homes and uprooting many trees. The tornado touched down again near the small area of Licksillet where it destroyed several churches and uprooted many trees before destroying a truck and a mobile home. An 11-year-old boy in the mobile home was killed as it was thrown about 20 feet. This mobile home was originally tied down with steel straps. The tornado touched down again several more times, destroying some barns and damaging some houses. In addition, many trees were blown down and power lines were destroyed. The tornado finally lifted for the last time near Richardsville.
Bell County Bell, Harlan, and Letcher Counties	23	0025EST			0	0	0	0	Hail (0.75)
	23	0540EST			0	0	6	3	Flash Flood Nearly 3 inches of rain falling over a 3- or 4-hour period forced many streams and creeks out of their banks. In Middlesboro, the main street was flooded, forcing the evacuation of 8 to 10 homes and several businesses. In Letcher County, estimates of damage to building and roads exceeded \$100,000 and in Harlan County, damage estimates were near \$500,000.
Russell County	23	1430EST			0	0	5	0	Thunderstorm Winds Strong thunderstorms caused nearly \$100,000 in damages to a marina on Lake Cumberland when wind snapped cables and moved the entire dock 250 feet.
Harlan, Bell, Knox, and Whitley Counties	23	1440EST			0	0	3	0	Flood Heavy rains over southeastern Kentucky produced flooding on the Cumberland River. The river rose from 1 to 8 feet into flood.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Pendleton County	23	1440EST			0	0	2	0	Flood
									Heavy rain forced the Licking River at McKinneysburg 2 feet above the flood stage of 28 feet.
Butler County	24	0700CST			0	0	3	0	Flood
									High water forced the Green River at Woodbury and Rochester to rise slightly above the flood stage.
Nelson County	24	0900EST			0	0	2	0	Flood
									The Rolling Fork River at Boston rose to 36.3 feet, 1 foot above the flood stage.
Simpson County	27	1536CST			0	0	0	0	Hail (0.80)
Franklin									
Allen County	27	1610CST			0	0	3	0	Thunderstorm Winds
10 NW Scottsville									Thunderstorm winds uprooted several trees and damaged some barns.
Barren County	27	1620CST			0	0	6	0	Thunderstorm Winds
Glasgow									
Cave City									Thunderstorm winds downed trees and power lines, and damaged several homes and businesses.
Hart County	27	1623CST			0	1	6	0	Thunderstorm Winds
Horse Cave									
Rex									Thunderstorm winds destroyed seven mobile homes and damaged three others. The storm also left 31 other homes and 110 outbuildings damaged. One injury was reported as an occupant of a mobile home was thrown from the structure as it overturned.

LOUISIANA

Avoyelles Parish	01	0415CST			0	0	2	0	Thunderstorm Winds
Bunkie									
Concordia Parish	01	0600CST			0	0	4	0	Thunderstorm Winds
Ferriday									
Cameron Parish	01	0614CST			0	0	2	0	Thunderstorm Winds
Grand Cheniere									
Creole	01	0615CST			0	0	3	0	Thunderstorm Winds
Jefferson Davis Parish	01	0700CST			0	0	0	0	Hail (0.75)
Welsh									
Vermillion Parish	01	0700CST	0.5	75	0	1	4	0	Tornado (F1)
Kaplan									
St. Landry Parish	01	0710CST	1.0	150	0	1	4	0	Tornado (F1)
5 E Eunice									
Lafayette Parish	01	0730CST			0	0	4	0	Thunderstorm Winds
Lafayette									
Acadia Parish	01	0740CST			0	0	3	0	Thunderstorm Winds
Mire									
St. Martin Parish	01	0720CST			0	0	2	0	Thunderstorm Winds
St. Martinville									
West Feliciana Parish	01	0800CST			0	0	2	0	Thunderstorm Winds
5 NW St. Francisville									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

LOUISIANA Cont'd

West and East Baton Rouge Parishes									
Brusly Landing S Baton Rouge	01	0820CST	4.0	100	0	1	5	0	Tornado (F1)
East Feliciana Parish									
Clinton	01	0850CST			0	0	3	0	Thunderstorm Winds
Lafourche Parish									
3 SE Thibodaux	01	0900CST	1.0	50	0	1	4	0	Tornado (F1)
St. Helena Parish									
1 W Greensburg	01	0905CST			0	0	2	0	Thunderstorm Winds
Livingston Parish									
1 S Livingston	01	0915CST			0	0	2	0	Thunderstorm Winds
Tangipahoa Parish									
Hammond	01	0920CST			0	0	3	0	Thunderstorm Winds
St. James Parish									
Union	01	0930CST			0	0	0	0	Thunderstorm Winds (G61)
St. Charles Parish									
Boutte	01	1000CST			0	0	2	0	Thunderstorm Winds

Severe thunderstorms moved across the southern half of Louisiana during the morning hours. Tornadoes touched down in several locations causing considerable property damage, and a few injuries.

In Eunice, a weak tornado damaged four mobile homes and destroyed another, injuring the only occupant. Four other mobile homes were heavily damaged. A tornado touched down near Kaplan, caused minor injury to a man as the mobile home he was in was overturned and destroyed. Another tornado touched down for 0.25 mile in Brusly Landing causing roof damage to several homes and downing trees. The tornado then lifted and crossed the Mississippi River before touching down and cutting a damage path about 0.75 mile long in the southern portion of Baton Rouge, near Louisiana State University. Several trees and large tree limbs were blown down on the campus, and a few buildings also sustained damage to roofs and trim. A wind speed of 68 mph was measured on campus. One woman was seriously injured in Baton Rouge when the strong winds blew down a large oak tree which struck the woman. At the Baton Rouge Airport, two small airplanes were flipped over by the gusty winds; however, the strongest wind gust measured at the airport was only 36 mph. The last tornado of the morning touched down just to the southeast of Thibodaux causing roof damage to approximately 15 homes. The roof of a mobile home was also partially blown off, and the occupant suffered minor injuries. The remainder of damage in southern Louisiana was caused by straight line winds and was generally confined to downed trees, power lines, and minor roof damage.

Jefferson Parish									
Metairie	02	1850CST			0	0	2	0	Hail (1.25)
Orleans Parish									
Eastern New Orleans	02	1905CST			0	0	0	0	Hail (0.75)
Tangipahoa Parish									
Robert	02	1917CST			0	0	3	0	Thunderstorm Winds
St. Tammany Parish									
Folsom	02	1930CST			0	0	4	0	Thunderstorm Winds
5 NE Covington	02	1953CST			0	0	4	0	Thunderstorm Winds

A strong, low-pressure system developed over south-central Louisiana and moved across southeastern Louisiana during the late afternoon and evening causing a few severe thunderstorms to develop. Many locations in southeastern Louisiana reported pea- to marble-size hail, with a few occurrences of hail from 0.75-inch to 1.25-inches reported in the greater New Orleans area. A severe thunderstorm caused wind damage to trees, tree limbs, utility poles, and roofs of homes when it moved from southern Tangipahoa Parish across the northern portion of St. Tammany Parish.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

LOUISIANA Cont'd

Morehouse Parish 4 N Oak Ridge	22	1540CST			0	0	2	0	Hail (1.50)
West Carroll Parish 4 W Oak Grove	22	1605CST			0	0	0	0	Hail (0.88)
East Carroll Parish Gassoway	22	1630CST			0	0	0	0	Hail (0.88)

Thunderstorms over northeastern Louisiana produced hail ranging from approximately 1 inch to about 1.5 inches in a few locations.

Madison Parish Tendal	28	2115CST			0	0	0	0	Hail (1.00)
Tensas Parish St. Joseph	28	2120CST			0	0	3	0	Thunderstorm Winds
Franklin Parish Griffin	28	2120CST			0	0	3	0	Hail (1.00)
East Carroll Parish Transylvania	28	2130CST			0	0	3	0	Hail (1.75)
Tensas Parish Newellton	28	2150CST			0	0	3	0	Thunderstorm Winds
LaSalle Parish South Portion	28	2200CST			0	0	4	0	Thunderstorm Winds
Catahoula Parish 2 S Sicily Island	28	2210CST			0	0	4	0	Thunderstorm Winds
Tensas Parish Waterproof	28	2230CST			0	0	3	0	Thunderstorm Winds
Calcasieu Parish 2 E Lake Charles Airport (LCH)	29	0115CST			0	0	3	0	Thunderstorm Winds

Scattered severe thunderstorms developed over the eastern portion of Louisiana producing large hail and damaging wind gusts. Windows were blown out of a store at Newellton, and near Sicily Island a mobile home was heavily damaged and several trees were blown down. Thunderstorm winds gusts ripped the roof off a house and toppled several trees in the vicinity of Plaquemine. Just east of Lake Charles, an isolated severe thunderstorm produced wind gusts which pushed a mobile home off its foundation and downed trees. The remainder of wind damage reports were confined to downed trees and power lines in rural areas.

MAINE

MEZ001-005 Northern Maine	03	1000EST-			0	0	?	0	Heavy Snow
MEZ013-014 Southwestern Maine	03	1700EST-			0	0	?	0	High Winds
MEZ014 Southwestern Maine	04	0230EST			0	0	?	0	Coastal Surge
MEZ001-002-003 005-006-007 009-010-012 All But Coastal Maine	04	0100EST			0	0	?	0	Freezing Rain

On the 3rd of March, a cold front moved south through New England. A large Arctic high-pressure system moved east from the Great Lakes area through southeastern Canada. Meanwhile, a low-pressure system over Georgia was moving northeast. The Georgia low intensified and moved up the coast as cold air continued to flow into northern New England from the circulation around the Arctic high. By the time the precipitation arrived in northern New England, enough cold air was present in the lower levels of the atmosphere to produce a significant freezing rain and sleet event in central portions of the state, and heavy snow in the north.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MAINE Cont'd

High winds toppled trees and limbs onto power lines in southwestern Maine causing power outages in York, Kittery, and Eliot Counties affecting some 5,000 customers. A downed tree on Route 236 in Berwick caused traffic problems. An unusually high tide in conjunction with this storm knocked a house off its pilings and onto the beach at 7 Eastern Avenue in the Camp Ellis section of Saco. The house was valued at \$145,500 per tax records. The extent of this damage was not reported.

Moreover, this late winter storm forced the state government to advise 12,000 state employees to stay at home until noon because of ice on the roads. Therefore, for half of a day, the state government was shut down and some state courts were disrupted. Also, numerous schools were closed due to dangerous road conditions. Some of the schools closed on the 5th as well - school officials couldn't recall any school closures for 2 days in a row because of a winter storm since the big blizzard of 1969.

MEZ003-006-007 009-010-012 Central Maine	23	1500EST-							
	24	2200EST	0	0	?	0			Heavy Snow

On the 23rd an Arctic high pressure system moved east across southeastern Canada. Subsequently a low moved east to northern New England from the Great Lakes region. Those systems interacted with a low that moved from south-central Virginia on the 24th. It intensified as it moved northeast from Virginia to the Delmarva Peninsula and across the Gulf of Maine. Heavy snow resulted causing widespread school and business closures as well as numerous traffic accidents.

MARYLAND and D.C.

Washington County Clear Springs 6 N Clear Springs	04	0615EST-							
		0845EST	0	0	5	0			Thunderstorm Winds (G77)

Strong winds, accompanying possible thunderstorms with a cold front, destroyed part of a barn and killed a cow 7 miles north of Clear Spring. A SKYWARN spotter in Clear Spring reported sustained winds as high as 57 mph (51 knots) with a gust to 88 mph (77 knots) during a 2-hour period.

District of Columbia	23	0230EST	0	0	4	0			Lightning
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Lightning struck the U.S. Department of Agriculture's administration building causing a fire that damaged the attic and roof of the building.

MASSACHUSETTS

MAZALL	02	1000EST-							
		1400EST	0	0	4	0			High Winds

Strong southwesterly winds caused isolated property damage and scattered power outages. A peak wind gust to 58 mph was recorded at the National Weather Service office at Logan Airport in Boston, a gust to 46 mph was recorded at the National Weather Service office in Chatham, and 42 mph was recorded at the National Weather Service office in Worcester.

Norfolk County Weymouth	22	0955EST	0	0	4	0			Lightning
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A bolt of lightning struck a house and started a fire which burned through the second floor. A person sleeping in the room next to where the lightning struck likened the noise to "a bomb going off." No one was injured in this unusual cold air mass isolated thunderstorm.

Barnstable County Chatham	23	2320EST	0	0	3	0			Lightning
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

A bolt of lightning snaked some 50 feet through the yard into the basement of a house leaving a trench several inches deep in the basement. It split waste pipes and damaged several appliances.

MICHIGAN

MIZ046-048-050- 06 0800EST
 052-054-067-073- 07 0800EST
 076, Northern Lower Peninsula and Central Upper Peninsula

0 0 0 0 Heavy Snow

Heavy snow began falling over the western and central Upper Peninsula of Michigan by 0800 EST in the morning. By early afternoon, it had spread east to the central sections of the Upper Peninsula. The snow ended over the Upper Peninsula by late evening on the 6th. Over the Lower Peninsula, the precipitation began as rain during the early evening hours of the 6th, then changed to snow during the early evening hours of the 6th. The heaviest snow for the Lower Peninsula fell from around 2000 EST on the 6th, until around 0400 EST on the 7th. The snow ended completely by 0800 EST on the 7th. Snowfalls across the Upper Peninsula were mostly from 1 to 3 inches. However, the Keweenaw Peninsula had 4 inches, and Marquette County had the maximum for the Upper Peninsula, with a snowfall of 6 inches. Over the northern Lower Peninsula, snowfalls of 4 to 6 inches were common, but 6 to 10 inches fell from Gaylord to Boyne Falls.

Allegan County
 Otsego 21 2348EST 0 0 0 0 Hail (1.50)

Golf ball-size hail was observed at Otsego.

Barry County
 Olivet 22 0015EST 0 0 0 0 Hail (1.50)

Golf ball-size hail fell at Olivet.

Berrien County
 5 N Niles 22 2325EST 0 0 0 0 Hail (0.75)

Cass County
 Cassopolis 22 2330EST 0 0 0 0 Hail (0.75)

Saginaw County
 Tri City (MBS) 26 2357EST 0 0 0 0 Hail (0.75)

Berrien County
 Eau Claire 27 0345EST 0 0 0 0 Hail (0.75)

Calhoun County
 Albion 27 0435EST 0 0 0 0 Hail (1.75)

Albion 27 0535EST 0 0 0 0 Hail (1.75)

Grand Traverse
 2 W Traverse City 27 1715EST 0 0 0 0 Hail (0.75)

Cherry Capital Airport Tower personnel reported 0.75-inch hail. No damage was reported.

Muskegon County
 1 SE Duck Lake 27 1720EST 0 0 3 0 Thunderstorm Winds (G61)

A ham operator reported wind gusts to 61 knots.

Muskegon 27 1725EST 0 0 0 0 Thunderstorm Winds (G61)
 Muskegon 27 1746EST 0 0 0 0 Hail (0.75)

A storm spotter reported 0.75-inch hail at Pere Marquette Park. No damage was reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Benzie County Frankfort	27	1750EST			0	0	0	0	Thunderstorm Winds (G56)
Nawaygo County White Cloud	27	1755EST			0	0	0	0	Thunderstorm Winds

Numerous trees were reported down by the state police.

Benzie County Honor	27	1757EST			0	0	3	0	Thunderstorm Winds
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Many trees were blown down and a mobile home roof was blown off as strong winds blew through the area as the thunderstorms passed through.

Mecosta County Big Rapids	27	1800EST			0	0	2	0	Thunderstorm Winds
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Strong thunderstorm winds caused some tree limbs to fall on cars in the city of Big Rapids, resulting in mostly minor damage. Half-inch hail was also reported with this storm.

Big Rapids	27	1802EST- 1804EST	1.0	20	0	0	3	0	Tornado (F1)
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The tornado touched down in the northwestern side of Big Rapids. The tornado moved northeast through a ten block area, mostly damaging trees and power lines. The tornado went over the Baldwin High School gymnasium which was empty at the time. Damage was limited to the roof and the floor of the gymnasium, which was left with thousands of gallons of water on the floor. There was some damage to cars from falling tree branches.

Newaygo County Diamond Lake	27	1802EST- 1803EST	0.5	10	0	0	0	0	Tornado (F0)
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The tornado touched down briefly in an open field; no damage was reported.

Kent County Sparta	27	1808EST			0	0	0	0	Hail (0.75)
Sparta	27	1820EST			0	0	0	0	Hail (0.75)

Hail measuring 0.75 inch in diameter covered the ground; no damage was reported.

Oceola County 4 S Marion	27	1815EST- 1820EST	4.0	70	0	0	3	0	Tornado (F2)
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Many large trees were snapped near their base; some fell on nearby homes, causing considerable damage. There were many reports of broken glass, and some small sheds were torn apart. The steel of one shed was wrapped around a tree behind a home.

Berrien County Buchanan	27	1815EST			0	0	0	0	Hail (2.75)
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Egg- to baseball-size hail, with some to as big as 8.5 inches in circumference was reported, just north of Buchanan.

Wexford County Cadillac	27	1820EST			0	0	0	0	Hail (1.75)
Ottawa County Zeeland	27	1820EST			0	0	0	0	Thunderstorm Winds (G61)
Countywide	27	1820EST			0	0	3	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MICHIGAN Cont'd

Strong winds blew down large limbs in many areas and in some areas, power lines were also blown down.

**Clare County
Southwestern
Portion**

27 1830EST 0 0 3 0 **Thunderstorm Winds**

Strong straight-line thunderstorm winds downed many large pines and also, many power lines. As a result, most of the area lost power during the storm.

**Osceola County
1 N Reed City**

27 1830EST-
1834EST 2.0 40 0 0 2 0 **Tornado (F1)**

The county sheriff reported many trees down near the intersection of 7- Mile Road and U.S. Highway 131.

**Wexford County
Countywide**

27 1830EST 0 0 0 0 **Thunderstorm Winds**

Many large trees and power lines were blown down by strong winds as thunderstorms passed through the county.

**Berrien County
St. Joseph**

27 1830EST 0 0 4 0 **Hail (0.75)
Thunderstorm Winds (G63)**

Strong winds blew down many large limbs and some trees and many areas had power lines blown down. Some cars were damaged when trees, or tree branches, fell on them.

**Allegan County
Shelbyville**

27 1830EST 0 0 4 ? **Thunderstorm Winds**

Strong thunderstorm winds destroyed a large barn.

**Kent County
Sparta**

27 1830EST 0 0 3 0 **Thunderstorm Winds**

Strong thunderstorm winds blew down many trees and power lines. Some automobiles also sustained damage when tree branches fell on them.

Grand Rapids

27 1831EST 0 0 0 0 **Thunderstorm Winds (G52)**

Wind gusts up to 52 knots measured at Chennel 13 television in downtown Grand Rapids.

**Berrien County
Baroda
Bridgeman
St. Joseph**

27 1832EST 0 0 0 0 **Hail (0.75)**
27 1833EST 0 0 0 0 **Hail (0.75)**
27 1835EST 0 0 3 0 **Hail (1.75)
Thunderstorm Winds (G70)**

Strong thunderstorm winds blew down many trees, tree limbs, and power lines. Some homes sustained window damage from hail.

Barry County

27 1835EST-
1845EST 0 0 4 0 **Thunderstorm Winds (G60)**

Strong thunderstorm winds blew down many trees, and damaged many homes and other buildings.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Allegan County

Allegan	27	1837EST			0	0	0	0	Hail (0.75)
Allegan	27	1837EST			0	0	4	?	Thunderstorm Winds

Numerous trees were downed across the county. Also, a barn was blown down during the storm. The contents of the barn, mostly feed, were lost.

Calhoun County Battle Creek

27	1837EST			0	0	0	0	Thunderstorm Winds (G55)
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Kelloggs of Battle Creek measured a wind gust to 55 knots.

Berrien County Berrien Center Berrien Springs

27	1840EST			0	0	0	0	Hail (1.00)
27	1840EST			0	0	2	0	Hail (1.75)

Some windows were damaged by large hail.

Roscommon County	27	1840EST			0	0	5	?	Thunderstorm Winds
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Dangerously strong winds caused the entire county to lose many 40- to 60-foot pines; many falling on power lines. As a result, many parts of the county were without power for several days after the storm ended. There was considerable damage to buildings and signs. The signs along State Road M55 were damaged the most.

Cass County Dowagiac

27	1845EST			0	0	4	0	Hail (1.00) Thunderstorm Winds
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Trees were uprooted and buildings battered. Some damage was reported to cars and windows, mostly from hail.

Kent County Countywide

27	1850EST			0	0	4	0	Thunderstorm Winds
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Many trees were blown down in the city of Ada. A construction trailer was flipped over by very strong winds in Grand Rapids. Strong winds blew down many trees and power poles across Kent County.

Crawford County 2 E Grayling

27	1852EST			0	0	2	0	Thunderstorm Winds
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Vast tree damage was reported east of Grayling along State Road M72; resulting in the road being blocked for several hours.

Montcalm County 2 SW Greenville

27	1855EST			0	0	0	0	Hail (1.00)
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Berrien County 5 N Niles

27	1856EST			0	0	4	0	Thunderstorm Winds (G63)
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Numerous trees were downed. Minor damage was reported to some homes; television antennas and towers were blown down; and shingles were blown off some homes.

Manistee County Onkama

27	1857EST			0	0	4	0	Thunderstorm Winds
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Considerable damage was reported in many parts of the city, as very strong winds blew down many large trees. Some homes and businesses had considerable damage as large trees fell on them, causing some roofs to fall. A few cars were crushed by falling trees, many more had

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

extensive damage from falling debris. The roof of a school gymnasium collapsed during the storm.

Montcalm County
2 SE Greenville 27 1900EST 0 0 2 0 **Thunderstorm Winds**

Strong thunderstorm winds snapped a large tree off at its base.

Gladwin County 27 1900EST 0 0 3 0 **Thunderstorm Winds**

Many large pine trees were blown down by straight-line thunderstorm winds.

Missaukee County 27 1900EST 0 0 3 0 **Thunderstorm Winds**

Strong thunderstorm winds blew down trees and power lines and caused structural damage to some buildings.

Osceola County
Marion 27 1905EST-1906EST 1.0 10 0 0 2 0 **Tornado (F0)**

A brief touchdown near the city of Marion resulted in a few downed trees.

Barry County
Hastings 27 1908EST 0 0 0 ? **Thunderstorm Winds (G60)**

Osceola County
Reed City 27 1910EST 0 0 5 0 **Thunderstorm Winds**

The winds uprooted trees, shattered windows, and demolished buildings. Several cars were crushed or severely damaged by falling trees.

Kalamazoo County
5 W Kalamazoo 27 1910EST 0 0 0 0 **Hail (1.00)**

Van Buren County
4 SE Lawton 27 1915EST 0 0 4 0 **Hail (2.00)**

Large hail caused considerable damage to windows and many cars.

Ogemaw County
3 SW West Branch
1 W Selkirk 27 1915EST-1930EST 6.0 100 0 0 5 ? **Tornado (F2)**

The tornado track varied from 50- to 200-yards-wide and reached F2 intensity twice; once about one-third of the way along its path, near the intersection of State Roads M33 and M55, and again near the end of the track just west of the town of Selkirk. The tornado damaged many buildings, moved one home under construction 25 feet, destroyed several garages, blew down many trees, and several barns were damaged or collapsed. There were several reports of livestock killed, but the total number is not known. No serious injuries to people were reported, but several minor injuries from flying debris were reported. Damage is estimated around \$250,000. The tornado was estimated on the ground about 30% of the time.

Midland County
Hope 27 1915EST 0 0 3 0 **Thunderstorm Winds**

Several trees were blown down by strong thunderstorm winds. Some of the trees fell across a road, blocking it for several hours until road crews could move the trees out of the way.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Ogemaw, Isoco, and Alconac Counties

1 W Sage Lake 2 S Harrisville	27	1915EST- 2000EST	35.0	100	0	0	6	0	Torando (F3)
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The longest of the tornadoes touched down about 1 mile west of the Iosco-Ogemaw county line, then tracked northeast, crossing 3 miles north of Hale. It then continued northeast to 1 mile east of the Loud Dam, where shortly after that, it crossed the county line into Alconac near the Oscoda State Forest. From there, it continued northeast near the town of Mikado, finally dissipating near the Lake Huron shore, between the cities of Greenbush and Harrisville. The tornado was on the ground about 60% of the time. Most of the damage was near intersections of state roads, and around the town of Mikado. Several homes were destroyed and many trees and power lines were downed.

Kalamazoo County Kalamazoo

27	1920EST			0	0	4	0	Hail (2.00) Thunderstorm Winds (G64)
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Large winds and 2-inch-diameter hail was seen in many places around the city. This caused considerable damage to many cars the area.

Oscoda County 1 W Fairview

27	1920EST			0	0	3	0	Thunderstorm Winds
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Strong thunderstorm winds blew down several trees. A home was damage 1 mile west of Fairview when a tree fell on the home, after being blown down by the wind. Damage to the building was mostly to the roof. No one was reported injured in the incident.

Montcalm County Vestaburg

27	1920EST			0	0	2	0	Thunderstorm Winds
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A power pole was blown down by strong winds in the city of Vestaburg.

Ogemaw County

27	1920EST- 1940EST			0	0	4	0	Thunderstorm Winds
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A very strong thunderstorm caused considerable tree damage across the county. Two buildings were seriously damaged, one was 2 miles west of Fairview (38 miles southwest of Alpena), and the other was 5 miles north of Mio.

Ionia County 2 E Belding

27	1920EST			0	0	5	0	Thunderstorm Winds
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Straight-line winds blew down many large trees. Some of the trees fell onto homes, causing several homes to be destroyed. The strong winds also blew the roof off a mobile home.

Barry County Gun Lake

27	1925EST			0	0	3	0	Thunderstorm Winds
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Trees and power lines were blown down at Gun Lake.

Kalamazoo County Portage

27	1925EST			0	0	4	0	Hail (4.50)
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Soft ball-size hail did extensive damage to cars and windows. Many trees had extensive damage done to their leaves.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Arenac County Twining	27	1930EST				0	0	3	0	Thunderstorm Winds
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Power lines were blown down in the city of Twining.

Calhoun County Western and Central Portions	27	1930EST 2000EST				0	0	4	0	Thunderstorm Winds (G52)
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Several storm spotters reported very strong winds across the western and central part of Calhoun County. Considerable damage was done to homes and cars.

Ogemaw, Iosco, and Alcona Counties Trout Lake 5 E Glennie 3 SE Barton City	27	1920EST- 1950EST	20.0	100		0	0	6	?	Tornado (F3)
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This tornado was on the ground about 60 percent of its track. The track began near Trout Lake in extreme northeastern Ogemaw County, then extended northeast across the extreme northwestern corner of Iosco County. From there it was tracked into Alcona County, half a mile east of Glennie, which is where the heaviest damage occurred. After passing east of Glennie, it continued northeast to 3 miles southeast of Barton City, where it finally dissipated. Many homes were damaged or destroyed and many large trees were also destroyed. Many power lines came down during the storm, some due to the tornado, some fell because trees fell on them. The falling power lines cause several fires to result. Many cars or farm vehicles were crushed or otherwise destroyed too. The damage estimate is near \$500,000.

St. Joseph County Sturgis	27	1930EST				1	0	3	0	Thunderstorm Winds
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Thunderstorm winds blew a tractor-semitrailer off Interstate 69 resulting in one death, several fallen trees, and two damaged barns. The age and name of the man was not reported. (M?V)

Ogemaw County West Branch	27	1930EST				0	0	3	0	Thunderstorm Winds
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Trees were blown down, and homes and barns were damaged by very strong thunderstorm winds.

Eaton County Charlotte	27	1930EST				0	0	2	0	Thunderstorm Winds
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A tree fell through the roof of a home.

St. Joseph County Three Rivers	27	1935EST				0	0	0	0	Hail (0.75)
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Barry County Countywide	27	1938EST				0	0	2	0	Thunderstorm Winds
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Strong thunderstorm winds blew down many trees and power lines.

Hastings	27	1940EST				0	0	3	?	Thunderstorm Winds
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Strong thunderstorm winds blew down many trees and a barn.

Ottawa County Near Pine Creek	27	1945EST				0	0	0	0	Thunderstorm Winds (G52)
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Calhoun County Battle Creek	27	1945EST				0	0	3	0	Hail (2.75)
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Large hail did significant damage to windows and cars.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Marshall	27	1945EST			0	0	0	0	Hail (2.75)
Windows and cars sustained significant damage from large hail.									
Clinton County Lansing Airport	27	1945EST			0	0	0	0	Thunderstorm Winds (G52)
Capital City Airport reported wind gusts to 60 mph and pea-size hail.									
St. Joseph County Three Rivers	27	1948EST			0	0	0	0	Hail (1.00)
No damage was reported form this hail storm.									
1 S Centreville	27	1950EST			0	0	3	0	Thunderstorm Winds
A barn was blown down by strong thunderstorm winds.									
Ionia County Countywide	27	1950EST			0	0	4	0	Thunderstorm Winds
Very strong winds blew many trees and power lines down across the county.									
St. Joseph County 1 N Mendon	27	1950EST			0	0	3	?	Thunderstorm Winds
A silo was blown down by strong thunderstorm winds.									
Ingram County Southwestern Portion	27	1952EST			0	0	3	0	Thunderstorm Winds
Very strong winds caused many trees and power lines to fall. It took quite some time to repair the power lines, which resulted in massive power failure across the area for several hours.									
Shiawassee County Durand	27	1955EST			0	0	0	0	Thunderstorm Winds (G70)
Ingham County Leslie	27	2000EST- 2010EST	5.0	60	0	0	5	0	Tornado (F2)
This tornado touched down near the town of Leslie causing considerable damage to a barn, and the trailer parked near the barn. The roof of a home near the barn was also destroyed.									
Mason	27	2000EST- 2030EST			0	0	3	0	Thunderstorm Winds
A historic barn was destroyed by very strong winds.									
Calhoun County Ablion	27	2000EST			0	0	2	0	Hail (0.75)
Bay County Bay City	27	2000EST			0	0	2	0	Thunderstorm Winds
Windows were blown out of a building by strong thunderstorm winds.									
Saginaw County Saginaw	27	2000EST			0	0	3	0	Thunderstorm Winds
A window was blown was out of an Aeromet supply store and an Action Auto sign was blown down.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD				KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

**Calhoun County
Albion** 27 2000EST-2030EST 0 0 4 0 **Thunderstorm Winds**

Strong thunderstorm winds caused trees and power lines to come down near, and on the campus of Albion College. Many homes and other buildings were also seriously damaged.

**Calhoun County
Northeastern Portion** 27 2000EST-2010EST 2.0 400 0 18 5 0 **Tornado (F3)**

A tornado touched down 1 mile to the southwest of Lee Center in the northeast portion of Calhoun County. From there, it moved northeast to just north of Partello (2 miles northeast of Lee Center), where the tornado then lifted. The tornado caused considerable damage for the short time it was on the ground. It totally destroyed 4 mobile homes and 4 well-constructed houses, severely damaged other homes, injured 6 people enough to be hospitalized, and 12 others were injured less seriously. Total damage was estimated at \$483,000.

**Ingham County
Mason** 27 2000EST 0 0 4 0 **Thunderstorm Winds**

Very strong winds blew down trees and power lines. Some of the falling trees caused extensive damage to homes and stores, shattering some windows. Some damage to automobiles was reported also.

**Branch County
NW Coldwater** 27 2000EST 0 0 3 0 **Thunderstorm Winds (G52)**

Strong winds blew down a barn, caused some windows to be blown out, and many trees downed during the storm.

**Alpena County
Alpena** 27 2000EST 0 0 3 0 **Thunderstorm Winds**

Thunderstorm winds damaged homes and downtown businesses. A storage shed was lifted into the trees in the northern part of Alpena.

**Branch County
Coldwater** 27 2005EST 0 18 4 0 **Thunderstorm Winds**

Several houses and mobile homes were destroyed, windows were blown out of businesses, and a truck and car were blown off Interstate 69.

**Alcona County
Sturgeon Point** 27 2005EST 0 0 0 0 **Thunderstorm Winds (G52)**

**Tuscola County
Caro** 27 2012EST 0 0 2 0 **Thunderstorm Winds (G52)**

A radio station reported gusts to 59 mph which blew some shingles off.

**Jackson County
Scattered Areas** 27 2015EST 0 0 4 0 **Hail (2.75)**

Scattered locations across the county reported large hail resulting in significant damage to cars, windows, and trees.

**Northwestern and
North-Central
Portions** 27 2020EST 0 6 4 0 **Thunderstorm Winds (G61)**

Strong thunderstorm winds destroyed a mobile home near Tompkins, caused a home in Rives

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Junction to have considerable roof damage, and rolled over and demolished a mobile home near Rives Junction. Many trees were blown down during the storm, and many others were sheared off about 20 feet up their trunks or lost large limbs. The damage pattern indicated straight line winds were the cause.

**Genesee County
Flint** 27 2022EST 0 0 0 0 **Thunderstorm Winds (G59)**

The National Weather Service Office in Flint reported a wind gust to 69 mph.

**Shiawasee County
Durand** 27 2023EST 0 0 4 0 **Thunderstorm Winds (G70)**

As a gust front with winds clocked at 80 mph that caused considerable damage through the entire town. A roof was blown off a home in Durand, windows were blown out of store fronts downtown, a railroad gate was damaged, telephone lines and power lines were downed the hose and spotlight were blown off a fire truck, and many trees were blown down at intersection of Monroe and Duran Roads.

**Genesee County
Swartz Creek** 27 2028EST 0 0 0 0 **Thunderstorm Winds (G52)**

A storm spotter reported winds over 60 mph.

Huron County 27 2030EST 0 0 0 0 **Thunderstorm Winds**

Tree limbs were blown down by strong thunderstorm winds.

**Ingham County
5 S Webberville** 27 2028EST-
2035EST 3.0 30 0 0 0 0 **Tornado (F0)**

The tornado touched down occasionally along a 3-mile track that ended on the border of Ingham and Livingston Counties. Little significant damage was noted with this tornado.

Hillsdale County 27 2037EST-
2045EST 0 0 4 0 **Thunderstorm Winds (G63)**

Strong winds blew down several big trees causing some of the trees to fall on adjacent buildings producing considerable damage to them. Many utility poles were blown down during the storm leaving most of the county in the dark for several hours.

**Northeastern
Portion** 27 2037EST-
2045EST 5.0 400 0 0 7 0 **Tornado (F3)**

The tornado caused considerable damage to a mobile home park, destroyed several frame homes, lifted roofs off other building, and overturned many vehicles. Damage is estimated around \$10 million.

Washtenaw County 27 2045EST-
2105EST 0 0 7 0 **Thunderstorm Winds**

Many trees were uprooted and billboards were shattered, along with roof damage to buildings. Damage estimates are around \$10 million. There was considerable damage to homes in many parts of the county.

**Genesee County
Grand Blanc** 27 2049EST 0 0 2 0 **Thunderstorm Winds (G53)**

The siding from a building was blown off by 61-mph thunderstorm winds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Saginaw County Saginaw	27	2049EST			0	0	0	0	Thunderstorm Winds
Sanilac County Marlette	27	2100EST			0	0	3	0	Thunderstorm Winds

A shed was blown off its foundation into a mobile home.

Livingston County Howell	27	2100EST			0	0	3	0	Thunderstorm Winds
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Strong winds damaged trees; some automobiles had minor damage from tree branches.

Lenawee County	27	2100EST			0	0	0	0	Thunderstorm Winds (G52)
Oakland County Pontiac Airport	27	2100EST			0	0	0	0	Thunderstorm Winds (G65)
Washtenaw County Ypsilanti	27	2100EST			0	0	0	0	Thunderstorm Winds (G52)
Saline	27	2100EST			0	0	3	0	Thunderstorm Winds

The roof blown off a fire station by strong thunderstorm winds.

Ann Arbor	27	2107EST			0	0	7	0	Thunderstorm Winds (G59)
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Many trees and power lines were blown down causing considerable damage to homes and businesses. Damage estimates run between \$5 to \$10 million.

Manchester	27	2112EST			0	0	0	0	Hail (0.50)
Wayne County Willowrun Airport	27	2115EST			0	0	0	0	Thunderstorm Winds (G59)
Lapeer County Inlay City	27	2120EST			0	1	4	0	Thunderstorm Winds

A building under construction was blown down, and a high tension line was downed across Interstate 69, on top of tractor-semitrailer trapping the driver for 3 hours. The highway was closed for 3 hours as they cleared the road and freed the truck driver. Many trees were also downed.

Oakland County Novi-Wixom	27	2130EST			0	0	3	0	Thunderstorm Winds
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Many trees and lines were down, and some homes were damaged.

Monroe County Whiteford Center	27	2139EST- 2140EST	0.5	10	0	0	0	0	Tornado (F0)
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A Michigan State Trooper spotted the tornado near Temperance and Whiteford Center Road. The tornado lifted almost as soon as it touched the ground; little damage was reported.

Macomb County Mt. Clemens (MTC)	27	2141EST			0	0	0	0	Thunderstorm Winds (G51)
Monroe County Monroe	27	2145EST- 2146EST	0.5	10	0	0	0	0	Tornado (F0)

A second tornado was spotted briefly near the Monroe Auto Equipment Company off East Albain Road (2 miles south of Monroe). This tornado caused little damage because it was on the ground briefly.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MICHIGAN Cont'd

Oakland County Waterford	27	2145EST			0	0	4	0	Thunderstorm Winds
									Trees, power lines, and businesses were damaged by strong winds.
St. Clair County	27	2145EST- 2200EST			0	2	6	0	Thunderstorm Winds
									Very strong thunderstorm winds caused considerable damage to homes and businesses. At least 60 buildings were damaged or destroyed. More than 100,000 homes and businesses were still without power the next morning.
Monroe County Ida Monroe	27	2150EST- 2200EST			0	0	4	?	Hail (4.00)
									Very large hail, some as big as baseballs, pelted an area from Ida to Monroe. The hail scared many people, causing them to run for cover in their basements. The large jagged hail stones shattered many windows in a 10-mile-wide area from Ida to Monroe. A resident of Stony Point, northeast of Monroe, measured hail stones that were 4 inches in diameter.
Ida	27	2150EST			0	0	4	?	Thunderstorm Winds
									Strong thunderstorm winds blew down a barn west of Lewis Avenue near the town of Ida. The rather large barn was totally destroyed. In the barn was a tomato harvest and a flatbed wagon. The barn, the tomatoes, and the wagon were all lost.
St. Clair County Berville	27	2152EST			1	0	4	0	Thunderstorm Winds (G52)
									Very strong winds, estimated at over 60 mph, blew a mobile home off its foundation. The resident was trapped inside, but in spite of rescue efforts the man died of a heart attack before he could be saved. (M71M)
Wayne County Detroit City Airport St. Clair County Emmet	27	2152EST			0	0	0	0	Thunderstorm Winds (G50)
	27	2153EST- 2220EST	10.0	150	0	0	4	0	Tornado (F1)
									The tornado touched down near the city of Emmet, then moved northeast toward Rudy where it dissipated. Damage was mostly to glass windows, trees were downed, and a few barns were destroyed. Of course, the tornado pulled down power lines and caused most of the county to lose power.
Capac	27	2157EST			0	0	0	0	Thunderstorm Winds
									Very strong thunderstorm winds did considerable damage to homes, cars, stores, trees, and power lines.
Ruby	27	2200EST			1	0	2	0	Thunderstorm Winds
									A man died from a massive heart attack while trying to flee his mobile home that was being rocked by strong thunderstorm winds. The man and his age were not identified. (M??M)
Macomb County 2 N Chesterfield	27	2204EST			0	0	2	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Strong thunderstorm winds caused many trees to be blown down. Some windows were shattered, and some cars were damaged from tree limbs denting them.

Arenac County
3 NW Twining

27 2230EST 0 0 5 0 Thunderstorm Winds

One mobile home was completely destroyed. A 1-mile-wide line of mobile homes were blown off their bases, and large trees were damaged.

Midland County
Midland

28 0000EST-
29 2400EST 0 0 2 0 Flood

Heavy rain from the thunderstorms on the 27th and the 28th caused the Tittabawassee River in Midland, to crest 0.5 foot above its flood stage of 24 feet during the 29th. By late in the evening of the 29th, the river had subsided below flood stage. The heavy rain caused flooded streets and basements, and also blocked sewer lines. Actual damage was small.

Genesee County
Davison

28 0000EST-
2400EST 0 0 0 0 Flood

Heavy rain from the thunderstorms on the 27th and the 28th caused the Kearly Creek to rise above flood stage early on the morning of the 28th. It reached a peak level of 8.13 feet, 0.13 feet above flood stage during the day of the 28th, then fell below flood stage by the late evening. Only inconvenience flooding of low areas was reported with no damage noted.

Isabella County
Mt. Pleasant

29 0000EST-
2400EST 0 0 0 0 Flood

Heavy rain from the thunderstorms on the 27th and the 28th caused the Chippewa River to rise to 8.01 feet during the 29th. The flood stage is 8 feet. By late evening, the river was back below flood stage with no damage reported.

Tuscola County
Vassar

29 0000EST-
2400EST 0 0 0 0 Flood

Heavy rain from the thunderstorms on the 27th and the 28th caused the Cass River to briefly go above its flood stage of 14 feet. The Cass River rose to 14.2 feet during the 29th, then fell below its flood stage by midnight. No significant damage was noted.

All totaled, the combination of 15 tornadoes, large hail, and very strong thunderstorm winds caused either severe damage or destruction of many stores, homes, barns, and a few school gymnasiums. Many cars and a few tractors and trucks were severely damaged or destroyed; a large number of trees, some 80-foot tall were lost; power was lost to 450,000 customers during the storms, some of them had to wait almost a week to get their power restored. Insurance company damage claims were expected to reach between \$20 and \$40 million for that stormy Wednesday night of March 27th, 1991.

MINNESOTA

MNZ003-005-008-009, North-Central, Northeast Minnesota

05 0400CST 0 0 ? 0 Ice Storm

Freezing rain moved into the northwestern corner during the early morning and moved slowly into the northeast by afternoon. Roads and sidewalks were glazed with up to 0.50 inch of ice causing numerous minor traffic accidents. Highway 169 between Marble and Nashwauk was closed for a time during the afternoon, and a number of schools were closed early because of the icy road conditions.

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MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSS	

MINNESOTA Cont'd

MNZ015-018 05 1700CST-
Southern Minnesota 06 0400CST 0 0 ? 0 **Heavy Snow
Ice**

A mixture of precipitation fell over southern sections of Minnesota during the evening of the 5th, before a cold front swept through changing it all to snow. By early morning on the 6th, a narrow band of snow in the 3- to 7-inch range fell from near Redwood Falls and across the Twin Cities metropolitan area. The slushy accumulation froze on area roadways by morning rush hour causing hundreds of traffic accidents.

MNZ017-019 12 0200CST-
Southern Minnesota 13 0400CST 0 0 ? 0 **Heavy Snow**

An intense storm moved slowly from north-central Kansas into Illinois during the early morning of the 12th, to late morning on the 13th. A mixture of precipitation in the form of freezing rain and sleet began across southern sections of Minnesota during the early morning and gradually turned to heavy, wet snow by midday.

Northwestern winds increased across the region during the afternoon as the storm intensified and moved northeast. The combination of winds gusting to 30 mph and heavy snow caused near blizzard conditions. Interstate 90 from Worthington to Albert Lea was closed from the evening of the 12th to about 0800 CST on the 13th. Forty to fifty cars were stranded along this stretch of highway and the National Guard opened its armory in Fairmont to accommodate the stranded motorists. Snow drifts to 4 feet occurred in southwestern Minnesota and a large number of schools and public events were canceled.

Snowfall, in excess of 6 inches, occurred from the Minnesota/Iowa border at Bricelyn to Mankato-Springfield to near Lakefield in southwestern Minnesota. A 35-mile-wide area of snow of 8 inches or more fell from Blue Earth to Comfrey to Jackson. A 15-mile-wide swath of snow of 10 inches or more accumulated from Fairmont to Windom with Fairmont reporting 11 inches.

Faribault County
Bricelyn
Wells

20 1620CST-
1640CST 15.0 300 0 0 5 ? **Tornado (F1)**

A tornado touched down approximately 3 miles south of Bricelyn (1620 CST) causing, in excess of, \$200,000 damage to one farmstead. The tornado damaged or destroyed four grain bins, a machine shed, corn dryer, three tractors, two combines, and the family car. Two other sites; one near the aforementioned site, the other several miles south-southeast, sustained major damage. A chimney was blown off a home, and the top was blown from a silo. Several livestock buildings were destroyed and trees were uprooted and reported as twisted and stripped of limbs.

The tornado apparently skipped across open fields 15 miles to the northeast to Wells (1640 CST). The tornado traveled across the town breaking windows of homes and downing power lines. Four tractor-semi trailers were overturned.

Waseca County
Janesville

20 1845CST 0 0 ? 0 **Lightning**

A lightning strike disabled the NOAA Weather Radio transmitter.

**MNZ003-005-
007-015-017**
Northeast, Central,
and Southwestern
Minnesota

22 1400CST-
23 2100CST 0 0 ? ? **Ice Storm
Heavy Snow**

The biggest storm of the Minnesota 1990-1991 winter season blasted the state with a combination of ice and heavy snow. The storm traveled from Kansas, across Iowa and western Wisconsin into the Great Lakes from early morning of the 22nd to late in the day on the 23rd.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

An intense ice storm, the worst to affect the Duluth area in 25 years, began in the afternoon on the 22nd across northeastern Minnesota and lasted until early afternoon on the 23rd before changing to heavy, wet snow.

Freezing rain, accompanied at times with thunder, coated the city of Duluth with as much as 6 inches of ice. The 850-foot WDIO television tower was toppled at 0130 CST as winds gusted to 40 mph buffeting the heavily ice-covered tower. The tower fell onto a nearby utility line which provided power to the remainder of Duluth's television stations, and all but one AM radio station. Telephone and power lines snapped leaving Duluth and many northeastern Minnesota communities without utility services for up to 24 hours. The Department of Natural Resources reported that approximately four million pine trees were damaged or destroyed due to the combination of wind and ice.

Heavy snow began across central and southwestern sections before midnight on the 22nd and continued until late evening on the 23rd. Accumulations of nearly 1.5 feet paralyzed a small area of west-central Minnesota. Strong northwesterly winds gusted to 35 mph causing near whiteout conditions at times. Treacherous travel conditions canceled a wide variety of weekend community events.

The northern boundary of snow, in excess of 6 inches, fell from near Moorhead in west-central Minnesota, to Grand Marais on the northern shore of Lake Superior. The southern boundary was located from near Sherburne and Lakefield in the southwest, to near St. Cloud and north of Duluth at Beaver Bay in northeastern Minnesota. A 50-mile-wide area of snow of 8 inches or more fell from near Morris to Lakefield. An area of snow in excess of 15 inches blanketed a 20-mile radius which was centered near Montevideo in west-central Minnesota. Fifteen inches was reported to have fallen at both Clarkfield and Granite Falls. In Montevideo, 16.5 inches of snow fell and 17.0 inches fell in Watson.

**MNZ016-018
East Central-
Southwest Minnesota**

27	Early Morning- Afternoon	0	0	?	0	Heavy Snow Ice
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Freezing rain and sleet coated area roads during the early morning before changing to heavy, wet snow which at times was accompanied with thunder. Four to six inches of snow fell in the Fairmont-Jackson areas, around 4 inches through the Mankato vicinity. Up to 3 inches fell across the southern suburbs of the Twin Cities from near Farmington and Rosemont.

**Polk County
Crookston**

30	1703CST	0	0	?	0	Thunderstorm Winds
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Thunderstorm winds blew the roof from a pole barn.

MISSISSIPPI

**Adams County
Sibley**

01	0845CST	0	0	3	0	Thunderstorm Winds
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Strong winds blew a small utility building into a tree.

**Pike County
2 E Magnolia**

01	0915CST	0	0	4	0	Thunderstorm Winds
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Several trees were blown down and a 70-foot by 35-foot building was totally destroyed.

**Lincoln County
Brookhaven**

01	0945CST	0	0	3	0	Thunderstorm Winds (G40)
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High winds blew a hangar door off one of the buildings at the Brookhaven Airport where a 40-knot gust was recorded. Several trees were blown down in the southwestern portion of Brookhaven.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MISSISSIPPI Cont'd

Simpson County Martinville	01	1035CST			0	0	3	0	Thunderstorm Winds
Thunderstorm winds damaged the roof of one house.									
Wayne County State Line	01	1130CST			0	0	4	0	Thunderstorm Winds
A mobile home was completely destroyed, several trees were blown down, and one of the trees fell on a house.									
Hinds County 5 SW Jackson	02	1515CST			0	0	3	0	Thunderstorm Winds
A shed was destroyed by strong winds.									
Winston County Louisville	02	1616CST			0	0	0	0	Hail (0.75)
Neshoba County 2 N Philadelphia	02	1620CST			0	0	0	0	Hail (0.75)
Lincoln County Brookhaven	02	2020CST			0	0	4	0	Thunderstorm Winds
A roof was blown off a mobile home, a shed was destroyed, and several large trees were blown down.									
Lawrence County Monticello	02	2045CST			0	0	4	0	Thunderstorm Winds
The roof of a barn was blown off and several trees were blown down. Marble-size hail was also reported.									
Hinds County Byrum	22	0845CST			0	1	2	0	High Winds
Gradient wind blew down a sign that struck a man and critically injured him.									
Coahoma County Clarksdale	22	1500CST			0	0	4	0	Thunderstorm Winds
Strong winds blew the roof of a house off and caused minor damage to several other houses.									
Quitman County Sledge	22	1515CST			0	0	4	0	Thunderstorm Winds
Thunderstorm wind damaged a barn and blew down several power lines.									
Washington County Swiftwater	22	1542CST			0	0	0	0	Hail (1.75)
Greenville	22	1545CST			0	0	0	0	Hail (2.00)
Bolivar County Choctaw	22	1555CST			0	0	0	0	Hail (1.75)
Benton and Tippah Counties	22	1600CST- 1700CST	23.0	500	0	3	5	0	Tornado (F3)

The tornado first touched down 7 miles south of Ashland in Benton County at 1600 CST. It destroyed a barn and uprooted several trees. The tornado moved northeast causing major roof damage to a metal barn and minor roof damage to two homes along Highway 4. The tornado then moved through a national forest causing extensive tree damage. The tornado crossed Highway 370, 1 mile inside Benton County, destroying one mobile home plus several other

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MISSISSIPPI Cont'd

outbuildings, and caused major damage to several more mobile homes and minor damage to several houses. The tornado moved into Tippah County at a point 5 miles northwest of Falkner. At this point two homes received minor roof damage. Six miles north-northwest of Falkner ten homes had minor damage, two mobile homes had major damage, and several outbuildings were destroyed. From 2 miles west to 2 miles northwest of Walnut, one home was pushed off the foundation, two homes had major damage, and three mobile homes were destroyed. One mile southwest of Brownsfield, two mobile homes were destroyed, two cars destroyed, and one home with major damage. Two people were injured in one of the mobile homes. The tornado crossed the Mississippi border into Tennessee along Highway 15 at Brownsfield. In Brownsfield, one person was injured when the tornado blew a tractor-semitrailer off the road. The tornado caused widespread damage to homes and vehicles in Brownsfield. This is the same tornado that moved into Tennessee and struck the town of Selmer.

Bolivar County 1 SE Shaw	22	1605EST			0	0	0	0	Hail (1.75)
Sunflower County 5 N Fairview	22	1610CST			0	0	0	0	Hail (1.75)
5 E Ruleville	22	1620CST			0	0	5	0	Thunderstorm Winds

Strong winds from a thunderstorm damaged two shop doors, overturned a cotton trailer, damaged a satellite dish and television tower, and did slight damage to a roof of a house. Strong winds also blew down several trees and a 100-foot water tower.

Tallahatchie County 10 S Charleston	22	1703CST			0	0	0	0	Hail (0.85)
LeFlore County Minter City	22	1804CST			0	0	3	0	Thunderstorm Winds

The roof of a store was blown off.

Alcorn County Rienzi	22	1724CST			0	0	0	0	Thunderstorm Winds
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Several trees were blown down.

Yalubusha County Water Valley	22	1745CST			0	0	3	0	Thunderstorm Winds
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Several trees and power lines were blown down.

Lafayette County	22	1745CST			0	0	2	0	Thunderstorm Winds
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Several trees and power lines were blown down in the eastern part of the county.

Union County 2 NW New Albany	22	1755CST			0	0	0	0	Hail (0.75)
Prentiss County 4 W Booneville	22	1800CST			0	0	2	0	Thunderstorm Winds

Two power poles were blown over.

Pontotoc County Thaxton	22	1802CST			0	0	2	0	Thunderstorm Winds
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Several trees and power lines were blown down.

Prentiss County 2 E Booneville	22	1830CST			0	0	0	0	Hail (0.75)
Calhoun County	22	1830CST			0	0	0	0	Hail (0.75)

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MISSISSIPPI Cont'd

From Bruce to Pittsboro to Calhoun City, numerous reports of hail up to 0.75 inch were received.

Leflore County
Itta Bena 22 1830CST 0 0 3 0 Thunderstorm Winds (G52)

Sixty-mph thunderstorm winds blew a large door off a repair shop.

Lee County
Baldwyn 22 1830CST 0 0 0 0 Hail (0.85)
Alcorn County 22 1845CST 0 0 0 0 Thunderstorm Winds

Three large pine trees were blown down.

Grenada County
12 E Grenada 22 1845CST 0 0 2 0 Thunderstorm Winds

Several trees were blown down between Gore Springs and Grenada Lake. One tree across Graceport road was hit by a truck.

Pontotoc County
Troy 22 1850CST 0 0 2 0 Thunderstorm Winds

Three power poles were downed due to falling trees.

Chickasaw County 22 1900CST 0 0 3 0 Thunderstorm Winds

Numerous trees and power lines were blown down in the northwestern portion of the county.

Grenada County
4 E Grenada 22 1900CST 0 0 2 0 Thunderstorm Winds

Three trees were blown down along Highway 8 East.

Tishomingo County
Tishomingo 22 1908CST 0 0 0 0 Hail (1.00)

Lee County
Tupelo 22 1923CST 0 0 0 0 Hail (0.75)

Itawamba County
Mantachie 22 1925CST 0 0 0 0 Hail (1.00)

Lee County
Verona 22 1930CST 0 0 2 0 Thunderstorm Winds

Several power lines were blown down by straight line winds.

De Soto County
Lakeview 27 1300CST 0 0 0 0 Thunderstorm Winds

Several trees were blown down in Lakeview.

Sunflower County
Parchman 27 1730CST 0 0 0 0 Hail (0.80)

Rankin County
3 SE Brandon 28 1548CST 0 0 0 0 Hail (0.80)

Clarke County
5 SW Quitman 28 1555CST 0 0 0 0 Hail (0.75)

Hinds County
Utica 28 1625CST 0 0 0 0 Hail (0.80)

3 W Jackson 28 1714CST 0 0 0 0 Hail (0.75)

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MISSISSIPPI Cont'd

Rankin Whitfield	28	1731CST			0	0	0	0	Hail (1.75)
Lauderdale County 3 W Meridian	28	1735CST	1.0	30	0	0	0	0	Tornado (F0)
A very weak tornado touched down briefly and then lifted without causing any damage.									
Winston County Louisville	28	1910CST			0	0	0	0	Hail (0.75)
Claiborne County Lorman	28	2300CST			0	2	4	0	Thunderstorm Winds
Two women were injured when strong thunderstorm winds overturned their mobile home.									
Hermanville	28	2338CST			0	0	0	0	Thunderstorm Winds
Several trees were blown down along Highway 18.									
Hinds County Byrum	29	0010CST			0	0	4	0	Thunderstorm Winds
Approximately 25 trees were blown down and 10 houses were damaged.									
Byrum	29	0010CST			0	0	0	0	Hail (0.80)
3 S Jackson	29	0015CST			0	0	0	0	Hail (0.80)
Rankin County Florence	29	0015CST			0	0	3	0	Thunderstorm Winds (G56)
Several trees were blown and several houses had minor roof damage.									
Florence	29	0015CST			0	0	0	0	Hail (1.00)
Florence	29	0030CST			0	0	5	0	Thunderstorm Winds
Numerous trees were blown down. Some of the trees fell onto houses. Two houses had major damage.									
2 E Brandon	29	0035CST			0	0	0	0	Hail (0.75)
5 S Brandon	29	0100CST			0	0	4	0	Thunderstorm Winds
Numerous trees were blown down in the Robinhood Lake area. Several houses and buildings had minor roof damage and one shed was completely destroyed.									
Pelahatchie	29	0120CST			0	0	4	0	Thunderstorm Winds
One mile east of Pelahatchie, a tin roof was blown off a grocery store, causing damage to a car and a house. Two miles east another tin roof was blown off a building. Trees were blown down all over the city blocking streets. Numerous power lines were blown down. Three miles northeast numerous trees were blown down.									
Scott County 4 N Forest	29	0135CST			0	0	0	0	Thunderstorm Winds
Two trees were blown down on Highway 35.									
Newton County Union	29	0155CST			0	0	0	0	Thunderstorm Winds
Several trees were blown down and several power outages were reported.									

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MISSISSIPPI Cont'd

Neshoba County 10 SE Philadelphia	29	0200CST			0	0	0	0	Hail (0.75)
Newton County 20 NE Newton	29	0230CST			0	0	0	0	Thunderstorm Winds
Several trees were blown down.									
Kemper County 12 NW De Kalb	29	0230CST			0	0	0	0	Thunderstorm Winds Hail (1.75)
Several trees were reported blown down and golf ball-size hail was reported.									
Rankin County	29	0230CST- 0430CST			0	0	0	0	Flash Flood
Many roads in Southern Rankin County were flooded by heavy rains.									
Hinds County	29	0230CST- 0430CST			0	0	4	0	Flash Flood
Over 3 inches of rain fell over the county from Jackson southward. Many reports of water running over roads and water getting into a few houses just south of Jackson.									
Newton County	29	0400CST- 0630CST			0	0	0	0	Flood
Flooding was reported all across the county. Many roads and low-lying areas were flooded. In Decatur, some of the streets had 2 to 3 inches of water running across them.									
Lee and Monroe Counties	29	0630CST- 2330CST			0	0	0	0	Flood
Over 2.50 inches of rain fell over Lee and Monroe Counties which caused Town Creek to exceed its flood stage of 21.0 feet. At its crest, the creek reached a level of 22.31 feet.									

MISSOURI

Saline County Glasgow Bottoms	12	1235CST	0.2	50	0	0	4	0	Tornado (F0)
A tornado that damaged a farm silo was reported by the public.									
Howard County Armstrong	12	1240CST			0	0	0	0	Funnel Cloud
A funnel cloud was reported by a Howard County Sheriff's Deputy.									
Chariton County Keytesville	12	1240CST			0	0	0	0	Thunderstorm Winds (G52)
A spotter reported a thunderstorm with wind gusts to 60 mph.									
Boone County McBaine	12	1248CST			0	0	0	0	Thunderstorm Winds (G52)
Columbia	12	1300CST			0	0	0	0	Thunderstorm Winds (G50)
Thunderstorms produced wind gusts to 60 mph at McBaine at 1248 CST, and gusts to 58 mph at Columbia at 1300 CST.									

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MISSOURI Cont'd

10 SE Columbia	12	1515CST			0	0	0	0	Hail (1.00)
A National Weather Service employee reported 1-inch-diameter hail, 1 mile northwest of COU airport.									
Pike County	12	1726CST			0	0	0	0	Funnel Cloud
8 SW Eolia	12	1732CST	0.3	50	0	0	0	0	Tornado (F0)
2 S Louisiana	12	1732CST			0	0	0	0	
A tornado was reported by ham radio spotters, but no damage was reported.									
Lincoln County	12	1800CST			0	0	0	0	Thunderstorm Winds (G52)
Troy	12	1800CST			0	0	0	0	
A thunderstorm produced wind gusts between 50 and 60 mph.									
Franklin County	12	1805CST			0	0	0	0	Hail (0.75)
6 W Washington	12	1805CST			0	0	0	0	
Hail to 0.75-inch in diameter was reported.									
St. Charles County	12	1807CST			0	0	0	0	Hail (0.75)
Wentzville	12	1807CST			0	0	0	0	
Hail to 0.75-inch in diameter was reported.									
Franklin County	12	1818CST			0	0	0	0	Hail (1.00)
Union	12	1818CST			0	0	0	0	
Hail to 1-inch in diameter was reported.									
St. Charles County	12	1855CST			0	0	0	0	Hail (1.75)
Weldon Spring	12	1855CST			0	0	0	0	
Golf ball-size hail fell at Weldon Spring.									
St. Louis County	12	1915CST			0	0	4	0	Thunderstorm Winds (G52)
Southern Portion	12	1915CST			0	0	4	0	
A thunderstorm produced wind gusts between 50 and 60 mph across southern St. Louis County, with minor roof damage and a van was blown off the road.									
Callaway County	17	1150CST			0	0	0	0	Hail (1.75)
Kingdom City	17	1150CST			0	0	0	0	
Golf ball-size hail was reported at Gaspers Truck Plaza.									
Montgomery County	17	1320CST			0	0	0	0	Hail (0.75)
Montgomery City	17	1320CST			0	0	0	0	
Hail to 0.75-inch in diameter was reported.									
Montgomery County	17	1347CST			0	0	0	0	Hail (0.75)
High Hill	17	1347CST			0	0	3	0	Thunderstorm Winds
High Hill	17	1347CST			0	0	3	0	
Thunderstorms produced 0.75-inch-diameter hail and knocked down power lines at High Hill.									

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MISSOURI Cont'd

Lincoln County Troy	17	1430CST			0	0	0	?	Hail (1.00)
One-inch-diameter hail fell just southwest of Troy with no reported damage.									
Franklin County Washington	17	1500CST			0	0	5	0	Thunderstorm Winds
Troop C, of the Missouri Highway Patrol, reported several trees were knocked down, and many reports of structural damage to brick buildings.									
St. Louis County Babler State Park	17	1520CST			0	0	0	0	Thunderstorm Winds G52)
Wind gusts to 60 mph were reported 20 miles west of St. Louis by the Missouri Highway Patrol.									
Taney County Forsyth Northern	21	1315CST			0	0	0	0	Hail (1.50)
Hail up to 1.50-inch in diameter fell just north of Forsyth.									
Christian County Garrison	21	1330CST			0	0	0	0	Hail (1.00)
Hail up to 1-inch in diameter was reported.									
Barry County Cassville	21	1355CST			0	0	0	0	Hail (1.00)
One-inch-diameter hail was reported by Ranger Station.									
Douglas County Dogwood	21	1400CST			0	0	0	0	Hail (1.00)
Hail to 1-inch in diameter was reported.									
Howell County Willow Springs	21	1415CST			0	0	0	0	Hail (0.75)
Hail to 0.75-inch diameter was reported.									
Texas County Cabool	21	1416CST			0	0	0	0	Hail (0.75)
Howell County Willow Springs	21	1418CST			0	0	0	0	Hail (1.50)
Mountain View	21	1436CST			0	0	0	0	Funnel Cloud
Hail to 1.5-inch in diameter was reported at 1418 CST. Troop G of the Missouri Highway Patrol reported a funnel cloud just southwest of Mountain View at 1436 CST.									
Washington County Potosi	21	1450CST			0	0	0	0	Hail (1.00)
Hail to 1-inch diameter was reported by the Washington County Sheriff's Office.									
St. Louis County Eureka	21	1503CST			0	0	0	0	Hail (1.75)
Chesterfield	21	1512CST			0	0	0	0	Hail (0.75)
Chesterfield	21	1515CST			0	0	0	0	Hail (1.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MISSOURI Cont'd

Hail was reported by St. Louis County Ham Radio spotters.

Jasper County Carthage	21	1518CST			0	0	0	0	Hail (1.00)
Jasper City	21	1530CST			0	0	0	0	Hail (1.50)
St. Louis County City of St. Louis	21	1521CST			0	0	0	0	Hail (0.75)

Hail up to 0.75-inch in diameter was reported at the intersection of Page and Woodson by county ham radio spotters.

Shannon County 7 W Alley Springs	21	1530CST			0	0	0	0	Hail (0.75)
Dade County Lockwood	21	1537CST			0	0	4	0	Hail (0.75)

Approximately 200 windows were broken out of a large greenhouse.

Jasper County NE Carthage	21	1615CST			0	0	0	0	Hail (0.75)
Polk County Bolivar	21	1640CST			0	0	0	0	Hail (0.75)
Bollinger County Marble Hill	21	1647CST			0	0	0	0	Hail (1.00)

It was reported by the Cape Girardeau Department of Emergency Services that hail covered the ground.

Vernon County 15 NE Nevada	21	1700CST			0	0	0	0	Hail (1.00)
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Hail to 1.00-inch in diameter was reported in Vernon County.

Dallas County Northwestern Portion	21	1720CST			0	0	0	0	Hail (1.00)
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Hail to 1.00-inch diameter fell in northwestern Dallas County.

Ozark County Bakersfield	21	1928CST			0	0	0	0	Hail (1.00)
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Howell County Moody	21	1950CST	0.8	65	0	0	5	0	Tornado (F1)
2 S West Plains	21	1955CST			0	0	0	0	Hail (1.00)

A tornado touched down briefly 15 to 17 miles south-southwest of West Plains. No injuries were reported, but numerous buildings and houses were damaged, and several roofs blown off. One-inch-diameter hail was also reported with this storm.

Pike County Bowling Green	21	1958CST			0	0	0	0	Thunderstorm Winds (G52)
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A thunderstorm with wind gusts to 60 mph was reported by the Pike County Sheriff's Office.

Oregon County Rover	21	2034CST			0	0	0	0	Hail (1.00)
Carter County Van Buren	21	2110CST			0	0	0	0	Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MISSOURI Cont'd

Wayne County Northwestern Portion	21	2243CST			0	0	0	0	Hail (1.75)
									Golf ball-size hail was reported by Cape Girardeau County Department of Emergency Services.
Bollinger County Glenallen	21	2247CST			0	0	0	0	Hail (1.75)
									Golf ball-size hail was reported by Cape Girardeau County Department of Emergency Services.
Cooper County Boonville	22	1738CST			0	0	0	0	Hail (1.00)
									Hail was reported by an off-duty National Weather Service employee.
Camden County Montreal	22	1740CST			0	0	0	0	Hail (1.75)
Montreal	22	1740CST			0	0	0	0	Thunderstorm Winds (G52)
15 E Camdenton	22	1742CST			0	0	0	0	Hail (1.75)
									Hail, up to golf ball-size, and wind gusts were reported.
Boone County Columbia	22	1745CST			0	0	0	0	Hail (0.75)
Hinton	22	1810CST			0	0	0	0	Hail (1.00)
									No damage was reported.
Miller County Iberia	22	1815CST			0	0	0	0	Hail (1.00)
									Hail up to 1.00-inch in diameter was reported in Ilkeria.
Iberia	22	1815CST			0	0	0	0	Thunderstorm Winds
									Wind gusts to 60 mph were reported.
N Iberia	22	1820CST			0	0	0	0	Hail (1.00)
									Hail to 1.00-inch-diameter covered the ground.
Boone County Hallsville	22	1825CST			0	0	0	0	Hail (1.00)
									Hail to 1.00-inch-diameter was reported in Hallsville.
Andrain County 5 W Mexico	22	1850CST			0	0	0	0	Hail (1.00)
									Hail up to 1.00-inch in diameter was reported.
5 N Mexico	22	1900CST			0	0	0	0	Hail (0.75)
									Hail to 0.75-inch in diameter was reported.
Platte County Walnut Creek	26	1719CST			0	0	1	0	Hail (0.75)
									In Walnut Creek, 0.75-inch-diameter hail fell.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MISSOURI Cont'd

Clay County Countywide	26	1720CST			0	0	3	0	Thunderstorm Winds Winds blew down utility poles at Highway 291 and Interstate 435.
Gladstone and Liberty	26	1727CST			0	0	1	0	Hail (0.75) Hail to 0.75-inch in diameter was reported.
9 SE MCI	26	1740CST			0	0	1	0	Hail (0.75) Hail to 0.75-inch-diameter fell 9 miles southeast of MCI.
Kearney	26	1758CST			0	0	3	1	Hail (1.00) Thunderstorm Wind Winds to 60 mph and hail up to 1-inch in diameter was reported.
Platte County Riverside	26	1820CST			0	0	2	0	Thunderstorm Winds Winds downed power lines in Riverside.
Linn County 2 E Brookfield	26	1950CST			0	0	0	0	Hail (0.75) Hail to 0.75-inch in diameter was reported.
5 E Brookfield	26	1950CST			0	0	0	0	Hail (0.75) Hail up to 0.75-inch-diameter fell 5 miles east of Brookfield.
Macon County Bevier	26	2020CST			0	0	0	0	Hail (0.75) Hail to 0.75-inch-diameter was reported by a spotter.
6 N Macon	26	2038CST			0	0	0	0	Hail (1.75) A Civil Defense Director reported hail up to golf ball-size.
Clinton County Gower	27	0200CST			0	0	2	0	Thunderstorm Winds Winds to 60 mph were reported in Gower.
Clark County 2 S Kahoka	27	0440CST			0	0	3	0	Thunderstorm Winds Thunderstorm winds uprooted several trees.
Dade County Lockwood	27	0340CST			0	0	2	0	High Winds High winds of 50 to 60 mph downed numerous trees. There had been thunderstorms in the general area.
Polk County Bolivar	27	0359CST			0	0	4	0	High Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MISSOURI Cont'd

Following thunderstorms in the general area, winds were estimated to near 60 mph and caused damage to roofs and downed trees and many power lines.

**Missouri (Except
Extreme Southeast)
MOZ001 through
MOZ020**

27 1115CST-2300CST 0 0 7 5 High Winds

A very intense area of low pressure moved from Kansas into Iowa, and continued to deepen during the day. Very high winds were caused by the pressure difference across the area. Wind gusts of 70 to 80 mph were reported in the western portions of the state at 1115 CST. These produced damage to buildings and glass in the Kansas City area. The high winds then moved to the eastern portions of the state from 1300 to 1400 CST. Winds continued to gust up to 60 and 70 mph, at times, across most of the state damaging roofs and downing or damaging trees. Windows were blown out of cars, houses, and office buildings. Signs were blown down all over the state.

MONTANA

**Lake County
3 SE Arlee**

02 2330MST ? ? 0 0 4 0 Tornado (F0)

A tornado briefly touched down destroying a barn and taking the porch off the house. Several large trees were also snapped off.

MTZ007

03 1245MST-2000MST 0 0 2 0 High Winds (G68)

Strong southwesterly winds were reported in the upper Yellowstone Valley. Big Timber had gusts to 65 mph, and Livingston 78 mph.

MTZ007

04 0938MST-1403MST 0 0 0 0 High Winds (G57)

Livingston reported wind gusts to 66 mph.

MTZ004-007

04 2200MST-1030MST 0 0 0 0 Winter Storm

Heavy snow fell in the southern Montana mountains; Hebgen Lake received 15 to 20 inches, Cooke City 18 inches, and 9 inches fell at Red Lodge.

MTZ007

10 1342MST 0 0 0 0 High Winds (G55)

Livingston reported a wind gust to 63 mph.

MTZ004-006-007

11 0200MST-2100MST 0 0 4 0 Heavy Snow

Heavy snow fell across portions of southwestern, central and southern-central Montana. Snowfall in Bozeman was 16 inches; Livingston, 10 inches; Harlowton, 7 inches; and Lewistown, 4 inches. Over 2 feet of snow fell in the mountains around Bozeman.

MTZ003-006

17 0200MST-1400MST 0 0 3 0 Heavy Snow

A narrow band of heavy snow fell from Rogers Pass eastward to near Lewistown. Great Falls received 10 inches of snow, and Lewiston received 4 inches. No snow fell just north of Great Falls.

MTZ003-004-005

25 1400MST 0 0 0 0 Winter Storm
26 0800MST 0 0 0 0 Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

MISSOURI Cont'd

Heavy snow fell across much of central Montana. In the mountains, 8 to 16 inches fell; Rimini reported 12 inches; Great Falls 8 inches; and Helena, Butte, and Havre, 5 inches.

NEBRASKA

NEZ002-006
Northern Central

12	0400MST-								
13	0200MST				0	0	?	?	Heavy Snow

In Cherry County, 8 to 10 inches of snow fell, 8 inches in Grant County, and 6 to 8 inches in Arthur County.

NEZ016-017
Southwestern
Nebraska

12	0330MST-								
	1200MST				0	0	4	5	High Winds

Northwesterly winds gusting to 60 mph, blew three tractor-semitrailers off railroad flatcars, and broke signs. Winter wheat crops were damaged as the winds pulverized and blew plants from the ground. In Hayes County, 5,000 acres of wheat were destroyed, 20,000 acres were damaged; in Hitchcock County, 1,000 acres were destroyed, 12,000 acres were damaged.

NEZ010-015-019-020, East-Central and Southeastern
Nebraska

20	1200CST-								
	1600CST				0	0	3	0	High Winds

Winds gusting to 60 mph blew in windows, and damaged buildings and signs.

Adams County
Ayr

26	2006CST								
					0	0	2	0	Hail (1.50)

Walnut-size hail damaged a few vehicles.

Douglas County
Elkhorn
York County
5 NW York
Dodge County
Fremont

26	2050CST								
					0	0	1	1	Hail (0.75)
26	2145CST				0	0	1	0	Hail (0.75)
26	2155CST				0	0	1	1	Hail (0.75)

Three-quarter-inch hail fell in Fremont, and was also reported 1 mile east of Ames and 7 miles north of Fremont in Dodge County.

Douglas County
Omaha

26	2300CST								
					0	0	4	0	Thunderstorm Winds

Straight-line winds peeled off part of an apartment building roof at 121st and Arbor Streets, exposing the bedrooms of four top-floor apartments. Lamp posts and power lines were downed at Abbot Drive and Locust Streets, roof damage was reported at 51st and Q Streets, and a porch lost its roof near 5600 S. 51st Street.

Richardson County
5 W Falls City
NEZ004-007-009-013-014
Central to North-eastern
Nebraska

26	2325CST								
27	0500CST-				0	0	?	?	Hail (1.50)
	1400CST				0	0	?	?	Blizzard

Six to nine inches of snow fell over central and northeastern Nebraska. Winds gusting to 60 mph dropped visibility to zero due to blowing snow.

NEVADA

NVZ001-002
Truckee-Tahoe Area

01	0000PST-								
	1500PST				0	0	0	0	Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

NEVADA Cont'd

Central Sierra Eastern Slopes A strong Pacific storm dropped up to 3 feet of new snow in 24 hours across the Sierra Nevada.

NVZ003 Extreme Western Nevada	02	1000PST- 1800PST			0	0	?	0	High Winds
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An approaching Pacific storm produced strong winds across extreme western Nevada. Gusts of over 70 mph were reported at several locations.

NVZ001-002 Truckee-Tahoe Area/ Central Sierra Eastern Slopes	02	2000PST- 04 0400PST			0	0	0	0	Heavy Snow
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A major storm system dropped over 4 feet of snow across the Sierra. Initial heavy snow was followed by locally-heavy rain up to 8,000 feet.

NVZ001-002 Truckee-Tahoe Area/ Central Sierra Eastern Slopes	04	0700PST- 2000PST			0	0	?	0	High Winds
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The same storm system brought high winds in the 60 to 80 mph range. Several ski areas with ridgetop anemometers reported winds in excess of 100 mph. Widespread reports of trees being blown down were received from throughout the Sierra Nevada region.

NVZ003 Extreme Western Nevada	04	0800PST- 2000PST			0	0	?	0	High Winds
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High winds also struck the lower elevations of extreme Western Nevada. Winds in the 60 to 80 mph range were reported throughout the Reno-Carson City area. Minor damage occurred in the area, including two overturned planes parked at the Reno-Cannon Airport.

NVZ005-006 Northwestern and Northeastern Nevada	04	1300PST- 2100PST			0	0	?	0	High Winds
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High winds also developed in northwestern and northeastern Nevada. Winds in the 40 to 60 mph range were common. Winds estimated at 75 mph caused some minor damage in Wells, Nevada.

NVZ008-009 South-Central and Extreme Southern Nevada	14	1800PST-			0	0	0	0	Heavy Snow
	15	1000PST							

Locally-heavy snow fell in south-central and extreme southern Nevada overnight. Tonopah reported 7 inches of snow, while some mountain areas near Las Vegas picked up over a foot.

NVZ001 Truckee-Tahoe Area	17	2000PST-			0	0	0	0	Heavy Snow
	18	0800PST							

Locally-heavy snow fell in the Lake Tahoe area. Several ski areas reported between 1 and 2 feet of new snow.

NVZ002 Central Sierra Eastern Slopes	17	2000PST-			0	0	0	0	Heavy Snow
	19	1200PST							

The same storm system dropped heavy snow over a longer period in the central Sierra area. Snowfall amounts between 2 to 3 feet were common. Mammoth Lakes, CA reported nearly 40 inches of snow from this storm.

NVZ001-002 Truckee-Tahoe Area Central Sierra Eastern Slopes	23	1800PST-			0	0	0	0	Heavy Snow
	26	1200PST							

Yet another wet Pacific storm brought widespread heavy snow to the Sierra Nevada. Once again 2 to 4 feet of snow fell in many areas. One ski area in the Lake Tahoe area reported over 60 inches of new snow at the higher elevations.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

NEVADA Cont'd

NVZ009 Extreme Southern Nevada	27	0000PST-1200PST			0	0	0	0	Heavy Snow
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Heavy snow fell in the mountains of extreme southern Nevada above 6,000 feet elevation. Mt. Charleston, near Las Vegas, received 22 inches of snow.

Special Addendum for March 1991:

The series of wet storms that brought heavy snow and high winds at times to the Sierra and Nevada, also brought much needed precipitation to the area. The storms were initially warm, with subtropical moisture streaming northeastward from the Hawaiian Islands. However, much of the month saw much colder storm systems, with low snow levels. This likely accounted for the remarkable lack of even minor flooding in the state.

At the beginning of March, western Nevada and the Sierra were in the grip of one of the driest winters on record. Snowfall in the Sierra averaged a scant 15% of normal. The "March Miracle" increased the snowpack to over 60% of normal by April 1st.

Following are a few additional statistics reported by two ski areas in the Lake Tahoe area:

Sugar Bowl Ski Area:

March 1-17: at 6800 feet: 99 inches of snowfall
 at 7800 feet: 133 inches of snowfall
 in addition, 6 inches of rain fell
 March Total: 241 inches of snowfall (7,800 feet)

Kirkwood Ski Area:

March 1-21: 145 inches of snowfall
 March Total: 234 inches of snowfall

NEW HAMPSHIRE

NHZ004-006-007 Southwestern New Hampshire	03	1700EST-			0	0	?	0	High Winds
NHZ001-002 Northern New Hampshire	04	0800EST			0	0	?	0	Freezing Rain

On March 3rd, a cold front moved east from the Great Lakes area through southeastern Canada. Meanwhile, a low-pressure system over Georgia was moving northeast. The Georgia low intensified and moved up the coast as cold air continued to flow into northern New England from the Arctic high. By the time the precipitation arrived in northern New England, enough cold air was present in the lower levels of the atmosphere to produce a significant freezing rain and sleet event in southern New Hampshire, and heavy snow in the north.

High winds caused trees and limbs to go down on power lines, disrupting power from 90 minutes to 2 hours for 150 to 220 customers in the Rochester and Milton areas. There were numerous power outages elsewhere across the state due to the weight of ice-laden power lines. The freezing rain also caused numerous schools and businesses to shut down for the day.

NHZ001-002-004 Northern and East-Central New Hampshire	23	1300EST-			0	0	?	0	Heavy Snow
Northern and East-Central New Hampshire	24	2000EST			0	0	?	0	Heavy Snow

On the 23rd, an Arctic high-pressure system moved across southeastern Canada. Then a low moved east to northern New England from the Great Lakes region. These systems interacted with a low that moved from southern-central Virginia on the 24th. It intensified as it moved northeast from Virginia to the Delmarva peninsula, and across the Gulf of Maine.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW JERSEY, Northern

NJZ005-015 03 2200EST-
 Watchung-Raritan 04 0500EST 0 0 ? 0 Flood
 and Metropolitan
 New Jersey Area

A strong, low-pressure system, moving northeastward along the eastern coast, dumped between 2 to 3 inches of rain across sections of northeastern New Jersey. The Saddle River in Passaic County, as well as the Rahway River in Union County, flooded as the result of the heavy rains and its associated runoff. Numerous small streams and creeks flooded as well. In addition, extensive urban flooding occurred across Bergen, Middlesex, Passaic, and Union Counties. Many roads were closed due to the flooding, which in spots, reached depths of 3 to 5 feet.

NEW JERSEY, Southern

NJC021 03 2200EST 0 0 2 0 Flood

Heavy rain of 1.90 inches fell over Mercer County and resulted in flooding. The Assunpink Creek crested at 0300 EST on the 4th at 8.46 feet, with the flood stage at 7 feet. Flooding occurred along the Assunpink from 2200 EST on the 3rd, until 0400 EST on the 4th.

NEW MEXICO

NMZ002-006 Feb 28 2200MST-
 Mar 02 0600MST 0 0 0 0 Heavy Snow

Heavy snow occurred over the north-central mountains (6 to 27 inches) and was isolated over the west-central mountains (6 to 17 inches), and over the south-central mountains (9 to 18 inches). Chama in Rio Arriba County received 27 inches, and McGaffey in McKinley County received 17 inches. The Ski areas in the central mountains received from 1 to 2 feet of snow.

NMZALL 11 1200MST-
 2000MST 0 0 5 0 High Winds

A vigorous spring storm swept through the southern rockies forcing a cold front across New Mexico that produced strong winds statewide. The wide winds caused roof damage, blew down trees and street signs, and caused many power outages. Sandia Peak Tramway reported 54-knot winds with gusts to 87 knots, which caused a shovel to be blown into the tram car window. Other peak gusts were: Artesia, 62 knots; at the Albuquerque International Airport, 55 knots; and the Santa Fe Airport, 54 knots. Some specific damage reports follow below.

San Juan County 11 1400MST 0 0 4 0 High Winds
 Aztec

Strong winds blew the roof off the fire station in Aztec, causing \$10,000 in damage.

Los Alamos County 11 PM 0 0 4 0 High Winds
 White Rock

Strong winds blew the roof off a 12-apartment complex causing \$15,000 in damage. Reported winds of 55 to 68 mph (48 to 59 knots) uprooted trees and blew down street signs and telephone poles.

Bernalillo County 14 1254MST 0 0 3 0 Dust Devil
 Albuquerque

A dust devil occurred at Albuquerque High School and caused damage to vehicles in the parking lot. Car windows were blown out, and a pickup truck's camper shell was blown off.

NMZ002 14 2200MST-
 15 0600MST 0 0 0 0 Heavy Snow

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEW MEXICO Cont'd

A quick-moving, upper-level, low-pressure system brought heavy snows of 6 to 12 inches to the ski areas of the north-central mountains.

NMZ002-004-006-008-012 15 2200MST-16 1800MST 0 0 0 0 **Heavy Snow**

Heavy snows occurred mainly over the north-central mountains, where 4 to 14 inches of snow fell, and 6 to 31 inches in the ski areas. The northeastern highlands received 6 to 8 inches, and the west-central mountains, 4 to 5 inches. Sixteen inches of snow fell at the Sandia Ski Area in Bernalillo County, and 8 inches fell at Ski Apache in Lincoln County.

Valencia County Belen 19 1450MST 0 0 5 0 **High Winds**

A tin-type roof was lifted off by strong winds at La-Merced Elementary school, causing \$75,000 to \$100,000 in damage to a multi-purpose room.

NM002-006-012 21 0200MST-22 1200MST 0 0 0 0 **Heavy Snow**

Heavy snows of 5 to 20 inches fell over the north-central mountains, 4 to 5 inches over the west-central mountains, and from 4 to 16 inches over the south-central mountains. The heaviest snowfalls were generally above 8,000 feet elevation.

NMZALL 26 1200MST-2000MST 0 0 0 0 **High Winds**

A violent spring storm swept into New Mexico bringing strong winds to the entire state. The strongest winds occurred ahead of a cold front which stretched southwest to northeast through the central portion of the state, where 50 to 70 mph winds were common. The Albuquerque International Airport was closed for a period of time, as wind gusts to 67 knots (77 mph) in blowing dust, reduced the visibility of around 0.25 mile. Peak gusts reported around the state, and some specific damage reports follow:

Clayton, Union County	56	Tucumcari, Quay County	48
Carlsbad, Eddy County	61	Deming, Luna County	58
Las Cruces, Dona Anna	82	Albuquerque, Bernalillo County	67
Corona, Lincoln County	54	Clovis, Curry County	53
Truth or Consequences	57	White Sands Dona Ana County	60
Raton Colfax County	52	Holloman AFB Otero County	50
Tularosa Otero County	70	Las Vegas San Miguel County	70

Otero County Tularosa 26 Afternoon 0 0 4 0 **High Winds**

The Associated Press reported at 2130 MST; that the roof of a school building was blown off in Tularosa. Winds were reported at 80 mph (70 knots).

San Miguel County Las Vegas 26 Afternoon 0 0 3 0 **High Winds**

Winds from 75 to 80 mph (60 to 70 knots) lifted the roof off a mobile home.

Dona Ana County Las Cruces 26 Afternoon 0 0 3 0 **High Winds**

Wind gusts to 94 mph (82 knots) blew off sections of a K-Mart store.

NMZ002-004-005-008-009 29 2200MST-30 1200MST 0 0 0 0 **Heavy Snow**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Heavy snows of 4 to 12 inches occurred over the north-central mountains, the central highlands, 4 to 8 inches; the northeastern highlands, 5 to 8 inches; the northeastern plains, up to 6 inches; and over the east-central plains, 4 to 6 inches.

NEW YORK, Central

NYZ007-008-011-018, St. Lawrence Valley, Eastern Adirondacks Champlain Valley Western Adirondacks	03	1600EST		0	4	7	7	Freezing Rain
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St. Lawrence County was part of the central New York area that was hard hit by a major ice storm. More than 9000 homes were without power, 60 automobile accidents were reported, mail delivery halted, all schools and colleges were closed for several days, and businesses were shut down. Elsewhere in the Adirondacks, the ice presented fewer and more scattered problems. The storm built in intensity through Sunday night. By Monday morning, more than 2 inches of ice had accumulated in some low-lying areas. In higher elevations the freezing rain was reported to have changed to snow before ending on Monday.

NYZ010-013 Catskill Mountains Lower Hudson Valley	15	2200EST		2	2	5	0	Snow
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Light snow fell across most of eastern New York. However, in higher elevations of the Catskills and lower Hudson Valley, snow accumulated up to 10 inches. (F40V)(F25V)

Area Wide	28	1330EST		0	0	6	?	High Winds
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Strong winds were blamed for power failures, grass fires, and building damages. More than 1,500 homes lost power when wind brought down high tension lines in the town of Chenango in Broome County. In Delaware County, the wind was blamed for blowing down part of a brick wall. The strong winds were suspected of setting up a vibration in the three story wood and brick structure. In Otsego County, the wind took off the roof of an office complex near Oneonta. In Middlebury and Roxbury in Delaware County, wind blew down four power poles. Sparks from the downed lines started a grass fire. In St. Lawrence County, winds estimated at 80 mph knocked down trees and power lines. In Orange County, winds whipped up a grass fire which burned over 50 acres before being brought under control.

NEW YORK, Coastal

Richmond County	03	2100EST-04 0200EST		0	0	?	0	Flash Floods
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A strong low-pressure system moving northeast along the east coast, dumped between 2 to 3 inches of rain across Staten Island. Nearly 2 inches of rain fell between 2030 to 2200 EST. Roadways quickly flooded catching many motorist by surprise. Two men had to swim away from their trapped car.

Westchester County	04	0430EST-1400EST		0	0	?	0	Flood
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Heavy rain and its associated runoff forced the Saw Mill and Bronx Rivers over their banks. Extensive flooding occurred along their adjacent parkways.

NEW YORK, Western

Chautauqua County Clymer	02	1655EST		0	0	4	0	Thunderstorm Winds
Cattaraugus County Portville	02	1758EST		0	0	4	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Thunderstorms developed during the afternoon in a southerly flow of warm, moist, unstable air. The thunderstorms dropped up to 0.75-inch of rain and produced up to 0.50-inch hail. The thunderstorm winds downed tree limbs and power lines resulting in scattered power outages.

NYZ002 Monroe, Ontario, Wayne, Yates, and Livingston Counties	03	2300EST			0	0	8	6	Ice Storm
NYZ004 Lewis, Oswego, and Jefferson Counties	03	2300EST			0	0	7	6	Ice Storm
NYZ003 Steuben County	04	0000EST			0	0	7	C	Ice Storm
NYZ022 Allegany and Cattaraugus Counties	04	0400EST			0	0	6	C	Ice Storm
NYZ021 Orleans County	04	0400EST			0	0	6	C	Heavy Snow Ice
NYZ001 Orleans County	04	0400EST			0	0	6	C	Heavy Snow Ice

Wyoming and Genesee Counties

A devastating ice storm paralyzed a large section of western and portions of northern New York. The freezing rain began during the late afternoon of Sunday the 3rd, continuing through the morning of the 4th. The ice coated trees and power lines and sent them crashing to the ground along with utility poles and transformers. There were also numerous reports of structural damage from the weight of the ice. Ice buildups ranged from 1 to 2 inches over the hardest hit areas. Over the western fringes of the storm area, the coating of ice was followed by 4 to 6 inches of heavy, wet snow. At its peak, nearly 325,000 customers were without electricity. Virtually all schools and businesses were shut down Monday and Tuesday (March 4th and 5th) in the affected areas. In the cities of Rochester and Watertown, schools were closed for the entire week. High water in flooded basements was commonplace when sump pumps were unable to work due to power failures. Governor Mario Cuomo declared 18 counties state disaster areas. State agencies were authorized to provide manpower and equipment in helping residents affected by the storm. Utility crews were brought in from Ohio, Pennsylvania, and Canada to aid in the restoration of power which was not accomplished until March 16th. President Bush signed an order declaring 12 counties federal disaster areas. It was the most costly natural disaster in the history of New York State.

NYZ004 Jefferson County	06	1400EST			0	0	3	0	Flood
NYZ002 Monroe County	08	0700EST			0	0	3	0	Flood

Mild temperatures and up to 0.50-inch rain combined together melting snow and ice and causing rises on already swollen rivers and creeks. At Watertown in Jefferson County, the Black River crested at 10.05 feet; flood stage is 10 feet. Jefferson County Sheriff's Office reported some flooding along Route 3. At Churchville in Monroe County, the Black Creek crested at 6.35 feet; flood stage is 6 feet.

Erie County Buffalo	28	0130EST			0	0	4	0	Thunderstorm Winds
Chautauqua County Fredonia	28	0135EST			0	0	4	0	Thunderstorm Winds
Niagara County Lockport	28	0145EST			0	0	4	0	Thunderstorm Winds
Cattaraugus County Dayton	28	0150EST			0	0	4	0	Thunderstorm Winds
Erie County Eastern Aurora	28	0200EST			0	0	4	0	Thunderstorm Winds
Orleans County									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

NEW YORK, Western Cont'd

Albion	28	0200EST			0	0	4	0	Thunderstorm Winds
Genesee County Batavia	28	0210EST			0	0	4	0	Thunderstorm Winds
Wyoming County Strykersville	28	0215EST			0	0	4	0	Thunderstorm Winds
Warsaw	28	0225EST			0	0	4	0	Thunderstorm Winds
Livingston County Caledonia	28	0232EST			0	0	4	0	Thunderstorm Winds
Monroe County Fairport	28	0232EST			0	0	4	0	Thunderstorm Winds (G56)
Brockport	28	0252EST			0	0	4	0	Thunderstorm Winds
Wayne County Macedon	28	0252EST			0	0	4	0	Thunderstorm Winds
Ontario County Canandaigua	28	0258EST			0	0	3	0	Thunderstorm Winds
Manchester	28	0300EST			0	0	3	0	Thunderstorm Winds

An intense spring storm centered over the Upper Great Lakes, pushed a cold front across western New York. The front was accompanied by severe thunderstorms which produced damaging winds and heavy downpours. The winds downed trees and power lines causing scattered power outages. There were also reports of sheds and small mobile homes overturned, and gutters ripped from houses.

NYZ003-022	28	0400EST			0	0	5	0	High Winds
NYZ021	28	0500EST			0	0	5	0	High Winds
NYZ001	28	0608EST			0	0	5	0	High Winds
NYZ002	28	0700EST			0	0	5	0	High Winds
NYZ004-005	28	0800EST			0	0	5	0	High Winds

Strong westerly winds following a cold front produced damage across western New York. The high winds downed trees and power lines causing power outages. In the town of Wheatfield, Niagara County, 23 utility poles were downed. A concrete silo was blown down in Sheldon, Wyoming County. A 20- by 40-foot section of roof was blown off a motel at Warsaw in Wyoming County. Several other roofs were also damaged in the Buffalo and Erie County area. A brick wall of a building under construction collapsed at Depew in Erie County. Reports of downed signs and light standards were also received. The strong winds also raised the level of Lake Erie at its eastern end causing localized flooding along the lake shore. Wind speeds averaged between 35 and 45 mph and specific gust reports included: 84 mph, Albion, Orleans County; 74 mph, Oswego, Oswego County; 70 mph, Dunkirk, Chautauqua County; 68 mph, Buffalo, Erie County; 63 mph, Rochester, Monroe County; 60 mph, Niagara Falls, Niagara County; 59 mph, Watertown, Jefferson County; 51 mph, Syracuse, Onondaga County.

NORTH CAROLINA

Cabarrus County Rocky River	01	2345EST			0	0	0	0	Thunderstorm Winds
Union County North of Waxhaw	01	2345EST			0	0	0	0	Thunderstorm Winds

Thunderstorm winds blew down trees and power lines in Rocky River and north of Waxhaw.

Anson County N Peachland	02	0005EST			0	0	0	0	Thunderstorm Winds
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Thunderstorm winds blew down numerous trees north of Peachland.

Bladen County Tar Heel	02	0310EST			0	0	5	0	Thunderstorm Winds
Johnston County West of Smithfield	02	0310EST			0	0	0	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Sampson County Roseboro	02	0330EST			0	0	0	0	Thunderstorm Winds
Sampson County Clinton	02	0330EST			0	0	0	0	Thunderstorm Winds
New Hanover County 4 NW Wilmington	02	0425EST			0	0	5	0	Thunderstorm Winds
Martin County Bear Grass	02	0500EST			0	0	0	0	Thunderstorm Winds
Onslow County Belgrade	02	0515EST			0	0	4	0	Thunderstorm Winds
Pasquotank County N Elizabeth City	02	0620EST			0	0	0	0	Thunderstorm Winds
Wayne County Grantham	02	1545EST			0	0	4	0	Thunderstorm Winds
Lenoir County East of Kinston	02	1615EST			0	0	3	0	Thunderstorm Winds

In the eastern part of the state, numerous severe thunderstorms blew down trees and power lines, and damaged homes and farm structures. In Tar Heel, four houses were damaged and five mobile homes were damaged or destroyed. Damage estimates were near \$150,000. Two mobile homes were damaged west of Smithfield. One house received minor damage in Clinton. Four miles north of Wilmington, three businesses were damaged by wind and two mobile homes were damaged by falling trees. Two old houses and a shed were damaged in Bear Grass. The roof was torn off of two houses in Belgrade. Two buildings were damaged and a large number of trees were blown down just north of Elizabeth City. In Grantham, high winds damaged the roof of the high school. A lot of trees were uprooted and a barn and chicken house were destroyed east of Kinston. Trees and power lines were blown down in Roseboro.

Camden County South Mills	02	0615EST	0.2	30	0	0	?	0	Tornado (F0)
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Three large trees were blown down and a roof was torn off a building.

Columbus County Near Sidney	03	1024EST	0.5	50	0	0	0	0	Tornado (F0)
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A small tornado touched down briefly near Sidney breaking off numerous trees and destroying a barn.

Cerro Gorde	03	1047EST	1.5	75	0	3	5	0	Tornado (F1)
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A second small tornado touched down in Cerro Gorde damaging West Brunswick High School, three houses, and four mobile homes. Three mobile homes were destroyed injuring three people.

Columbus County Evergreen	03	1055EST			0	0	0	0	Thunderstorm Winds
Brunswick County Holden Beach	03	1125EST			0	0	3	0	Thunderstorm Winds
Bladen County Ruskin	03	1139EST			0	2	0	0	Thunderstorm Winds
New Hanover County 4 NE Wilmington	03	1158EST			0	0	0	0	Thunderstorm Winds
Duplin County Near Faison	03	1200EST			0	0	3	0	Thunderstorm Winds
Lenoir County Near Kinston	03	1245EST			0	0	0	0	Thunderstorm Winds
Pitt County Greenville Farmville	03	1310EST			0	0	0	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

For the second day in a row, numerous severe thunderstorms blew down trees and power lines in the eastern part of the state. A chimney was damaged and the porch was blown off a house at Holden Beach. Minor roof damage was reported in Faison. Minor roof damage was reported and small farm buildings were turned over near Kinston. In Bladen County, between Bladenboro and Dublin, five houses were damaged. In Ruskin, two people were seriously injured when their mobile home was destroyed.

Union County Mineral Springs	13	2020EST			0	0	0	0	Hail (0.75)
Hoke County Western Portion	13	2255EST			0	0	0	0	Hail (1.75)
Raeford	13	2330EST			0	0	0	0	Hail (0.75)

Thunderstorms produced nickel- to golf ball-size hail in Union and Hoke Counties.

Stokes County Eastern Portion	23	1100EST			0	0	0	0	Hail (0.75)
Rockingham County Northern Portion	23	1115EST			0	0	0	0	Hail (1.75)

Thunderstorms produced nickel- to golf ball-size hail in Stokes and Rockingham Counties.

Camden County	29	1000EST			0	0	0	0	Hail (1.50)
Pasquotank County 14 NW Elizabeth City	29	1030EST			0	0	4	0	Thunderstorm Winds

A church and a mobile home sustained damage.

Henderson County Hendersonville	29	1100EST			0	0	0	4	Flash Flood
Transylvania County Rosman	29	1100EST			0	0	0	4	Flash Flood

Heavy rains, up to 6 inches, fell on Transylvania and Henderson Counties and other parts of the southern mountains. Thirteen homes were evacuated in Rosman as flood waters covered much of the main street. Three houses were flooded as water inundated many streets in Hendersonville.

Washington County	29	1130EST			0	0	0	0	Hail (0.88)
Mecklenburg County Charlotte	29	1345EST			0	0	0	0	Thunderstorm Winds Hail

A severe thunderstorm blew the window out of a store showroom in Charlotte. Sixty-mph winds and nickel-size hail were reported at the Charlotte Douglas Airport.

Randolph County Asheboro	29	1445EST	28.0	300	0	0	6	0	Tornado (F2)
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A small tornado touched down near Farmer in southwest Randolph County snapping off and uprooting trees. No structures were reported damaged. The tornado moved northeasterly and touched down again in the northern part of the city of Asheboro east of U.S. Highway 220. The tornado reached it's maximum intensity in the city where it damaged or destroyed 68 residences. Unbelievably, there were no serious injuries or fatalities. The tornado weakened and continued to produce intermittent damage to trees on a path to Liberty where it touched down for the last time. Damage estimates were near \$600,000.

Stanley County Albemarle	29	1450EST	2.0	80	0	0	6	0	Tornado (F1)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

A small tornado touched down briefly in Albermarle where it blew down hundreds of trees and some power lines. A small cinder block building was destroyed and 50 other buildings sustained some damage.

Chatham County 29 1530EST 6.0 300 0 0 5 0 Tornado (F2)

A small tornado touched down briefly blowing down trees about 2 miles south of Siler City. It intensified and touched down a second time about 2 miles northeast of Terrells. It stayed on the ground for about 5 miles moving east-northeasterly before lifting just inside of the Orange County line at U.S. Highway 15/501. About 35 residences were damaged; Four mobile homes were destroyed.

Moore County 29 1533EST 1.0 150 0 2 5 0 Tornado (F1)

A small tornado touched down about 7 miles southwest of Robbins. It moved east-northeasterly and lifted about 3 miles east of Robbins. The tornado produced intermittent damage along most of the track. The greatest damage was near Garner's Store. About 45 residences sustained damage; four mobile homes were destroyed injuring two people.

**Lee County
N Sanford** 29 1555EST 0 0 0 0 Thunderstorm Winds

Thunderstorm winds blew down trees and power lines and slightly damaged about 10 homes just north of Sanford.

**Rockingham County
Eden** 29 1600EST 0 0 4 0 Flash Floods

Heavy rain produced flash flooding near Eden. One car was swept off the Mebane Bridge Road as flood waters topped the bridge. One woman was rescued from her van. Two cars carrying a family of seven were swept off a flooded highway. When rescuers arrived all seven people were standing on top of cars in about 3 feet of water.

Scotland County 29 1605EST 8.0 80 0 1 5 0 Tornado (F1)

A small tornado touched down near Gibson, and lifted about 1 mile north of Laurinburg. Hundreds of trees were blown down. One mobile home was destroyed and about 15 houses and 10 mobile homes sustained damage. One person was cut by flying glass during the tornado.

**Northhampton
County** 29 1622EST 0.5 3 0 0 3 0 Tornado (F0)

Witnesses saw a small tornado touch down briefly between Pendelton and Severn. The tornado blew down trees and destroyed two barns.

**Johnston County
Central** 29 1700EST 0 0 0 0 Thunderstorm Winds

**Edgecombe County
2 N Rocky Mount** 29 1740EST 0 0 0 0 Thunderstorm Winds

**Nash County
Rocky Mount** 29 1740EST 0 0 0 0 Thunderstorm Winds

Thunderstorm winds blew down trees and power lines in central Johnston County and in the northern part of Rocky Mount in both Edgecombe and Nash counties.

**Halifax County
Palmyra** 29 1745EST 0.5 200 0 0 4 0 Tornado (F1)

A tornado touched down briefly near Palmyra blowing down trees and damaging three houses.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Lenoir County 29 1745EST 8.0 100 0 0 5 0 Tornado (F1)

A tornado touched down at Irvings Crossroads and moved northeasterly to a point 1 mile northeast of Elm Grove. The tornado produced intermittent damage along the track uprooting trees and destroying numerous farm buildings. One mobile home was destroyed, and one brick house was severely damaged.

Bertie County
Burden's Store 29 1810EST 0.5 70 0 1 4 0 Tornado (F1)

A small tornado touched down briefly near Burden destroying four mobile homes and damaging four others. Three houses were damaged, and numerous trees and power lines were blown down in the area. One person was injured in a mobile home.

Hertford County
Lloyds Crossroads 29 1830EST 1.0 80 0 0 4 0 Tornado (F1)

A small tornado touched down near Lloyds Crossroads destroying one mobile home and damaging seven others. Twelve farm buildings were destroyed, and many pieces of heavy farm equipment were overturned and damaged.

Lenoir and Jones Counties
Irvings Crossroads
11 NW Trenton 29 1930EST-1945EST 12.0 100 0 33 6 0 Tornado (F1)

A tornado touched down at Irvings Crossroads and moved northeast to just inside Jones County near State Routes 1305 and 1306, about 11 miles northwest of Trenton. The tornado caused intermittent damage along the track including 11 homes, 20 farm buildings, and 1 business. Damage was estimated at \$150,000 in Lenoir County and \$450,000 in Jones County.

Davidson County
Arcadia 29 Unknown 1 0 0 0 0 Flash Flood

A vehicle was swept away by flood waters on Muddy Creek. A passenger escaped, but the driver was trapped. (M28V)

NORTH DAKOTA

NDZ017
Part of South-eastern North Dakota 22 2300CST-23 2300CST 0 0 0 0 Heavy Snow

Rain and drizzle in the Fargo area changed to snow by late afternoon of the 22nd. The precipitation was intermittent the night of the 22nd, and alternated between rain and snow. On the morning of the 23rd, wet snow developed and continued through the day. The snowfall was intense at times before it ended toward the evening of the 23rd. Six inches of snowfall was reported at the Fargo airport, some of it melted as it fell.

OHIO

Stark County
Canton 02 1420EST 0 0 3 0 Hail (0.75)
Hartville 02 1430EST 0 0 3 0 Hail (1.00)
Mahoning County
Austintown 02 1520EST 0 0 3 0 Hail (0.75)
Ashtabula County
Andover 02 1530EST 0 0 3 0 Hail (0.88)

Severe thunderstorms produced large hail in a few areas of northeastern Ohio.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

OHZ002-004-006-007-011 Central Lakeshore Northeastern Lakeshore, Northeastern Inland Central, East-Central, Central Highlands	03 04	1300EST- 1200EST			0 0	0 0	6 0	0 0	Ice Storm
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Freezing drizzle and rain overspread the eastern half of Ohio causing significant travel problems, downed trees, and power outages. The freezing rain was the heaviest over northeastern Ohio where some areas recorded nearly 1 inch of ice on trees and power lines. Widespread damage from the ice started toppling trees, branches, and power lines around 2200 EST on the 3rd. Over 100,000 homes were without power for at least some time during this storm, with some areas losing power for a few days. The freezing rain changed over to snow in northeastern Ohio during the morning of the 4th with accumulations of 2 to 4 inches.

OHZ006-007 Central East-Central	12 13	2100EST- 0700EST			0 0	0 0	4 0	0 0	Heavy Snow
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Heavy snow developed in a narrow band from northwestern Ohio into central and east-central Ohio. Snow depths reached 4 inches around 0200 EST on the 13th with total snow depths of 4 to 6 inches by 0500 EST. The heaviest amount of 6 inches fell in Marysville.

Lawrence County Gallia and Scioto Counties	22 22	0700EST- 1100EST 0800EST- 1110EST			0 0	0 0	4 4	0 0	Urban and Small Stream Flood Urban and Small Stream Flood
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Showers and thunderstorms with heavy rain moved across southern Ohio causing widespread flooding of small streams and county roads.

Warren County	22 23	2300EST- 0100EST			0 0	0 0	4 0	0 0	Urban and Small Stream Flood
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Showers and thunderstorms with heavy rain caused small streams and urban areas to flood.

Pike County Piketon	23 24	1030EST- 1700EST			0 0	0 0	4 0	0 0	Flood
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Heavy rain pushed the Scioto River to 19.2 feet at 2300 EST on the 23rd; this was 3.2 feet above flood stage. Damage was restricted to the farmland along the river.

Montgomery County New Lebanon South Dayton Miamisburg Greene County Xenia Fayette County Washington C.H. Northern Portion Pickaway County Northern Portion Fairfield County 5 N Lancaster Perry County Crooksville Delaware County Delaware	26 26 26 26 26 26 26 26 26 26 26 26 26 26 26	1630EST 1650EST 1650EST 1725EST 1735EST 1735EST 1741EST 1800EST 1834EST 1930EST			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 0 0 0 0	4 3 4 3 4 4 3 3 3 3 3 3 3 3 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Hail (1.00) Hail (0.75) Hail (1.75) Hail (0.88) Thunderstorm Winds Hail (1.00) Hail (0.75) Hail (0.75) Hail (0.75) Hail (0.75) Hail (0.75) Hail (0.75) Hail (0.75) Hail (0.75)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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 moved from west-central into central Ohio producing widespread large hail and some isolated wind damage.

Williams County
2 NW Columbia
2 NE Nettle Lake

27 2039EST-2046EST 6.4 200 0 18 7 0 Tornado (F3)

A strong tornado entered the extreme northwestern corner of Williams County from northeastern Indiana at 60 mph. The tornado lifted and touched down five times across the county with winds estimated at 175 mph in the Nettles Lake area. Property damage was extensive in Nettle Lake with 210 homes damaged, and 28 single family and 25 mobile homes destroyed. Total damage was \$12 million and there were 18 injuries. The tornado continued northeasterly into Hillsdale County of southern Michigan.

Defiance County 5 SE Defiance	27	2054EST			0	0	4	0	Thunderstorm Winds
Fulton County Countywide	27	2110EST			0	0	4	0	Hail (2.00)
Allen County 2 W Lima	27	2115EST			0	0	4	0	Thunderstorm Winds (G52)
Mercer County 2 S Wilshire	27	2120EST			0	0	4	0	Thunderstorm Winds
Lucas County 3 SE Swanton	27	2122EST			0	0	4	0	Thunderstorm Winds (G56)
Berkey	27	2122EST			0	0	4	0	Hail (3.00)
Van Wert County Ohio City	27	2128EST			0	0	4	0	Hail (1.75)
Putnam County Columbus Grove	27	2130EST			0	0	4	0	Thunderstorm Winds (G52)
Fulton County 8 W Toledo	27	2131EST			0	0	4	0	Thunderstorm Winds Hail (0.75)
Hancock County Findlay	27	2144EST			0	0	3	0	Hail (0.75)
Henry County Countywide	27	2145EST			0	0	4	0	Thunderstorm Winds
Shelby County 1 N Sidney	27	2145EST			0	0	5	0	Thunderstorm Winds
Lucas County Countywide	27	2150EST			0	0	5	0	Thunderstorm Winds (G56)
Darke County Hillgrove	27	2153EST			0	0	4	0	Thunderstorm Winds
Wood County Bowling Green	27	2200EST			0	0	5	0	Thunderstorm Winds (G65)
Perrysburg									
Sandusky County Fremont	27	2205EST			0	0	4	0	Thunderstorm Winds (G61)
Ottawa County Port Clinton	27	2208EST			0	0	4	0	Thunderstorm Winds (G56)
Logan County Russells Point	27	2212EST			0	0	4	0	Thunderstorm Winds
Lakeview									
Seneca County Tiffin	27	2215EST			0	0	4	0	Thunderstorm Winds
Darke County Ansonia	27	2226EST			0	0	4	0	Thunderstorm Winds
Greenville									
Erie County Sandusky	27	2240EST			0	0	4	0	Thunderstorm Winds Hail (1.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Berlin Heights	27	2250EST				0	0	4	0	Thunderstorm Winds
Marion County Countywide	27	2245EST				0	0	4	0	Thunderstorm Winds
Miami County Northwestern Portion	27	2247EST				0	0	4	0	Thunderstorm Winds
Huron County Bellevue	27	2250EST				0	0	4	0	Thunderstorm Winds (G72)
Hardin County Kenton	27	2257EST				0	0	4	0	Thunderstorm Winds
Union County Marysville	27	2305EST				0	0	4	0	Thunderstorm Winds
Lorain County Countywide	27	2310EST				0	0	4	0	Thunderstorm Winds
Cuyahoga County Bay Village Westlake	27	2320EST				0	0	4	0	Thunderstorm Winds
Huron County Southeastern Portion	27	2330EST				0	0	4	0	Thunderstorm Winds
Richland County Mansfield	27	2330EST				0	0	4	0	Thunderstorm Winds
Lorain County Wellington	27	2340EST				0	0	4	0	Thunderstorm Winds
Ashland County Countywide	27	2350EST				0	0	4	0	Thunderstorm Winds
Medina County Countywide	27	2350EST				0	0	4	0	Thunderstorm Winds
Lake County Western Portion	28	0000EST				0	0	4	0	Thunderstorm Winds
Ashtabula County Northern Portion	28	0015EST				0	0	4	0	Thunderstorm Winds (G54)
Geauga County Russell	28	0028EST				0	0	4	0	Thunderstorm Winds (G61)
Wayne County Mt. Eaton	28	0030EST				0	0	4	0	Thunderstorm Winds
Summit County Countywide	28	0105EST				0	0	4	0	Thunderstorm Winds
Holmes County Countywide	28	0110EST				0	0	4	0	Thunderstorm Winds
Ashtabula County Windsor Orwell	28	0115EST				0	0	4	0	Thunderstorm Winds
Stark County 2 E Canton	28	0125EST				0	0	4	0	Thunderstorm Winds
Trumbull County Countywide	28	0130EST				0	0	4	0	Thunderstorm Winds

Thunderstorms moved through northern Ohio blowing down trees and power lines, and damaging homes and businesses in many areas. Winds frequently reached 70 to 80 mph. Large hail fell with the storms across northwestern Ohio.

OHZ001-007-010-011, Northwestern Central Lakeshore Northeastern Lakeshore Northeastern Inland Miami Valley	27	1900EST-				0	0	6	0	Strong Winds
	28	0700EST								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

East-Central, West-Central, and Central Highlands

Strong gradient winds blew down trees and power lines and did some structural damage across northern Ohio during the evening of the 27th, and early morning hours of the 28th. Winds were from 40 to 50 mph with gusts to 70 mph in some areas. The most significant damage occurred 2 miles east of St. Clairsville, in Belmont County, where one-third of the roof was blown off the Hospitality Inn.

OKLAHOMA

Eastern Beaver and Northern Harper Counties

03 0400CST-1000CST	0	0	0	0	Heavy Snow
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Heavy snow across extreme northwestern Oklahoma and the extreme eastern panhandle caused several traffic accidents with no reported injuries. Snow amounts were generally around 4 inches, but 6 to 8 inches were reported near Gate in eastern Beaver County.

Delaware County 3 N Colcord	21	1110CST	0	0	0	0	Hail (0.75)
Adair County 4 N Westville	21	1118CST	0	0	0	0	Hail (0.88)
Cherokee County 6 NE Tahlequah	21	1145CST	0	0	0	0	Hail (0.75)
Jefferson County 3 NE Ryan	21	1205CST	0	0	0	0	Hail (0.75)
Carter County 4 N Dickson	21	1230CST	0	0	0	0	Hail (0.88)
Johnston County Mill Creek	21	1230CST	0	0	0	0	Hail (0.88)
Cherokee County 8 SE Peggs	21	1230CST	0	0	0	0	Hail (0.75)
Carter County 3 NW Healdton	21	1245CST	0	0	0	0	Hail (1.00)
Cleveland County Noble	21	1255CST	0	0	0	0	Hail (0.88)
Pottawatomie County 1 NW Pink	21	1300CST	0	0	0	0	Hail (0.75)
Pontotoc County 5 SSW Fittstown	21	1300CST	0	0	0	0	Hail (0.88)
Grady County 5 W Alex	21	1302CST	0	0	0	0	Hail (0.75)
Tillman County Davidson	21	1330CST	0	0	0	0	Hail (0.75)
Comanche County Sterling	21	1340CST	0	0	0	0	Hail (0.75)
Carter County Ratliff City	21	1345CST	0	0	0	0	Hail (0.75)
McClain County Washington	21	1345CST	0	0	0	0	Hail (0.75)
Hughes County 5 S Stuart	21	1345CST	0	0	0	0	Hail (0.75)
Tillman County 6 SW Chattanooga	21	1350CST	0	0	0	0	Hail (1.00)
Tillman County 6 SW Chattanooga	21	1350CST	0	0	0	0	Thunderstorm Winds (G56)
Seminole County 3 N Konowa	21	1405CST	0	0	0	0	Hail (1.00)
Grady County 2 N Rush Springs	21	1410CST	0	0	0	0	Hail (1.25)
Comanche County 3 SE Faxon	21	1410CST	0	0	0	0	Hail (1.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Pittsburg County 1 W Arpelar	21	1410CST			0	0	0	0	Hail (1.00)
Creek County Bristow	21	1410CST			0	0	0	0	Hail (1.00)
Comanche County Lawton	21	1415CST			0	0	0	0	Hail (0.75)
Okfuskee County 2 S Weleetka	21	1420CST			0	0	0	0	Hail (0.75)
Pontotoc County 3 E Ada	21	1425CST			0	0	0	0	Hail (1.00)
Creek County Kiefer	21	1428CST			0	0	0	0	Hail (1.50)
Okmulgee County 2 E Henryetta	21	1430CST			0	0	0	0	Hail (0.75)
Stephens County Duncan	21	1430CST			0	0	0	0	Hail (0.75)
Cotton County Randlett	21	1440CST			0	0	0	0	Hail (1.75)
Pittsburg County Indianola	21	1440CST			0	0	0	0	Hail (2.75)
Cleveland County Near Stella	21	1445CST			0	0	0	0	Hail (1.00)
Tulsa County 3 W Bixby	21	1450CST			0	0	0	0	Hail (0.75)
McIntosh County Eufaula	21	1455CST			0	0	4	0	Hail (0.88)
Tulsa County Tulsa	21	1455CST			0	0	0	0	Hail (0.75)
Jefferson County Ringling	21	1500CST			0	0	0	0	Hail (1.00)
Seminole County Konawa	21	1500CST			0	0	0	0	Hail (0.88)
Jefferson County Oscar	21	1500CST			0	0	0	0	Hail (1.25)
Oklahoma County Countywide	21	1500CST			0	0	0	0	Hail (0.88)
Grady County Cox City	21	1505CST			0	0	0	0	Hail (0.88)
Stephens County Duncan	21	1510CST			0	0	0	0	Hail (1.00)
Hughes County 2 W Atwood	21	1515CST			0	0	0	0	Hail (0.75)
Muskogee County 2 E Warner	21	1520CST			0	0	0	0	Hail (1.75)
Carter County Wilson	21	1525CST			0	0	0	0	Hail (1.75)
Rogers County 2 N Inola	21	1530CST			0	0	0	0	Hail (0.75)
McClain County 4 SW Norman	21	1535CST			0	0	0	0	Hail (0.75)
Cleveland County Noble	21	1540CST			0	0	0	0	Hail (0.75)
Garvin County 7 WSW Pauls Valley	21	1543CST			0	0	0	0	Hail (0.75)
Sequoyah County Gore	21	1545CST			0	0	0	0	Hail (0.88)
Garvin County 3 SW Pauls Valley	21	1548CST			0	0	0	0	Hail (1.75)
3 SW Pauls Valley	21	1548CST			0	0	0	0	Thunderstorm Winds (G68)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Adair County Bunch	21	1548CST			0	0	0	0	Hail (1.00)
Jefferson County Ringling	21	1550CST			0	0	0	0	Hail (1.00)
Creek County 5 S Bristow	21	1555CST			0	0	0	0	Hail (0.75)
Love County 9 S Wilson	21	1555CST			0	0	0	0	Hail (1.75)
Carter County Ardmore	21	1600CST			0	0	0	0	Hail (1.75)
Lincoln County 2 SE Sparks	21	1600CST			0	0	0	0	Hail (1.75)
Carter County Ardmore	21	1611CST			0	0	0	0	Thunderstorm Winds (G70)
Adair County 6 S Stillwell Airport	21	1615CST			0	0	0	0	Hail (0.75)
Pontotoc County 6.5 W to 4 WNW to 6 NNE Ada	21	1625CST- 1643CST	11.0	350	0	2	6	0	Tornado (F3)
Pontotoc County 2 SW to 1 E Ada	21	1630CST- 1637CST	5.0	175	0	0	5	0	Tornado (F1)
Johnston County 3 S Tishomingo	21	1630CST			0	0	0	0	Hail (1.75)
3 NW Mannsville	21	1630CST	1.0	100	0	0	4	0	Tornado (F1)
McIntosh County 5 N Eufaula	21	1630CST			0	0	0	0	Hail (1.00)
Muskogee County 3 E Ft. Gibson	21	1635CST			0	0	0	0	Hail (1.00)
Johnston County Near Tishomingo	21	1645CST			0	0	0	0	Hail (2.75)
2 E Mannsville	21	1649CST			0	0	0	0	Hail (1.25)
Cherokee County Tahlequah	21	1650CST			0	0	0	0	Hail (1.25)
Tahlequah	21	1650CST			0	0	0	0	Thunderstorm Winds (G56)
Love County 9 S Wilson	21	1655CST			0	0	0	0	Hail (1.75)
Atoka County 5 NW Caney Near Lane	21	1710CST- 1740CST	19.0	1400	0	6	5	0	Tornado (F2)
Adair County 2 N Watts	21	1715CST			0	0	0	0	Hail (0.75)
Atoka County 1 N Atoka	21	1730CST			0	0	0	0	Hail (2.50)
Lane	21	1730CST			0	0	0	0	Hail (1.25)
Carter County 4 N Dickson	21	1730CST			0	0	0	0	Hail (1.75)
5 S Ardmore	21	1730CST	2.0	100	0	0	4	0	Tornado (F1)
Marshall County 5 SW Madill	21	1747CST			0	0	0	0	Hail (1.75)
Pittsburg County Indianola	21	1800CST	1.5	0	0	0	4	0	Tornado (F1)
1.5 NE Indianola									
Bryan County 1 NW Durant	21	1802CST			0	0	0	0	Hail (1.00)
Bryan County 1 NW Durant	21	1802CST	10.0	150	0	0	5	0	Tornado (F2)
1 NE Armstrong									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Johnston County									
15 W Tishomingo	21	1814CST	0.01	20	0	0	0	0	Tornado (F0)
15 W Tishomingo	21	1814CST			0	0	0	0	Hail (1.50)
Pushmataha County									
Clayton	21	1815CST			0	0	0	0	Hail (0.75)
Love County									
6 N Marietta	21	1819CST			0	0	0	0	Hail (1.75)
Carter County									
4 N Dickson	21	1830CST			0	0	0	0	Hail (1.75)
Jefferson County									
Ryan	21	1830CST			0	0	0	0	Hail (1.00)
Atoka County									
Bently	21	1855CST	0.5	50	0	0	3	0	Tornado (F0)
Muskogee County									
Porum	21	1905CST			0	0	0	0	Hail (0.75)
Marshall County									
6 SW Kingston	21	1905CST			0	0	0	0	Hail (1.75)
Bryan County									
2 N Silo	21	1915CST			0	0	0	0	Hail (1.75)
Haskell County									
1 N Stigler	21	1915CST			0	0	0	0	Hail (0.88)
Le Flore County									
Near Talihina	21	1919CST			0	0	0	0	Hail (0.88)
2 W Muse	21	1925CST	2.0	50	0	1	0	0	Tornado (F1)
Pushmataha County									
4 SW Nashoba	21	1930CST			0	0	0	0	Thunderstorm Winds

Severe thunderstorm winds uprooted trees at Nashoba.

Love County									
Near Kingston	21	1930CST			0	0	0	0	Hail (0.75)
Marshall County									
1 E Little City	21	1942CST			0	0	0	0	Hail (1.75)
Le Flore County									
Big Cedar	21	1948CST			0	0	0	0	Thunderstorm Winds
Bryan County									
5 NE Bokchito	21	1952CST	3.0	100	0	0	0	0	Tornado (F0)
Atoka County									
4 SE Atoka	21	2006CST	0.3	50	0	0	0	0	Tornado (F0)

A weak tornado southeast of Atoka made a brief touchdown and caused no damage or injuries.

Pushmataha County									
Nashoba	21	2015CST			0	0	0	0	Hail (1.00)
Choctaw County									
7 NNW Boswell	21	2015CST			0	0	0	0	Hail (1.25)
Le Flore County									
Heavener	21	2018CST			0	0	0	0	Hail (1.00)
McCurtain County									
Near Battiest	21	2020CST			0	0	0	0	Hail (0.88)
Near Battiest	21	2020CST			0	0	4	0	Thunderstorm Winds
Jefferson County									
Ringling	21	2045CST			0	0	0	0	Hail (1.00)
McCurtain County									
3 W Smithville	21	2050CST			0	2	4	0	Thunderstorm Winds
3 E Smithville	21	2058CST			0	0	0	0	Hail (1.00)
Rufe	21	2103CST			0	0	0	0	Hail (1.75)
Rufe	21	2103CST			0	0	0	0	Thunderstorm Winds (G63)
Le Flore County									
1 S Heavener	21	2115CST			0	0	0	0	Hail (1.00)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

McCurtain County Sherwood	21	2125CST			0	0	0	0	Hail (1.00)
Carter County 2 W Lone Grove	21	2150CST			0	0	0	0	Hail (1.75)
Ardmore	21	2225CST			0	0	0	0	Hail (1.75)
Love County Courtney	21	2230CST			0	0	0	0	Hail (1.00)
Johnston County Pontotoc	21	2255CST			0	0	0	0	Hail (0.75)
Pittsburg County 9 WNW McAlester	21	2350CST			0	0	0	0	Hail (0.75)
Johnston County Coleman	22	0000CST			0	0	0	0	Hail (1.00)
Love County Marietta	22	0200CST			0	0	0	0	Hail (0.75)
Marshall County Kingston	22	0210CST			0	0	0	0	Hail (1.25)
4 SW Kingston	22	0221CST			0	0	0	0	Hail (1.75)
Atoka County 13 W Atoka	22	0230CST			0	0	0	0	Hail (0.75)
Bryan County 6 S Durant	22	0300CST			0	0	0	0	Thunderstorm Winds
McCurtain County Garvin	22	0455CST			0	0	4	0	Thunderstorm Winds
Choctaw County 6 N Boswell	22	0700CST			0	0	0	0	Hail (1.75)
Boswell	22	0700CST			0	0	0	0	Thunderstorm Winds
Pushmataha County 5 W Antlers	22	0705CST			0	0	0	0	Thunderstorm Winds
Clayton	22	0725CST			0	0	0	0	Hail (0.75)
Latimer County Countywide	22	0745CST			0	0	0	0	Hail (0.88)
Countywide	22	0745CST			0	0	0	0	Thunderstorm Winds
Haskell County McCurtain	22	0820CST			0	0	0	0	Hail (0.75)

Thunderstorms developed first over eastern Oklahoma then quickly spread to the south and southwest. Eleven tornadoes were reported along with many reports of large hail and strong winds. The first tornado (F0) touched down briefly in Duncan. It destroyed two horse trailers and did minor structural damage to several homes. Damage was estimated at \$40,000. Large hail at Eufaula caused minor damage to as many as 100 homes with damage estimated at \$8,000. The second, and the strongest tornado (F3) of the day, tore through Ada. It first touched down 6.5 miles west of Ada then moved east-northeasterly to 4 miles northeast of Ada, then back north-northwesterly to a point 6 miles north-northeast of Ada, where it dissipated.

A second tornado (F1) hit the Ada area at about the same time, carving a path from 2 miles southwest of Ada to 1 mile east of Ada. In these two tornadoes damage was estimated at \$950,000, with six homes totally destroyed, 131 homes receiving light to moderate structural damage, three mobile homes totally destroyed, another seven mobile homes receiving structural damage, three barns destroyed, and structural damage to five businesses and one apartment building. Two people were slightly injured in the tornado which went to the north of Ada, but no one was injured in the tornado that went through Ada.

The fourth tornado (F1) struck 1 mile northwest of Mannsville. One house sustained roof damage, and several outbuildings were destroyed. Damage was estimated at \$25,000.

The fifth tornado (F2) touched down 5 miles west of Caney and continued doing intermittent damage to near Lane. One home was destroyed, two homes were damaged, eight mobile homes were totally destroyed, six mobile homes were overturned or damaged. One of these mobile homes contained five children who were injured. A tractor-semitrailer driver was seriously

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

OKLAHOMA Cont'd

injured when his truck was blown off the road. The tornado also struck a freight train, derailing 31 cars with 20 of the cars being overturned. Damage was estimated at \$300,000.

The sixth tornado touched down 5 miles south of Ardmore and had a 2-mile-long path. It did minor structural damage to several homes totaling \$20,000.

The seventh tornado (F1) touched down near Indianola and moved to 1.5 miles northeast of Indianola. It caused an estimated \$50,000 damage, mostly to outbuildings, and minor damage to one home.

The eighth tornado (F2) went along a 10-mile path from 1 mile northwest of Durant to 1 mile northeast of Armstrong. Twenty-five buildings were damaged in Armstrong by the tornado. Damage was estimated at \$355,000.

The ninth tornado touched down briefly 15 miles west of Tishomingo, with no reported damage.

The tenth tornado (F1) touched down 2 miles west of Muse in Le Flore County, which destroyed two homes and damaged four others, with damage estimated at \$150,000.

The eleventh tornado (F0) touched down 5 miles northeast of Bokchito. The path was 3 miles long but the only damage was to trees.

Near Battiest, a chicken house and barn were destroyed, and the roof of a house was damaged by thunderstorm winds. Damage was estimated at \$20,000. Three miles west of Smithville, thunderstorm winds caused an estimated \$15,000 damage to structures. In Garvin thunderstorm winds caused an estimated \$10,000 damage to storage sheds.

Seminole County Seminole

23	1500CST	0	0	3	0	High Winds
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Winds estimated at 68 mph tore part of the roof off a restaurant. Damage was estimated by the owner at \$1,100.

Ellis County

Catesby	26	1600CST	0	0	0	0	Hail (0.88)		
7 NE Catesby	26	1610CST	0	0	0	0	Hail (0.75)		
Harper County									
3 E Rosston	26	1600CST	0	0	0	0	Hail (1.00)		
7 SE Buffalo	26	1650CST	0	0	0	0	Hail (2.75)		
Roger Mills County									
Roll	26	1700CST	0	0	0	0	Hail (0.75)		
Woods County									
Countywide	26	1700CST	0	0	0	0	Thunderstorm Winds (G52)		
1 NNW Freedom	26	1712CST	0	0	0	0	Hail (1.75)		
Countywide	26	1730CST	0	0	0	0	Hail (1.25)		
Woodward County									
Eastern Portion	26	1740CST	0	0	0	0	Hail (1.00)		
Roger Mills County									
4 N Angora	26	1740CST	0	0	0	0	Hail (0.88)		
7.5 W Camargo	26	1755CST	0	0	3	0	Thunderstorm Winds		
Dewey County									
2 S Cestos	26	1825CST	0.01	20	0	0	0	Tornado (F0)	
Woodward County									
6 SE Woodward	26	1830CST	0	0	0	0	Hail (1.25)		
Major County									
4 NNW Chester	26	1835CST	0	0	0	0	Hail (1.00)		
Alfalfa County									
1 SSE Helena	26	1940CST	0	0	0	0	Hail (1.75)		
4.5 SSE Helena	26	1945CST-							
5 NE Goltry		1957CST	9.0	300	0	0	5	0	Tornado (F2)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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 and Kay Counties	26	2005CST-2113CST	44.0	500	0	0	6	0	Tornado (F3)
3 NE Nash to Kansas State Line, 0.5 W I-35									
Kay County	26	2112CST	0.01	20	0	0	0	0	Tornado (F0)
Kansas State Line 0.12 E I-35									
Jackson County	26	2230CST			0	0	0	0	Hail (0.88)
9 S Altus									
Kiowa County	26	2305CST			0	0	0	0	Hail (0.88)
Snyder									
Custer County	26	2305CST			0	0	0	0	Thunderstorm Winds
Clinton									
Canadian County	26	2343CST	0.01	20	0	0	0	0	Tornado (F0)
1 W Union City									
Garfield County	26	2351CST			0	0	0	0	Thunderstorm Winds (G51)
Vance Air Force Base (END)									
Love County	27	0250CST			0	0	0	0	Thunderstorm Winds
Marietta									
Ottawa County	27	0315CST			0	0	6	0	Thunderstorm Winds (G56)
Miami									
Commerce									

Thunderstorms developed first over northwestern Oklahoma, and then spread in the north-central portions of the state, producing five tornadoes, the first four from the same parent thunderstorm. The first reported damage of the day was in Roger Mills County, 7.5 miles west of Camargo, where two sheds were blown down by thunderstorm winds with damage estimated at \$2,000.

The first tornado (F0) of the five produced this evening, was reported 2 miles west of Cestos which was a brief touchdown and produced no reported damage.

The second tornado (F2) touched down 4.5 miles south-southeast of Helena in Alfalfa County at 1945 CST. The tornado had a 9-mile-long path and lifted 5 miles northeast of mile long path and lifted 5 miles northeast of Goltry at 1957 CST. Eleven homes were heavily damaged or destroyed, with damage estimated at \$220,000.

The third tornado (F2) had a 44-mile path from 3 miles northeast of Nash in Grant County at 2005 CST, to its crossing the Kansas border 0.5 miles west of Interstate 35 in Kay County at 2113 CST and dissipating shortly thereafter. It caused mainly shed and barn damage along its path, but along the last 10 miles of its path it increased to F3 intensity and grew from its mostly one-eighth to as wide as three-eighths-mile wide. The Lake Blackwell area was hardest hit, with many tall trees uprooted, snapped at heights of 10 to 15 feet above the ground, or partially debarked. In Grant and Kay Counties, the tornado destroyed two homes, nine vacation cabins, four barns, and one silo. It heavily damaged 12 vacation cabins, 5 mobile homes, and 6 cars. Fifteen mobile homes suffered minor damage. Total estimated damage was \$873,000.

A fourth tornado developed one-eighth mile east of Interstate 35 at the Kansas border at 2115 CST, and moved northeasterly into Kansas. No damage was reported from this tornado while it was in Oklahoma.

A bit before midnight, a fifth tornado (F0) touched down briefly near Union City, but no damage was reported. No reports of injuries were received with any of these tornadoes.

The area of thunderstorms continued to spread to the east, and around 0315 CST a severe thunderstorm produced wind gusts estimated between 60 and 70 mph causing nearly \$700,000 in damages to homes and businesses from the northwestern edge of Miami to Commerce. A total of 85 homes and 39 businesses sustained damages, and four mobile homes were either damaged or destroyed.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

OREGON

ORZ001-003
Coastal Oregon

02 0800PST-
1500PST 0 0 4 0 High winds

The first in a series of Pacific storms brought high winds to the Oregon coast. Sea Lion Caves in Lane County reported gusts to 61 mph, Gold Beach in Curry County reported gusts to 65 mph, and Cape Blanco in Curry County had wind gusts to 75 mph. Rainfall on the south coast fell at the rate of 1 inch in 5 hours.

ORZ006-008-009-013, Cascades and South-Central Oregon

02 1400PST-
1800PST 0 0 4 0 High Winds

The storm and winds moved across the Cascades. A gust to 66 mph was recorded at Mt. Hood Meadows in Hood River County. Gusts to 51 mph at Redmond in Deschutes County blew over 80 wooden trusses of a building under construction. The wind gusted to 40 mph at Kamath Falls in Klamath County.

ORZ010
Umatilla County

02 1700PST-
2100PST 0 0 4 0 High Winds

As the storm moved through northeastern Oregon, the highest speed reported was a gust to 61 mph in Pendleton (Umatilla County).

ORZ001-005
Oregon Coast and Western Interior

02 2100PST-
03 1900PST 0 3 4 0 Severe Thunderstorms
High Winds

The next storm during this first weekend of March was stronger and right behind the first. During the early morning hours of Sunday, the 3rd of March, winds of 51 mph gusted to 82 mph at Gold Beach in Curry County and a peak of 91 mph was felt at the Cape Blanco Lighthouse. Cape Arago in Coos County had gusts to 54 mph, Netarts in Tillamook County had a gust to 62 mph during a thunderstorm, and Astoria in Clatsop County reported a wind gust to 59 mph. In North Bend in Coos County, where winds gusted to 63 mph, a woman was knocked off her feet and broke her hip. In Port Orford in Curry County, a house roof was overturned and a satellite dish was uprooted from its mount. A tree fell on a car in Florence in Lane County and injured the two occupants. The wind gusted to 44 mph at Medford in Jackson County while wind gusts in Eugene in Lane County tipped over scaffolding onto three cars. Sustained wind to 41 mph at Portland in Multnomah County was enough to capsizes a sailboat on the Columbia River.

ORZ006-008-010-011-012
Cascades and North-Eastern Oregon

03 0945PST-
1900PST 0 0 5 0 High Winds

In Umatilla County at Pendleton, an apartment building roof blew off onto a car in the parking lot below at 1530 PST when the wind was 48 mph and reaching gusts to 74 mph. At John Day in Grant County, winds of 52 mph gusting to 69 mph occurred at about the same time. Elsewhere in this region during this time: Burns in Harney County, 40 mph gusting to 54 mph; Rome in Malheur County, 44 gusting to 54 mph; and Redmond in Deschutes County had gusts to 44 mph. Blowing dust and wind caused three accidents. One was on Highway 20 in Harney County; a four-car pileup with no injuries. The other accident was a two-car wreck near Adrian in Malheur County; again, no injuries. A third accident occurred when the wind made a trailer being towed fishtail, break away from the vehicle, and rip out the vehicle's rear axle. The Willowcreek Elementary School in North Vale in Malheur County lost half of its roofing during the high winds, and the roof of the 150 seat Kays Cafe in Cambridge in Malheur County was torn off and deposited on the building next door.

ORZ009-011-012
and Southern Z08
Southeastern Oregon

04 0800PST-
1500PST 0 0 ? 0 High Winds

The third day of the wind storm was over primarily southeastern Oregon. Speeds included 40 mph gusting to 48 mph at John Day in Grant County, gusts to 48 mph at Klamath Falls in Klamath County, gusts to 48 mph in Baker City in Baker County, gusts to 41 mph in La Grande

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

in Union County, at Burns in Harney County gusts to 37 mph and in Redmond in County gusts to 32 mph.

Coos County
Myrtle Point

10 Unknown 0 0 0 0 Snow

The coastal town of Myrtle Point (0 feet MSL) received 1 inch of snow in moderate snowfall.

ORZ005-006-013
Cascades and
Siskiyou Mountains

11 Unknown-
12 0 0 0 0 Heavy Snow

A cold storm moved inland with heavy snowfall in the mountains. Snow totals included 12 inches at Mt. Hood Meadows and Bennett Pass in Hood River County, 5 inches at Chemult in Klamath County, and 4 inches at Siskiyou Summit in Jackson County.

PENNSYLVANIA, EASTERN

PAZ007-016
Upper Susquehanna
and Poconos Zones

14 1200EST 0 0 ? 0 Heavy Snow

Snow began falling over the upper Susquehanna zone 1500 to 1700 EST on the 13th, and 0000 to 0400 EST on the 14th over the Poconos. Snow continued to fall through the 14th and the 15th, but was very light at times. Accumulations reached 6 inches at least in some locations by 1200 on the 14th over the upper Susquehanna, and by 1700 EST over the Poconos. Snowfall finally ended 0400 to 0600 EST on the 15th over the upper Susquehanna zone, and by 1300 to 1500 EST over the Poconos. The highest accumulations were 4 to 9 inches over the upper Susquehanna zone and 4 to 12 inches over the Poconos. Accumulations over the remainder of eastern Pennsylvania were: east-central and southeastern zones, 1 to 2 inches; lower Susquehanna zone, 1 to 4 inches; northeastern Metropolitan zone, 4 to 6 inches; middle Susquehanna zone, 4 to 5 inches; but a few spots in lower Clinton County had 6 to 7 inches.

PENNSYLVANIA, WESTERN

McKean County
Bradford

02 1735EST 0 0 0 0 Hail (0.75)

Three-quarter-inch hail fell at Bradford.

12 NE Smethport

02 1825EST 0 0 0 0 Hail (0.75)
Thunderstorm Winds

Three-quarter-inch hail fell at Eldred, and power lines were blown down.

15 E Smethport

02 1830EST 0 0 0 0 Thunderstorm Winds

Power lines and large trees were blown down east of Port Allegany.

Potter County
14 NE Clouders-
port

02 1830EST 0 0 0 0 Thunderstorm Winds

Thunderstorm winds gusted to 58 mph at Genesee.

Cloudersport

02 1840EST 0 0 0 0 Hail (0.75)

Three-quarter-inch hail fell at Cloudersport.

PAZ001
Erie, Lakeshore
PAZ002, North-
western Portion
PAZ003, Western
Portion

04 0100EST 0 0 ? 0 Ice Storm

Ice coated power lines and branches with ice 1 inch thick caused a total of 40,000 people to lose power in northwestern Pennsylvania.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

PAZ005 Laurel Mountains PAZ006, South-Central Mountains	14	1040EST			0	0	0	0	Heavy Snow
Seven to ten inches of snow fell throughout the area. Other amounts were: 8 inches at Altoona and Donegal; 7 inches at Latrose; and 9 inches at New Florence and Johnstown.									
Washington County Washington	26	2215EST			0	0	0	0	Hail (1.00)
One-inch size hail fell in Washington.									
3 N Washington	27	2120EST			0	0	4	0	High Winds
The roof was blown off of a supermarket in Meadow Lands.									
Allegheny County 14 SE Pit	27	2135EST			0	0	0	0	High Winds
Allegheny County Airport reported wind gusts to 58 mph.									
Armstrong County 5 SE Kittanning	27	2300EST			0	0	0	0	High Winds
Trees were blown down in Cherry Hill and Blanket Hill.									
Westmoreland County 22 NW Greensburg	28	0000EST			0	0	0	0	High Winds
Trees were blown down in New Kensington.									
Warren County 8 N Warren	28	0000EST			0	0	0	0	High Winds
Trees were blown down in Russell.									
Venango County Franklin 5 NE Franklin 5 SE Franklin	28	0000EST			0	0	0	0	High Winds
Trees were blown down in Franklin, Van, Venus, Sugarcreek, and Polk.									
Armstrong County 12 NE Kittanning	28	0030EST			0	0	0	0	High Winds
Trees were blown down in Belknap.									
Erie County Erie	28	0045EST			0	0	0	0	Thunderstorm Winds
The wind gusted to 60 mph at Erie Weather Office.									
Erie	28	0052EST			0	0	4	0	Thunderstorm Winds
Winds were gusting up to 64 mph in the thunderstorm. A 40-foot radio tower was blown down, and metal sheeting was torn off an industrial building.									
10 SW Erie	28	0055EST			0	0	0	0	Thunderstorm Winds
Franklin Centre reported gusts up to 74 mph.									
5 SE Erie	28	0057EST			0	0	0	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Power lines were downed as winds gusted from 70 to 75 mph near the junction of Interstate 90 and Route 8.

8 SE Erie
8 SW Erie 28 0100EST 0 0 5 0 Thunderstorm Winds

The roofs were blown off two barns in Green Township, and a mobile home flipped over in McKean Township.

26 SW Erie 28 0103EST 0 0 0 0 Thunderstorm Winds

The winds were gusting to 60 mph at Cranesville.

14 NE Erie 28 0105EST 0 0 0 0 Hail (1.75)

Golf ball-size hail fell northeast of Erie.

14 SE Erie 28 0110EST 0 0 0 0 Thunderstorm Winds

Power lines and large trees were blown down in Union City.

1 S Erie 28 0115EST 0 0 0 0 Hail (1.50)

Hail, measuring 1.50 inch in size, fell at the intersection of Interstate 79 and Route 20.

Crawford County
15 W Meadville 28 0130EST 0 0 0 0 Thunderstorm Winds

Winds gusted to 65 mph in Linesville.

12 NE Meadville 28 0140EST 0 0 0 0 Thunderstorm Winds

Power lines and large trees were blown down in Cambridge Springs.

PAZ005
Laurel Mountains 28 0200EST 0 0 0 0 High Winds

Trees and power lines were blown down in Cambria and Somerset Counties.

PAZ014, North-Central Mountains 28 0230EST 0 0 0 0 High Winds

Trees and power lines were blown down in Clearfield.

PAZ003
Northwestern Portion 28 0540EST 0 0 0 0 High Winds

Trees were blown down in Sugarcreek in Venango County.

PAZ004
Northern Mountains 28 0549EST 0 0 0 0 High Winds

Winds gusted to 68 mph at Bradford.

PAZ014
North-Central Mountains 28 0630EST 0 0 0 0 High Winds

Telephone poles were blown down in Ferguson Township and trees were blown down in Harris Township in Centre County with gusts to 70 mph. Trees were uprooted and power lines blown down between Clearfield and Phillipsburg where the winds were estimated to be from 70 to 80 mph.

PAZ004
Northern Mountains 28 0630EST 0 0 ? 0 High Winds

Tree limbs were blown down on houses, and 1000 people were without power in McKean County. A tree fell on a house in Coudersport.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

PENNSYLVANIA, Western Cont'd

PAZ005 28 0630EST 0 0 0 0 **High Winds**
Laurel Mountains
 Trees and power lines were blown down in Cambria County.

PAZ006 28 0630EST 0 0 0 0 **High Winds**
South-Central Mountains
 Trees were blown down at Tyrone in Blair County.

RHODE ISLAND

RIZALL 02 1000EST-1400EST 0 0 4 0 **High Winds**
 Strong southwesterly winds caused isolated property damage and scattered power outages. A peak gust to 56 mph was recorded by the National Weather Service at T. F. Green Airport in Warwick at 1335 EST.

RIZ001 14 1900EST-15 0900EST 0 0 4 0 **Heavy Snow**
 Heavy, wet snow accumulated 7 to 12 inches on the highest terrain in northwestern Rhode Island. Trees were knocked down and power outages occurred in Coventry, Foster, Glocester, and Burrillville.

SOUTH CAROLINA

Anderson County
Star 01 1940EST 0 0 4 0 **Thunderstorm Winds (G70)**
Iva
Abbeville County
Lowndesville 01 1945EST 0 0 ? 0 **Thunderstorm Winds**
Anderson County
Williamston 01 2000EST 0 0 2 0 **Thunderstorm Winds (G55)**
Honea Path

A weakening line of severe thunderstorms moved from northeastern Georgia into upstate South Carolina during the early evening. Wind gusts as high as 70 knots were estimated shortly after the storms crossed Lakes Hartwell and Russell. The most severe damage occurred around Starr and Iva, along S.C. Highway 81. About \$25,000 in damage was done to one place of business and home combine. Ten to fifteen mini buildings were destroyed, some mobile homes were severely damaged, and a couple of garages were torn up. Numerous other small buildings in the area were severely damaged or destroyed, and numerous trees were blown down. The edge of this area of damage affected the Lowndesville area, though not as severely, with only a few trees blown down. The storm causing the most intense wind moved across southern Anderson County. A few trees were blown down at Honea Path and 10 to 15 trees were blown down in a residential area at Williamston. Some brief power outages occurred across parts of Greenville, Laurens, and Spartanburg Counties, but not significant damage was reported.

Aiken County
Aiken 01 2215EST 0 0 ? 0 **Thunderstorm Winds**
3.5 S to 4 SE 01 2215EST 1.5 150 0 0 ? 0 **Tornado (F2)**
Ellenton

A tornado moving from west to east caused damage to a stand of timber on the Savannah River Site.

College Acres 01 2230EST 0 0 ? 0 **Thunderstorm Winds**
Lexington County
Lexington 01 2300EST 0 0 ? 0 **Thunderstorm Winds**
Orangeburg County
Ellore 01 2330EST 0 0 ? 0 **Thunderstorm Winds**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

SOUTH CAROLINA Cont'd

Richland County Forest Acres	01	2340EST			0	0	4	0	Thunderstorm Winds
Lee County 5 NNW Bishopville	02	0030EST			0	0	2	0	Thunderstorm Winds
Darlington County Dovesville	02	0030EST			0	1	5	0	Thunderstorm Winds
4 E to 4.2 E Hartsville	02	0045EST	0.2	100	0	2	5	0	Tornado (F0)

A tornado injured two, destroyed five mobile homes, and left one mobile home with major damage, eight with minor damage, one single family dwelling with major damage and one single family home with minor damage. In Dovesville, thunderstorm winds injured one person, and destroyed seven mobile homes. In Aiken County, thunderstorm winds destroyed one mobile home, uprooted trees and blew down business signs. In Orangeburg County, thunderstorm winds destroyed an outbuilding near downtown Elloree. In Richland County, thunderstorm winds damaged the roof at Trenholm Plaza shopping center, along with five homes and power lines. In Lee County, underpinnings from mobile homes were removed and some trees blown down.

Clarendon County Manning	03	0300EST			0	0	?	0	Thunderstorm Winds
Dorchester County 3 S Summerville	03	0445EST			0	0	0	0	Thunderstorm Winds
Orangeburg County Bowman	03	0700EST			0	0	?	0	Flooding
Charleston County Countywide	03	0800EST			0	0	?	0	High Winds
Beaufort County Island Sections	03	0800EST			0	0	?	0	High Winds
Beaufort	03	0800EST			0	0	?	0	High Winds
Bluffton	03	0800EST			0	0	?	0	High Winds
Horry County Myrtle Beach	03	0830EST			0	0	3	0	High Winds

High winds, created by a strong pressure gradient, damaged Beaufort, Charleston, and Horry Counties, and contributed to coastal flooding in Georgetown County.

Orangeburg County Eastern Sections	03	0830EST			0	0	?	0	Thunderstorm Winds
Dorchester County Summerville	03	0900EST			0	0	?	0	Thunderstorm Winds
Berkeley County Lake Moultrie and Vicinity	03	0915EST			0	0	?	0	Thunderstorm Winds
Charleston County Charleston	03	0915EST			0	0	?	0	Thunderstorm Winds
N Charleston	03	0915EST			0	0	?	0	Lightning
Georgetown County Garden City	03	0916EST			0	0	?	0	Coastal Flood

High tides combined with strong southerly winds to push the morning high tide onto roadways.

Berkeley County Cross	03	0930EST			0	0	?	0	Thunderstorm Winds
St. Stephen	03	0930EST			0	0	?	0	Thunderstorm Winds
Williamsburg County Countywide	03	0945EST			0	0	?	0	Thunderstorm Winds
Georgetown County 5 S Georgetown	03	1000EST			0	0	?	0	Thunderstorm Winds
Near Sampit	03	1000EST			0	0	?	0	Thunderstorm Winds
Marion County Southern Portions	03	1007EST			0	0	?	?	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Horry County									
Loris	03	1015EST			0	0	?	?	Thunderstorm Winds
North Myrtle Beach	03	1015EST			0	0	5	0	Thunderstorm Winds
Conway	03	1030EST			0	0	?	?	Hail (1.75) Thunderstorm Winds
Lancaster County									
Countywide	03	1045EST			0	0	?	?	Flood
Lancaster	03	1045EST			0	0	?	?	Flood
Chester County									
Chester	03	1045EST			0	0	?	0	Urban Flood
York County									
Rock Hill	03	1045EST			0	0	?	0	Urban Flood

High winds followed by severe thunderstorms, blew down trees and power lines, disrupting electric service to 35,000 customers throughout the coastal counties. In the Midlands and Piedmont, severe thunderstorms developed in a warm, moist air mass during the early morning hours, and moved through the area. Some of the more significant damage is described below.

Along the coast, in Beaufort County, on Hilton Head Island, an El Camino automobile was crushed when a tree fell on it as it was parked in a driveway. In Berkeley County, at St. Stephen and Cross, there was heavy tree damage. The public reported hearing a loud roaring sound. A tornado was not confirmed to have occurred. In Charleston County, in Charleston, winds blew the roof off of the San Souci plantation house, that was built in 1804, onto an apartment building next door. In North Charleston, the winds blew the roof off an auto parts and repair shop near the intersection of North Rhett Avenue and Remount Road. Also in North Charleston, lightning struck a tree, which fell onto a power pole causing the power pole to fall, cutting off electricity to a small neighborhood. Wind gusts to 69 mph were recorded at the Charleston Weather Service Office and gust to 73 mph were recorded at the Coast Guard Station at Charleston Harbor. In Dorchester County, two large trees were blown down along S.C. Highway 642 at 0445 EST. Also, at 0900 EST, numerous trees and power lines were blown down as a result of thunderstorm winds. In Horry County, high winds blew a shed onto a mobile home, damaging the shed, its contents, and the mobile home. High winds disrupted power to 2,000 customers, and blew off a large section of the roof at Loris Elementary School. In Conway, golf ball-size hail was reported. In Georgetown, thunderstorm winds toppled trees weakened by Hurricane Hugo (September 1989), causing scattered power outages in the county. Most of the damage was concentrated south of the city of Georgetown, along U.S. Highway 17, and near Sampit. In Orangeburg County, about 200 customers were without electricity because of the storm. Several roads near Bowman were washed out when Cow Castle Creek overflowed its banks. In the Eastern Piedmont, in Chester County, Lancaster County, and York County, some roads were made impassable by creeks overflowing their banks in the county. In the City of Lancaster, Independence Park was flooded. In the city of Rock Hill, urban flooding occurred at Rock Hill Mall, and on Cherry Road, and Oakland Avenue.

Lexington County									
Leesville	03	1415EST			0	0	?	?	Hail (0.75)
Jasper County									
Ridgeland	03	1430EST			0	0	?	?	Thunderstorm Winds
Aiken County									
8 E Jackson to 5 SE New Ellenton	03	1500EST	5.0	200	0	0	?	?	Tornado (F2)
9 E Jackson to 6 E New Ellenton	03	1500EST	6.0	300	0	0	?	?	Tornado (F2)

Two separate tornadoes moving from southwest to northeast damaged a stand of timber on the Savannah River Site. Both of the above tornadoes were possibly spawned from the same parent thunderstorm cell. The storm with the 6-mile-long path caused more damage than the storm with the 5-mile-long path.

Abbeville County									
Countywide	03	1600EST			0	0	0	0	Flood

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Colleton County									
Walterboro	03	1600EST			0	0	?	?	Thunderstorm Winds
Ruffin	03	1600EST			0	0	?	?	Thunderstorm Winds
Sumter County									
Shaw Air Force Base	03	1715EST			0	0	?	0	Thunderstorm Winds (G55)
Darlington County									
Hartsville	03	1800EST			0	0	3	0	Thunderstorm Winds
Greenwood County									
Countywide	03	1800EST			0	0	0	0	Flood
Florence County									
Countywide	03	1805EST			0	0	?	?	Thunderstorm Winds

Florence County Sheriff's Office reported trees and power lines downed.

Marlboro County									
Bennettsville	03	1820EST			0	0	?	0	Thunderstorm Winds Lightning Flood
Marion County									
Mullins	03	1830EST			0	0	?	?	Thunderstorm Winds

Two lines of severe thunderstorms moved through South Carolina in the afternoon hours of March 3. One moved from west to east, while the other moved from near Savannah, Georgia, to Williamsburg County. The counties on and near the coast were affected by the latter, while interior counties were affected by the former. At 1600EST, Charleston reported the lowest sea level pressure since the passage of Hurricane Hugo, September 21-22, 1989, with a pressure of 29.20 inches (988.83 mo). In the Midlands, in Lexington County, hail was reported in Leesville. It was thick enough to almost cover the ground. Thunderstorm winds blew out windows in a two-block area around South Fifth Street in Hartsville, in Darlington County. In Bennettsville, in Marlboro County, lightning struck the 911 emergency dispatch center, knocking out power to it. In Mullins, Marion County, thunderstorm winds blew down trees. In the Lower Piedmont, in Abbeville and Greenwood Counties, heavy rain and showers persisted long enough to cause some small streams to overflow. A couple of roads and bridges were covered and some urban areas in Greenwood flooded. Along the coast, in Jasper County, trees were downed east of Ridgeland along S.C. Highway 462. In Colleton County, there were extensive power outages. Trees were downed in scattered areas of Walterboro and Ruffin. The media falsely reported a tornado in Walterboro.

Fairfield County									
Northern Portion	04	Early AM			0	0	?	?	Flood

Three feet of a bridge were washed out on S.C. Highway 200 at 9 miles northeast of Winnsboro, and another four feet of road were washed out.

Richland County									
Western and Southern Portions	13	1827EST			0	0	?	0	Hail (1.00)
Lexington County									
Gaston	13	1830EST			0	0	4	0	Hail (1.25)
7 S Columbia	13	1833EST			0	0	?	0	Hail (2.50)
Greenwood County									
Ware Shoals	13	1910EST			0	0	?	0	Hail (1.75)
Laurens County									
5 SE Ware Shoals	13	1915EST			0	0	?	0	Thunderstorm Winds
Calhoun County									
Sandy Run	13	1925EST			0	0	?	?	Hail (1.75)
Laurens County									
2 S Clinton	13	1944EST			0	0	?	0	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Calhoun County									
St. Matthews	13	2010EST			0	0	?	?	Hail (1.50)
Ft. Motte	13	2015EST			0	0	?	?	Hail (2.00)
Sumter County									
Southern Portion	13	2015EST			0	0	?	?	Hail (0.75)
Clarendon County									
Manning	13	2030EST			0	0	?	?	Hail (1.75)
Fairfield County									
Ridgeway	13	2110EST			0	0	?	?	Hail (1.75)
Williamsburg County									
Kingstree	13	2117EST			0	0	?	?	Thunderstorm Winds Hail (0.75)

A severe thunderstorm moved from over eastern Lexington County to Williamsburg County, bringing hail, and gusty winds to a five-county area. At Sandy Run, hail accumulated to a depth of 4 inches. In Gaston, hail destroyed a 1991 pickup truck. In Greenwood and Laurens Counties, a severe thunderstorm developed quickly near Ware Shoals and produced large hail and some wind damage. A few trees and power lines were blown down in a couple of areas in Laurens County. In an isolated severe thunderstorm, the observer at Ridgeway reported golf ball-size hail covering the ground.

York County									
Near York	29	1315EST			0	0	?	0	Thunderstorm Winds
New Zion	29	1315EST			0	0	?	0	Thunderstorm Winds

Significant damage occurred in York County, where two mobile homes were destroyed, and found damaged, as thunderstorm winds truck the town of York. In New Zion, York, County, trees were damaged as a result of thunderstorm winds.

Aiken County									
Eureka	29	1352EST			0	0	0	0	Funnel Cloud
Fairfield County									
Western Portion	29	1355EST			0	0	?	0	Thunderstorm Winds
Ridgeway	29	1415EST			0	0	?	0	Thunderstorm Winds

In Fairfield County, there was pea-size hail, thunderstorm winds, heavy rain, and downed trees.

Aiken County									
8 SE Jackson	29	1422EST	Short	Narrow	0	0	?	0	Tornado (F2)

A tornado briefly touched down causing impressive damage to trees and power poles. The 20-inch diameter power poles were snapped 15 feet off the ground, and the trees were snapped and chopped off. Some small trees were uprooted.

Edgefield County									
Northeastern Portion	29	1424EST			0	0	0	0	Funnel Cloud

In the Lower Piedmont, in Aiken and Edgefield Counties, two funnel clouds were spotted. Although the area of the sighting was close together, it has not been determined if the two were the same.

Lancaster County									
Kershaw	29	1445EST			0	0	?	0	Thunderstorm Winds

In the town of Kershaw, several large trees fell on power lines and two poles were downed as a result of thunderstorm winds.

Jasper County									
0.5 E Ridgeland	29	1452EST			2	2	4	0	Thunderstorm Winds (G45)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

In Jasper County, a 66-year-old man and his 21-year-old son were killed when thunderstorm winds blew a dead pine tree, 3 feet in diameter, onto a car and through its windshield as it was traveling on U.S Highway 278, 0.5 mile east of the intersection of Secondary Road 213. An infant and his mother, who were in the back seat of the car, were hospitalized due to injuries. (M66V)(M21V)

Greenville County Greenville Taylors	29	1500EST			0	0	?	0	Flash Flood
Chesterfield County 2 E Pageland	29	1500EST	Short	Narrow	0	4	5	0	Tornado (F0)

A tornado injured four (two critically), destroyed two mobile homes, and damaged five mobile homes.

Marlboro County 5.3 WNW to 5.5 NW McColl	29	1503EST	1.5	100	0	0	5	0	Tornado (F1)
5.4 NW McColl	29	1505EST			0	0	4	0	Thunderstorm Winds
5.6 NNW McColl	29	1510EST			0	0	4	0	Thunderstorm Winds

A weak tornado, moving from southwest to northeast, damaged nine homes, and five barns. A mobile home was lifted off its foundation and placed into the front yard by the storm. Damages ranged from minor to moderate. The tornado skipped three times over its 1.5-mile-long path before dissipating. Total damages from the thunderstorm winds and tornado were estimated at \$130,000.

Orangeburg County Countywide	29	1515EST			0	0	?	0	Thunderstorm Winds
Bamberg County 7 S Bamberg	29	1530EST			0	0	?	0	Thunderstorm Winds
Orangeburg County Between Branch- ville and Bowman	29	1545EST			0	0	?	0	Thunderstorm Winds
Cherokee County Southern Portion	29	1600EST			0	0	?	0	Flash Flood
Union County Jonesville	29	1600EST			0	0	?	0	Flash Flood
Bamberg County 7 S Bamberg	29	1630EST			0	0	?	0	Thunderstorm Winds
Orangeburg County Between Branch- ville and Bowman	29	1800EST			0	0	?	0	Thunderstorm Winds

Numerous thunderstorms produced 3 to 4 inches of rain during the day and caused some mostly minor flooding around the Upstate. The most significant flooding occurred in northern Greenville County where a few roads were closed, and in the eastern Upstate counties where a couple of roads were closed by flooded small streams. The combination of gusty winds and wet ground caused a couple of trees to fall across power lines in several counties, but the winds were only in the 40-knot range. In the Eastern Piedmont, near Great Falls, in Chester County, a car hydroplaned into the path of a tractor-semitrailer on a secondary road, killing two people. In the Midlands, the most significant damage was as follows: in Marlboro County, seven homes were damaged, and 200 people were affected by power outages, as at least one confirmed tornado struck the Bennettville, and Newtonville areas. Most of the damage in Chesterfield County was in the vicinity of Pageland. In Orangeburg County, one mobile home was destroyed and four single family homes suffered minor damage between Branchville and Bowman. Also at the same vicinity of Orangeburg County, one double-wide mobile home sustained major damage in the 1800 EST incident.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

SDZ007	11	1600CST-							
Black Hills	12	0700CST			0	?	?	0	Heavy Snow

A developing winter storm centered to the south of the Black Hills on March 11th, caused moist air to be lifted orographically over the northern Black Hills, dumping heavy snow. From the evening of March 11th through the morning of March 12th, heavy snow fell on the northern Black Hills. Total snowfall amounts of 3 to 9 inches were reported. Custer reported 9 inches of new snow, and Lead and Deerfield reported 8 inches of new snow.

South-Central and Northeastern South Dakota	12	0700CST- 2400CST							
					0	?	?	0	Heavy Snow

A major winter storm dumped heavy snow on south-central South Dakota mostly during the morning into early afternoon as the storm moved slowly northeast across southeastern South Dakota. Heavy snow was reported in Tood, Mellette, Tripp, Gregory, and Charles Mix Counties between 0800 and 1500 CST on March 12th. Winner reported 6 to 8 inches of new snow, and Acadamy reported 6 inches. As the storm moved northeast it accelerated and dropped lesser amounts of snow over east-central and northeastern South Dakota. Total snow amounts ranged from 2 to 5 inches over east-central and northeastern South Dakota.

Extreme Southeastern South Dakota	27	1000CST- 1800CST							
					0	?	?	0	Heavy Snow

A winter storm clipped the extreme southeastern corner of South Dakota on the day of March 27th. Snowfall amounts from Beresford to Sioux City Iowa ranged from 4 to 7 inches. Snowfall amounts dropped off dramatically in a short distance. Yankton and Vermillion reported 1 to 3 inches while Sioux Falls received only a 0.5 inch of new snow.

TENNESSEE

Bledsoe County Pikeville	02	1745CST							
Macon County	22	0400CST			0	0	2	0	Hail (0.75) Thunderstorm Winds

High winds blew a carport onto the roof of a house in Lafayette.

Chester County	22	1608CST							
	22	1630CST			0	0	3	0	Funnel Cloud Thunderstorm Winds

Power lines and trees were downed by strong winds, and a porch was blown off a house south of Deanburg.

Carroll County	22	1615CST							
					0	0	2	0	Thunderstorm Winds

An outbuilding had roof damage 13 miles north of Huntingdon, and numerous trees were downed along Highway 77.

Gibson County	22	1617CST							
					0	0	0	0	Thunderstorm Winds

Between Milan and Bradford, along Highway 45, mobile homes were damaged, and shingles were blown off roofs. Trees and power lines were downed also.

Madison County	22	1625CST							
					0	0	3	0	Thunderstorm Winds

Thunderstorm winds downed trees and power lines south of Jackson.

McNairy County 5 E Pocahontas Adamsville	22	1635CST- 1700CST	22.0	200	4	45	7	0	Tornado (F3)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

TENNESSEE Cont'd

A massive tornado plowed through sections of western Tennessee, first touching down near Big Hill Pond State Park just east of Pocahtontas and then traveling northeast 22 miles across the county. The hardest hit area was Selmer with a population of about 4,000 people, where 65 homes and 28 mobile homes were completely destroyed. The tornado was over 300 yards wide at Selmer, where it demolished most of the high school, and heavily damaged over 20 downtown business structures. Three deaths occurred in Selmer; two people were crushed in an auto parts store, and one person died in a used car lot when a car smashed into him. After leaving Selmer, the tornado continued along Highway 64 on its way to Adamsville. In between, the tornado struck the Lawton community, causing the fourth fatality, and wrecking the fire station; a community center, and another school. The fourth death occurred when a man was killed when a brick wall fell on him as his house collapsed. In Adamsville, the tornado also wrecked several houses and buildings. In addition to the property damage of over \$15 million, several hundred acres of timber, mostly pines, were felled by the tremendous winds. (M47P)(M21O)(F96O)(M30O)

Hardeman County 22 1655CST 0 0 2 0 **Thunderstorm Winds**
Trees downed in the eastern part of the county.

Benton County
Big Sandy
Tennessee River 22 1700CST-1715CST 7.0 150 0 0 6 0 **Tornado (F2)**

A twister severely damaged 35 structures near Big Sandy (10 were completely destroyed), as a storm plowed through northern Benton County from just north of Big Sandy to the Tennessee River.

Hardin County
Crump
Tennessee River
Northwestern Portion 22 1725CST-1735CST 1.0 50 0 0 4 0 **Tornado (F1)**
22 1815CST 0 0 3 0 **Thunderstorm Winds**

Widespread damage occurred in the northwestern part of the county. Several homes sustained at least moderate damage. The tornado that demolished parts of Adamsville continued moving northeast through Hardin County, crossing the Tennessee River, skipping and causing less severe damage. The tornado still snapped utility poles and flattened trees along its route. The tornado and accompanying thunderstorm winds (possible downburst) damaged 164 residences, 6 were destroyed (2 businesses destroyed, 8 damaged). Most of the damage was in Crump and the Cerro Gordo community.

Wayne County
Clifton 22 1730CST-1740CST 1.0 50 0 0 5 0 **Tornado (F1)**

The Selmer tornado continued into Wayne County and touched down near Clifton, where the winds ruined a marina and a small rubber factory. The tornado touched down along the eastern bank of the Tennessee River, slamming into the new houseboat slips and the marina store, lifting the store off its foundation and pushing it toward the dock. It then shot across a bend north of Clifton, and then struck the rubber plant where it destroyed the back side of the building. A mobile home was in the path of the tornado and was so utterly destroyed that when it was found, debris from the mobile home was wrapped tightly around trees hundreds of feet from where it had been parked.

Hickman County 22 1755CST 0 0 2 0 **Thunderstorm Winds**
Trees were knocked down in the southwestern part of the county.

Dickson County 22 1800CST 0 0 2 0 **Thunderstorm Winds**

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TENNESSEE Cont'd

Trees were knocked down on Possum Hollow Road.

Lewis County
Sweetwater
Howenwald

22 1805CST-1815CST 5.0 50 1 14 7 0 Tornado (F2)

Three homes, eight mobile homes, and six businesses were completely destroyed as the same storm that produced the Selmer tornado slammed into Howenwald. Several trees were downed along the path of the storm, in addition to moderate damage done to a number of homes. A four-month-old baby girl was killed when pulled from her father's arms in an apartment in Howenwald. (FOOP)

Maury County

22 1810CST 0 0 2 0 Thunderstorm Winds

Several trees and power lines were knocked down.

Williamson County

22 1815CST 0 0 4 0 Thunderstorm Winds

Two homes were damaged by thunderstorm winds.

Davidson County

22 1820CST 0 0 2 0 Thunderstorm Winds
22 1910CST 0 0 3 0 Thunderstorm Winds

A large tree was downed on Sandersville Road. Other trees that were knocked down caused a power outage in the southern section of the county.

Marshall County

22 1825CST 0 0 2 0 Thunderstorm Winds
22 1915CST 0 0 2 0 Thunderstorm Winds

Several trees were knocked down in the southern part of the county. Trees were also knocked down near Lewisburg.

Robertson County

22 1825CST 0 0 3 0 Thunderstorm Winds

Several trees were knocked down on top of power lines. Between 20 and 30 homes lost power during the storm.

Rutherford County
Murfreesboro

22 1915CST 0 0 6 0 Thunderstorm Winds

A total of 53 homes were damaged in Murfreesboro. A funnel cloud was spotted near Highway 96. An outlet mall roof was partially torn off, the old National Guard Armory Building roof was torn off, and windows at Lascassas School were blown out.

Dekalb County
Smithville
Smithville

22 1945CST 0 0 0 0 Hail (0.75)
22 2000CST 0 0 3 0 Thunderstorm Winds

Marble-size hail was reported in Smithville. The roof was torn off one home as strong thunderstorm winds pelted middle and east Tennessee. The boat dock at Hidden Harbor on Center Hill Lake near Smithville sustained major damage. Four boats received minor damage when the dock collapsed. Trees were uprooted and power lines were downed.

Wilson County
Watertown

22 1945CST 0 0 3 0 Thunderstorm Winds

In Watertown, a garage sustained damage from thunderstorm winds.

Putnam County
Cookeville

22 2000CST 0 2 4 0 Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TENNESSEE Cont'd

Two people were injured near Cookeville when thunderstorms slammed through. Four mobile homes were destroyed and 31 homes were damaged near Algood.

Fentress County Jamestown	22	2015CST			0	1	5	0	Thunderstorm Winds
Near Jamestown, strong thunderstorms blew trees down and ripped roofs and back porches off a couple of homes. A man was injured when a large oak tree was blown down onto his truck while driving toward Tinch.									
Lawrence County	22	2020CST			0	0	0	0	Hail (0.75)
	22	2025CST			0	0	4	0	Thunderstorm Winds
Two businesses sustained damage, and trees and power lines were downed.									
Grundy County Altamont	22	2228CST			0	0	0	0	Hail (1.75)
Giles County	22	2030CST			0	0	2	0	Thunderstorm Winds
In Giles County, some trees were knocked down.									
Marshall County	22	2050CST			0	0	2	0	Thunderstorm Winds
Several trees were downed in Marshall County.									
Bedford County	22	2055CST			0	0	2	0	Thunderstorm Winds
A few trees were knocked down by thunderstorm winds.									
Grundy County Altamont	22	2218CST			0	0	0	0	Hail (1.75)
Smith County Carthage	22	2300CST			0	0	2	0	Thunderstorm Winds
High winds blew down two trees just south of Carthage and small hail was reported.									
Bledsoe County Pikeville	22	2305CST			0	0	0	0	Hail (0.75)
Shelby County SE Memphis	27	1310CST			0	0	0	0	Hail (0.75)
SE Memphis	27	1320CST	0.5	50	0	0	2	0	Tornado (F1)
Fayette County Somerville	27	1325CST			0	0	2	0	Thunderstorm Winds
Somerville	27	1400CST			0	0	0	0	Thunderstorm Winds
Henderson County	27	1500CST			0	0	2	0	Thunderstorm Winds
Decatur County Scott's Hill	27	1500CST			0	0	5	0	Thunderstorm Winds
Decaturville									
Perry County Linden	27	1515CST			0	0	3	0	Thunderstorm Winds
Lobelville									
Several trees were knocked down and the awning on the jail was damaged.									
Hickman County Nunnally	27	1545CST			0	0	2	0	Thunderstorm Winds
Vernon									
A few trees were blown down by thunderstorm winds.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

TENNESSEE Cont'd

Cheatham County Kingston Springs	27	1558CST			0	0	2	0	Thunderstorm Winds Trees fell on top of power lines.
Davidson County	27	1630CST			0	0	3	0	Thunderstorm Winds Trees were blown on top of the Viacom Cable Tower.
Cheatham County Ashland City	27	1706CST			0	0	3	0	Thunderstorm Winds A roof from a patio was blown off and fell onto some power lines.
Dekalb County Smithville	27	1850CST			0	0	3	0	Thunderstorm Winds Several trees were downed and a mobile home sustained damage.
White County Western Portion	27	1900CST			0	0	5	0	Thunderstorm Winds Two mobile homes were destroyed and 17 homes were damaged with one home suffering severe damage. A truck repair shop and two lumber yards were damaged as well.
Franklin County Winchester	27	2015CST			0	0	0	0	Hail (1.00)
Hickman County Pleasantville	27	1530CST			0	0	3	0	Thunderstorm Winds
Davidson County Western Portion	27	1615CST			0	0	0	0	Thunderstorm Winds
Robertson County Near Springfield	27	1620CST			0	0	0	0	Hail (1.00)
Rutherford County Lavergne	27	1640CST			0	0	3	0	Thunderstorm Winds
Cumberland County Mayland Crossville	27	1930CST			0	0	3	0	Thunderstorm Winds
Anderson County	27	2038CST			0	0	2	0	Thunderstorm Winds
Marion County S Pittsburg	27	2100CST			0	0	0	0	Thunderstorm Winds
Sequatchie County Dunlap	27	2100CST			0	0	0	0	Thunderstorm Winds
Rhea County 2 W Dayton	27	2115CST			0	0	0	0	Thunderstorm Winds
Morgan County Lancing	27	2115CST			0	0	4	0	Thunderstorm Winds
Meigs County Southern Portion	27	2130CST			0	0	0	0	Thunderstorm Winds Hail (0.75)

A rash of severe weather, associated with a strong early spring cold front, prompted over 30 severe thunderstorm warnings and a rash of damage reports. The action first started in western Tennessee as a small tornado touched down in southeastern Memphis which took the roofing off a couple of barns and toppling several large cedar trees. In Decatur County, damage surveys indicated an intense downburst. A wide swath of damage was evident from around Scott's Hill eastward to Decaturville. Many large trees were blown over, roofs were damaged on homes and barns, and a couple of storage buildings were destroyed. A male child was struck in the head by airborne debris near Scott's Hill; the only reported injury. As the thunderstorms and cold front pressed eastward, the damage continued. Most of the reports were downed trees and power

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CRODSS	

TENNESSEE Cont'd

lines, especially in middle and east Tennessee. Several homes were damaged as trees were blown on them by the strong straight-line winds. In Morgan County (east Tennessee), very strong winds produced considerable damage along a 0.25-mile-wide and 3-mile-long path near the town of Lansing. A total of ten houses and buildings were damaged; one was completely destroyed. Numerous trees and power lines were also downed. Amazingly, only one injury was reported in this entire severe weather episode.

Lake, Obion, Dyer, and Gibson Counties	29	Afternoon	0	0	3	0	Heavy Snow
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A rare spring snowstorm dumped between 3 to 6 inches on sections of northwestern Tennessee, downing trees and knocking out power for up to 24 hours in some cases. The storm started out as a mixture of hail, sleet, and rain around midmorning. The mixture then turned to heavy, wet snow in the early afternoon before ending around 1800 CST. The snow fell fast and furiously and the weight on the limbs caused trees with early spring blooms to topple. Several accidents occurred as drivers were sliding all over the roadways.

TEXAS, Northern

Parker County	16	1315CST	0	0	?	?	Hail (0.75)
Millsap	16	1318CST	0	0	?	?	Thunderstorm Winds (G52)
Weatherford							

Northern Texas	21-						
	23						

At 1200 CST March 21st, a surface cold front was located over extreme western portions of northern Texas. A cluster of severe thunderstorms developed along the eastward moving cold frontal boundary during the early afternoon of March 21st and produced several large hail events and isolated damaging downbursts of wind through March 22nd and early March 23rd. (See entries below on the next few pages.)

Wilbarger County	21	1344CST	0	0	?	?	Hail (0.75)
Oklaunion							
Archer County	21	1350CST	0	0	?	?	Hail (1.00)
Scotland	21	1414CST	0	0	?	?	Hail (0.75)
1 S Lake Wichita	21	1435CST	0	0	?	?	Hail (1.75)
1 S Lake Wichita	21	1435CST	0	0	?	?	Hail (1.75)
Wichita County	21	1402CST	0	0	?	?	Hail (0.75)
Iowa Park	21	1408CST	0	0	?	?	Hail (1.75)
4 S Iowa Park	21	1408CST	0	0	?	?	Hail (1.75)
Clay County	21	1403CST	0	0	?	?	Hail (0.75)
6 S Henrietta	21	1408CST	0	0	?	?	Hail (0.75)
1 S Henrietta	21	1412CST	0	0	?	?	Hail (1.00)
Henrietta	21	1412CST	0	0	?	?	Hail (1.00)
Eastland County	21	1740CST	0	0	3	?	Thunderstorm Winds
Rising Star							Hail (1.00)

In Rising Star, strong winds blew down a few trees.

Palo Pinto County	21	1815CST	0	0	?	?	Hail (1.75)
10 W Palo Pinto							
Wise County	21	1919CST	0	0	?	?	Hail (1.75)
Alvord	21	1950CST	0	0	?	?	Hail (1.75)
Taylor County	21	1950CST	0	0	?	?	Hail (1.75)
Merkel	21	1950CST	0	0	?	?	Hail (1.75)
Jones County	21	1955CST	0	0	?	?	Hail (0.75)
5 N Hawley	21	2005CST	0	0	4	?	Thunderstorm Winds
Abilene	21	2010CST	0	0	?	?	Hail (0.75)
Funston	21	2010CST	0	0	?	?	Hail (0.75)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CRODGS	

TEXAS, Northern Cont'd

5 N Merkel	21	2050CST			0	0	?	?	Hail (1.75)
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Strong winds lifted the roof off a building and downed several trees on power lines in Abilene.

Throckmorton County

3 NE Woodson	21	2028CST			0	0	?	?	Hail (0.75)
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Taylor County

Shep	21	2150CST			0	0	?	?	Hail (0.75)
12 NE Tuscola	21	2200CST	Short	Narrow	0	0	?	?	Tornado (F0)
View	21	2205CST			0	0	2	?	Hail (2.00)
Dyess Air Force Base	21	2216CST			0	0	?	?	Hail (1.00)
16 W Tuscola	21	2219CST			0	0	?	?	Hail (1.75)
Potosi	21	2222CST			0	0	?	?	Hail (2.00)
Abilene	21	2232CST			0	0	?	?	Hail (0.75)

A Department of Public Safety patrolman observed a brief tornado touchdown in open country near Coronados Camp (12 miles northeast of Tuscola). Two-inch hail broke several windows at View.

Clay County

Vashti	21	2215CST			0	0	?	?	Hail (0.88)
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Callahan County

Clyde	21	2245CST			0	0	?	?	Hail (0.75)
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Stephens County

Breckenridge	21	2340CST			0	0	?	?	Hail (1.75)
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Caddo

Caddo	21	2355CST			0	0	?	?	Hail (1.75)
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Palo Pinto County

Possum Kingdom Lake	22	0010CST			0	0	4	?	Hail (4.00)
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Four-inch hail damaged several automobiles, street lights, and shattered numerous windows in a building.

Young County

Newcastle	22	0020CST			0	0	?	?	Hail (1.00)
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Loving

Loving	22	0045CST			0	0	?	?	Hail (0.75)
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Wise County

Chico	22	0055CST			0	0	?	?	Hail (1.75)
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Alvord

Alvord	22	0125CST			0	0	?	?	Hail (4.00)
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Jack County

10 E Antelope	22	0100CST			0	0	?	?	Hail (1.75)
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Montague County

Bowie	22	0120CST			0	0	?	?	Hail (0.75)
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Montague

Montague	22	0128CST			0	0	?	?	Hail (0.88)
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Cooke County

Muenster	22	0140CST			0	0	?	?	Hail (1.75)
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Gainesville

Gainesville	22	0215CST			0	0	5	?	Hail (3.00)
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Baseball-size hail fell continuously from 0215 to 0230 CST in Gainesville where over 80 automobiles were heavily damaged, and several trees had limbs split off.

Dallas County

Garland	22	0602CST			0	0	?	?	Hail (1.00)
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Collin County

4 NE Wylie	22	0612CST			0	0	?	?	Hail (0.75)
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Hunt County

2 N Caddo Mills	22	0630CST			0	0	?	?	Hail (1.50)
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Camp County

5 NW Pittsburg	22	0905CST			0	0	?	?	Hail (1.75)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Titus County 10 SE Mount Pleasant	22	0925CST			0	0	?	?	Hail (1.00)
Morris County Naples	22	0940CST			0	0	2	?	Thunderstorm Winds

Strong winds blew down one tree in Naples.

Cass County 3 SW Bryans Mill	22	0940CST			0	0	3	?	Thunderstorm Winds
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Strong winds blew down numerous trees.

Bowie County 5 SW Texarkana	22	0950CST			0	0	?	?	Hail (1.00)
Clay County Vashti	22	2215CST			0	0	?	?	Hail (0.88)
Young County Newcastle	23	0018CST			0	0	?	?	Hail (1.00)
Markley	23	0045CST			0	0	?	?	Hail (0.75)
Jack County Antelope	23	0100CST			0	0	?	?	Hail (1.75)
Montague County Bowie	23	0120CST			0	0	?	?	Hail (0.75)
Montague	23	0128CST			0	0	?	?	Hail (0.88)
Hardeman County Quanah	26	2214CST			0	0	?	?	Hail (0.75)
Hardeman County Quanah	26	2214CST			0	0	?	?	Hail (0.75)
Foard County 16 NW Crowell	26	2214CST			0	0	?	?	Hail (0.75)
Erath County Dublin	27	0215CST			0	0	?	?	Hail (0.75)
Comanche County Proctor	27	0230CST			0	0	3	?	Thunderstorm Winds Hail (0.75)

Strong winds blew down several street signs and building awnings.

Tarrant County Everman	27	0300CST			0	0	?	?	Hail (1.00)
Arlington	27	0300CST			0	0	3	?	Thunderstorm Winds
Edgecliff	27	0300CST			0	0	?	?	Hail (1.50)

Strong winds blew down several telephone poles and power lines in Arlington.

Dallas County Grand Prairie	27	0310CST			0	0	?	?	Thunderstorm Winds (G52)
Johnson County Rio Vista	27	0335CST			0	0	?	?	Hail (0.75)
Marion County 4 E Jefferson	28	2015CST			0	0	?	?	Hail (0.88)
Rusk County 2 SW Tatum	28	2020CST			0	0	?	?	Hail (1.00)
Harrison County Hallsville	28	2025CST			0	0	?	?	Hail (0.88)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

TEXAS, Southern

Bastrop County	01	0315CST			0	0	4	?	Thunderstorm Winds (G52)
Lee County	01	0330CST			0	0	?	?	Thunderstorm Winds

High wind from thunderstorms, estimated to be near 60 mph, tore a portion of the roof off the McDade Historical Society building. Trees were blown down across County Road 426 in Lee County.

Jefferson County	01	0900CST			0	0	4	?	Hail (1.00)
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Quarter-size hail was reported by the Goodyear Safety Department 5 miles west of Beaumont on Interstate 10. Several cars in the parking lot were damaged.

Chambers County	01	0930CST			0	0	?	?	Hail (1.75)
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Golf ball-size hail was reported near the town of Sea Breeze in eastern Chambers County.

Jackson County	16	1045CST			0	0	4	?	Thunderstorm Winds
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Thunderstorms winds caused an estimated \$5,000 in damage to the Lolita Volunteer Fire Department meeting hall; no injuries were reported.

Maverick County	20	2350CST			0	0	?	?	Thunderstorm Winds (G64)
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A Federal employee reported wind gust to 74 mph; no damage was reported.

Robertson County	28	1830CST			0	0	3	?	Thunderstorm Winds
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High wind from a thunderstorm tipped a recreational vehicle over on its side about 3 miles west of Hearn, near Valley Junction. No injuries were reported.

Brazos County	28	1922CST			0	0	?	?	Hail (0.75)
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The Department of Public Safety and the Bryan Police Department reported dime-size hail in the town of Bryan.

College Station	28	1940CST			0	0	?	?	Hail (1.75)
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Golf ball-size hail was reported on the campus of Texas A&M University. No damage was reported.

Walker County	28	2030CST			0	0	4	?	Thunderstorm Winds
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Several trees were damaged and numerous power lines reported down across the county. Near Huntsville a large tree fell across two cars, destroying them.

Dewitt County	28	2031CST			0	0	?	?	Hail (0.88)
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The Dewitt County Sheriff's Office reported nickel-size hail in downtown Cuero.

Bee County	28	2115CST			0	0	?	?	Thunderstorm Winds (G52)
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A weather observer at the Beeville Naval Air Station reported a wind gust to 60 mph.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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, Southern Cont'd

Nueces County
Corpus Christi 28 2152CST 0 0 3 ? Thunderstorm Winds

Thunderstorm wind downed a large oak tree, which then collapsed a wooden fence in the city of Corpus Christi.

San Patricio County
Portland 28 2220CST 2.0 25 0 0 4 ? Tornado (F0)

As the thunderstorm system moved from Nueces County to San Patricio County, a small tornado was spawned near the town of Portland. Damage was done to the Gunderland Marine building. Several large trees were reported downed in the town of Portland.

Nueces County
Corpus Christi 28 2225CST 0 0 3 ? Thunderstorm Winds

The Department of Public Safety reported power outages and trees down in the Corpus Christi metropolitan area.

TEXAS, Western

Parmer County
Bovina 11 2130CST 0 0 3 0 High Winds

Strong gradient winds damaged a barn and several signs in Bovina.

Sterling County
Sterling City 21 1936CST 0 0 2 0 Hail (1.75)
Sterling City 21 2125CST 0 0 1 0 Hail (1.75)

The Sterling County Sheriff's Office reported golf ball-size hail in Sterling City at 1936 CST. At 2125 CST, golf ball-size hail fell again in Sterling City. No significant damage resulted from either hail event.

Nolan County
Maryneal 21 2040CST 0 0 2 0 Hail (1.75)
Blackwell 21 2140CST 0 0 2 0 Hail (1.75)

Thunderstorms produced golf ball-size hail in Maryneal at 2040 CST. One hour later, golf ball-size hail fell in Blackwell. No significant damage resulted.

All of West Texas 26 1300CST-
2200CST 0 0 5 1 High Winds

Strong gradient winds associated with a deep low-pressure system blew across western Texas during the afternoon and evening. Winds gusted to above 80 mph in the Panhandle and far west, with winds above 50 mph reported across the rest of the area. Damage was done to roofs and power lines in the Panhandle and South Plains. In El Paso, damage to roofs and plate glass windows was reported.

Permian Basin and
Concho Valley 28 1200CST-
1800CST 0 0 4 0 High Winds

Strong gradient winds blew through the Permian Basin and Concho Valley during the afternoon. In the Permian Basin, winds gusting to 66 mph damaged a car and a barn. In the Concho Valley, winds of 54 mph were observed, but no significant damage was reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

UTAH

UTZ010-011
All Mountains

01	0000MST-								
02	0600MST				0	0	0	0	Heavy Snow

This storm began late on February 28th, developing off the southern California coast, and spreading a moist, unstable air mass over the state. The heavy snow began over the southwestern mountains on the first, and then moved to the northern mountains. The southern mountains received 18 to 34 inches, and the northern mountains had 12 to 34 inches. In some of the valleys of southern Utah, heavy rain did cause some minor flooding.

UTZ001-002-003
Western Valleys
and Northwestern
Mountains
Box Elder County
Collinston
Plymouth
Davis County
Clearfield

04	0855MST-								
	1930MST				0	0	4	0	High Winds
04	2355MST				0	0	4	0	Thunderstorm Winds (G70)
05	0220MST				0	0	0	0	Funnel Cloud

A cold front associated with a strong Pacific storm system off the western coast caused very strong southerly winds ahead of it. Gusts in the northwestern mountains ranged from 60 to 88 mph. The valley locations had gusts from 59 to 73 mph. In northwestern Utah, three tractor-semitrailers were blown over. One of these vehicles was carrying a mobile home. Property damage included fences blown over, siding blown off houses, and downed phone and power lines. Strong gradient winds occurred the next day over the mountains and the southeastern portion of the state, but were not as strong as on the 4th.

When the cold front moved through northwestern Utah late on the 4th and early on the 5th, it produced severe thunderstorms and even a funnel cloud. A spotter in Collinston reported severe thunderstorm winds, 0.50-inch hail, and brief heavy rain. Just a few minutes later, the Utah Highway Patrol reported numerous trees downed in the area. Some power and phone service was still out as of 0720 MST. In Cache County to the east, a spotter reported pea-size hail and 40- to 50-mph winds. The funnel cloud was observed by personnel from Hill Air Force Base. No damage was caused by the funnel cloud. Light snow did follow the passage of the cold front, but the snow was mainly confined to the higher elevations.

UTZ-010
Northwest Mountains

11	0500MST-								
	2200MST				0	0	0	0	Heavy Snow

A strong, cold storm system developed over Nevada, and moved into Utah early on the 11th. Ahead of the cold front there were strong southerly winds in the western valleys. There were isolated reports of high winds. The mountains received 12 to 15 inches of snow.

UTZ-010
Northwest Mountains

19	1500MST-								
20	0900MST				0	0	0	0	Heavy Snow

The combination of a cold front that moved through the state Tuesday afternoon, and the large, moist upper level trough that followed brought precipitation to most of the state. The mountains received 13 to 22 inches of snow.

UTZ-002-010
Northwestern
Valleys and
Mountains

25	1000MST-								
	1700MST				0	0	4	0	High Winds

Another storm system over Nevada brought very strong and gusty winds to the western portion of the state. Gusts of 59 to 69 mph were reported in the northwestern valleys, and gusts near 70 mph were reported in the northwestern mountains. At least 24 power lines were damaged with some of the power lines causing damage to nearby houses.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

VERMONT

Statewide 03 2000EST 0 2 7 6 Freezing Rain

Freezing rain and brief periods of: sleet, snow, fog, and rain made a mess of Vermont's celebration of 200 years of Statehood. Power crews across the state were kept busy for several days repairing power lines. A 30-month-old girl and her 5-year-old sister were rescued from near drowning after a car accident which sent their vehicle into the river. Police blamed the accident on icy roads. Portions of Interstate 89 were closed to traffic.

Statewide 22 2200EST 1 0 5 ? Snow Rain

An elevation storm began late Friday night and continued until early Sunday morning. The storm produced a mix of rain, snow, and freezing rain, depending upon elevation. One male was killed in a car accident that the police listed as weather related. (M31V)

Bennington County
Manchester 23 AM 0 0 3 0 Lightning

Lightning struck the transformer for a television station on top of Mt. Equinox.

VIRGINIA

Franklin County
Callaway 04 0300EST 0 0 3 0 Thunderstorm Winds

Strong winds possibly associated with thunderstorms tore the roof off the front porch of a house.

King George County
Office Hall 11 1000EST 0 0 4 0 High Winds

High winds blew the walls out of a mobile classroom (trailer) that was being transported by truck.

Frederick and
Shenandoah Counties
Middletown 23 0900EST-
1600EST 1 0 5 0 Flood

In Middletown, two boys fell into a brook that was 6 feet out of its banks after a morning of heavy rain. One boy drowned when he was unable to escape the waters. Flooding in both counties caused damage to roadways estimated by the county officials at over \$60,000. Several vehicles in Shenandoah County had to be pulled out of flood waters. (M040)

Pittsylvania County
City of Danville 23 0900EST-
1600EST 0 0 5 0 Flood

Widespread flooding of basements and roadways occurred as a result of a morning of heavy rain. Some 45 roads were, at least temporarily, impassable due to water up to several feet deep. There were also many residences in Pittsylvania County, and in the City of Danville with flooded basements.

Alleghany County
5 N Covington 23 0830EST 0 0 4 0 Lightning

Lightning struck the side of a residence damaging the kitchen walls and knocking out the windows.

City of Suffolk 29 1615EST-
1630EST 3.0 10 0 0 4 0 Tornado (F0)

A small tornado traveled a narrow and spotty path through the western part of Suffolk, between Holland and Franklin Junction, causing minor damage.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

WAZ002
Northwestern Interior
01 1200PST-2200PST
0 0 4 0 Heavy Snow

A weather system moving in from the Pacific ocean, overran the cold Arctic air mass over Whatcom County. Anywhere from 3 to 6 inches of snow fell over the area during the afternoon and evening hours as gusty, northeasterly winds flowing out of the Frazier River Canyon kept temperatures below freezing.

WAZ011-012
Washington Cascades and Olympics
02 Unknown-04
0 0 0 0 Heavy Snow

A series of weather systems combined with strong westerly flow aloft to produce heavy snows in the mountains. New snow totals for the 3 days ranged from 1.5 feet at Stampede Pass, to 4 feet at Paradise Lodge on Mount Rainier.

WAZ001-009-013
Pierce County Benton and Franklin Counties
03 Late Morning
0 0 5 0 High Winds
03 1700PST-2000PST
0 0 5 0 High Winds

A strong cold front moved into western Washington during the late morning hours of the 3rd bringing high winds with it. Wind gusts of 70 mph, in the town of Ohop, caused \$30,000 in damage. Utility officials in the area said it was the worst storm in 10 years. As the system moved east of the Cascades in the late afternoon, winds gusting up to 60 mph were reported in Hanford with winds consistently gusting over 50 mph at Pasco.

WAZ001
Seattle Area
05 Early Morning
0 0 0 0 Snow

A Puget Sound convergence zone developed in the wake of a cold front. A narrow band of snow fell from near the Seattle-Tacoma Airport, eastward to Issaquah. Five inches of snow was reported in Maple valley, while 2 to 4 inches were common for the rest of the area.

WEST VIRGINIA

WVZ005-009-012
Tygart Valley, Cheat and Elk River Basins
09 2000EST-10 1500EST
0 0 0 0 Heavy Snow

Three to seven inches of snow fell over Preston, Tucker, Randolph, Taylor, Barbour, Upshur, Webster, and western Pocahontas Counties.

WVZ008-009
Upper Greenbrier Valley and Northern Mountains
13 0000EST-1300MST
0 0 0 0 Heavy Snow

Four to eight inches of snow fell over Pocahontas and northern Greenbrier Counties, plus the higher terrain in Randolph and Tucker Counties. Buckeye reported 5 inches of snow, while Gladys measured 7 inches.

Cabell County 22 0730EST-1000EST
0 0 5 0 Flash Flood
Wayne County 22 0730EST-1000EST
0 0 5 0 Flash Flood
Putnam County 22 0815EST-1000EST
0 0 3 0 Flash Flood
Lincoln County 22 0815EST-1000EST
0 0 3 0 Flash Flood

Rainfall of 0.75 to 1.25 inches was observed between 0630 and 0830 EST. This rain rate combines with the wet ground to cause rapid runoff. Small streams overflowed, urban streets flooded, and many mud/rock slides occurred. Fourpole Creek flooded in Huntington surrounding several homes with water and damaging a few vehicles. A mud/rock slide occurred on Route 152 north of the city of Wayne. Hurricane Creek rose to doorsteps of a few homes in Putnam

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

County. Water surrounded the grade school at Sweetland in Lincoln County. County schools in Lincoln and Putnam Counties let children go home at 0830 EST. Total damage was estimated at \$300,000.

Logan County	23	0600EST-0800EST			0	0	3	0	Flash Flood
Mingo County	23	0600EST-0800EST			0	0	3	0	Flash Flood
Wyoming County	23	0630EST-0800EST			0	0	3	0	Flash Flood
Fayette County	23	0630EST-0830EST			0	0	3	0	Flash Flood
Raleigh County	23	0645EST-0900EST			0	0	3	0	Flash Flood

Rainfall of 1.00 to 1.50 inches fell in 1 to 2 hours. Small stream and urban flooding occurred along with mud/rock slides. Water from Mud Fork and Rum Creek blocked roads in Logan County. Streams were flooded around Matewan and Chattaroy in Mingo County. Water surrounded homes at Chattaroy. Huff Creek flooded in Wyoming County. Luke Creek overflowed and surrounded Glen Jean homes in Fayette County. Cranberry Creek flooded Routes 16 and 19 in the vicinity of Raleigh Mall, blocking roads and flooding parlots. Damage estimated at \$20,000 for the five counties.

Pocahontas County	23	0825EST-0930EST			0	0	0	0	Small Stream Flood
Randolph County	23	0825EST-0930EST			0	0	0	0	Small Stream Flood
Pocahontas County	23	1350EST-1430EST			0	0	3	0	Flood

One to two inches of rain fell over 12 hours, leading to small stream overflow. Water was over Route 219 north of Marlinton and across Georgetown Road west of Beverly County. The upper Greenbrier River overflowed its banks around Durbin and into parking lot at Cass Railroad during the afternoon. Knapps Creek had minor overflow from Huntersville to Marlinton.

WVZ001 Northern Panhandle	27	2045EST-2300EST			0	0	?	0	High Winds
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Numerous tree limbs and power lines were blown down by gusty winds in advance of a cold front. No thunderstorms occurred. A 75-mph gust was measured at the Wheeling Airport at 2100 EST, temporarily closing the control tower. Large glass window panes were broken at commercial sites in Wheeling. A dairy farm in Ohio County had several buildings moved off their foundation.

WVZ002-003-005-009, Northern and Western Counties	29	2200EST-30 1030EST							Heavy Snow
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Rain changed to wet snow towards the end of a major storm. In Wirt County, the town of Elizabeth measured 5 inches of snow, while Glenville reported 4 inches.

WISCONSIN

WIZ018 Extreme Southwestern Wisconsin	12	Morning into							
	13	Early Morning			0	0	0	0	Heavy Snow

The northern edge of a winter storm dumped 6 to 10 inches of snow in extreme southwestern Wisconsin. Snow amounts included 1 inch at Darlington and Gratiot (LaFayette County) and 9 inches in Cassville (Grant County).

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Crawford County									
Prairie Du Chien	22	2003CST			0	0	5	0	Thunderstorm Winds
Steuben	22	2020CST			0	0	?	0	Thunderstorm Winds
Grant County									
5 SE Lancaster	22	2010CST			0	0	?	0	Thunderstorm Winds
Muscoda	22	2030CST			0	0	4	0	Thunderstorm Winds
LaFayette County									
Cuba City	22	2043CST			0	0	?	0	Thunderstorm Winds
5 W Darlington	22	2045CST			0	0	4	0	Thunderstorm Winds
2 N Darlington	22	2050CST			0	0	?	0	Thunderstorm Winds
Green County									
Monroe	22	2100CST			0	0	?	0	Thunderstorm Winds
Iowa County									
Montfort	22	2100CST			0	0	?	0	Thunderstorm Winds
Mineral Point	22	2110CST			0	0	3	0	Thunderstorm Winds
Dodgeville	22	2120CST			0	0	?	0	Thunderstorm Winds (G52)
Waldwick	22	2120CST			0	0	?	0	Thunderstorm Winds (G52)
Dane County									
Brooklyn	22	2130CST			0	0	?	0	Thunderstorm Winds
Mount Horeb	22	2130CST			0	0	?	0	Thunderstorm Winds
Black Earth	22	2130CST			0	0	?	0	Thunderstorm Winds
Blue Mounds	22	2130CST			0	0	?	0	Thunderstorm Winds
Madison	22	2140CST			0	0	?	0	Thunderstorm Winds (G52)
Rock County									
Janesville	22	2200CST			0	0	4	0	Thunderstorm Winds

Several severe thunderstorms struck southern Wisconsin during the evening hours. Prairie Du Chien (Crawford County) was hit hardest as violent thunderstorm winds blew down a drive-in movie screen, toppled modular homes under construction, and knocked down trees and power poles. In Janesville (Rock County) a camper was lifted by winds and smashed into a mobile home. Other scattered damage across the area was to trees, power lines, and farm sheds. A huge gas tank was blown 0.5 mile across a field and struck a shed near Cuba City (LaFayette County).

Bayfield County									
Drummond	26	1835CST			0	0	?	0	Hail (1.75)
Washburn County									
5 N Spooner	26	1910CST			0	0	?	0	Hail (0.75)
Ashland County									
1 W Mellen	26	1910CST			0	0	?	0	Hail (1.75)
Dane County									
Belleville	26	2300CST			0	0	?	0	Hail (1.75)

Isolated severe thunderstorms deposited hail up to golf ball-size over northwestern and south-central Wisconsin.

LayFayette County									
Shullsburg	27	1245CST			0	0	?	0	Hail (0.75)
Woodford	27	1310CST			0	0	?	0	Hail (2.75)
Argyle	27	1310CST			0	0	5	0	Thunderstorm Winds
Argyle	27	1310CST			0	0	0	0	Funnel Cloud
Sauk County									
Baraboo	27	1315CST			0	0	?	0	Thunderstorm Winds
Green County									
Monticello	27	1320CST			0	0	5	0	Hail (2.00)
Monticello	27	1320CST			0	0	5	0	Thunderstorm Winds
Green, Rock, Dane and Jefferson Counties									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

2 SW Brooklyn 3 W Union 4 S Stoughton Dunkirk 3 N Busseyville Jefferson	27	1350CST- 1430CST	35.0	440	1	5	7	0	Tornado (F2)
Jefferson County Waterloo	27	1410CST			0	0	?	0	Hail (2.00)
Dodge County Horicon	27	1430CST			0	0	?	0	Hail (0.75)
Kenosha County Pleasant Prairie	27	1430CST			0	0	?	0	Thunderstorm Winds
Walworth County Delevan	27	1430CST			0	0	?	0	Thunderstorm Winds
Waukesha County Waukesha	27	1435CST			0	0	?	0	Hail (1.00)
Waukesha	27	1435CST			0	0	4	0	Thunderstorm Winds (G54)
Racine County Sturtevant	27	1440CST			0	0	?	0	Thunderstorm Winds (G54)
Caledonia	27	1445CST			0	0	?	0	Hail (1.75)
Caledonia	27	1445CST			0	0	?	0	Thunderstorm Winds (G61)
Milwaukee County Butler	27	1440CST			0	0	?	0	Hail (1.00)
Wauwatosa	27	1450CST			0	0	?	0	Hail (1.00)
Franklin	27	1450CST			0	0	?	0	Thunderstorm Winds (G77)
Milwaukee	27	1453CST			0	0	5	0	Thunderstorm Winds (G67)
Washington County 4 W Jackson	27	1445CST			0	0	?	0	Thunderstorm Winds
Kewaskum	27	1450CST			0	0	?	0	Hail (1.75)
Marquette County Montello	27	1455CST			0	0	?	0	Hail (1.00)
Sheboygan County Plymouth	27	1510CST			0	0	?	0	Thunderstorm Winds
Sheboygan	27	1510CST			0	0	?	0	Thunderstorm Winds
1 E Sheboygan	27	1520CST	?	?	0	0	0	0	Waterspout
Winnebago County Larsen	27	1545CST			0	0	?	0	Hail (0.75)

A widespread outbreak of severe thunderstorms spread across southern and eastern Wisconsin during the afternoon hours. A 35-mile-long tornado track that began 2 miles southwest of Brooklyn (Green County), and moved east-northeast. The tornado entered Rock County 3 miles west of Union and crossed the extreme northwestern corner of the county. The tornado tracked into southeastern Dane County 4 miles south of Stoughton, striking the Dunkirk area before entering southwestern Jefferson County 3 miles north of Busseyville and lifted at the city of Jefferson. In the town of Dunkirk, an 88-year-old man was killed when caught outside by the tornado. He died of injuries when a tree fell on him. Five other people received minor injuries. The tornado caused over \$5 million in damage (\$2.9 million in Dane County, \$2.5 million in Jefferson County, and \$0.75 million in Rock County). In all, 6 homes were destroyed and 90 were damaged, as well as over 80 farm buildings. Other severe thunderstorms generated winds up to 89 mph, and hail the size of baseballs. In Argyle (LaFayette County), 22 homes were damaged by violent winds while in Monticello (Green County), 250 vehicles received damage from hail as large as hen eggs. Numerous trees and power lines were knocked down as well as reports of scattered house, farm, and business damage. (M880)

WYOMING

WYZ010-011-012 Wind River Basin Central Plains Eastern Plains	04	1300MST- 2000MST			0	0	3	0	High Winds
Wind gusts to 60 mph occurred over the central and southeastern during the afternoon and									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

evening. A peak wind gust of 65 mph was noted south of Wheatland in Platte County. Several roofs were damaged in the Lander area due to wind.

WYZ004-005	04	2300MST-							
Big Horn Mountains	05	1300MST			0	0	0	0	Heavy Snow
Northern Front Range									

Six to twelve inches of snow fell over the eastern slopes of the Big Horn Mountains.

WY011-WY015	29	0100MST-							
Central Plains		1020MST			0	0	0	0	Heavy Snow
Southern Mountains									

Snowfall of 8 to 12 inches fell over the mountains south of Casper, and in the snowy range mountains in south-central Wyoming.

ALASKA, Southeastern

None reported.

ALASKA, Southern

Kodiak Island	01	1600AST							Record High Temperature
----------------------	----	---------	--	--	--	--	--	--	-------------------------

Kodiak recorded a new record high of 47° F for the date. The old record high set in 1974, was 46° F.

Western Alaska Peninsula Yukon-Kuskokwim Delta	06	0000AST							Winter Storm
---	----	---------	--	--	--	--	--	--	--------------

A strong low-pressure system moved to the eastern Bering Sea from the North Pacific on Wednesday. Wind gusts to 53 knots were reported at Cold Bay early Wednesday evening. At Bethel, wind gusts reached 45 knots and visibility was briefly below 0.25 mile.

Kodiak Island	08	0000AST							High Winds
----------------------	----	---------	--	--	--	--	--	--	------------

A high-pressure system over southwestern Alaska and a low-pressure system over the southeastern Gulf of Alaska, produced strong winds along the Barren and Kodiak Islands. Gusts reached 53 knots at Kodiak.

Eastern Aleutians Western Alaska Peninsula and Kodiak Island	14	0000AST							High Winds
---	----	---------	--	--	--	--	--	--	------------

A strong low-pressure system moved northeast to the Bering Sea. Strong winds were reported across the central and western Aleutian Islands, the Alaska Peninsula, and Kodiak Island. Wind gusts reached 60 knots at Amchitka, 54 knots at Cold Bay and 41 knots at WSO Kodiak. The Coast Guard at Kodiak reported gusts reaching 110 mph in the channel. A 140-foot vessel (The Lady Patricia) broke loose from the mooring buoy and was blown against a breakwater in the small boat harbor.

Western Alaska Peninsula Eastern Aleutians Kodiak Island	15	0000AST							High Winds
---	----	---------	--	--	--	--	--	--	------------

A strong low-pressure system moved northeast over the Bering Sea. The low split with the main low remaining stationary over the western Bering Sea and the other moving inland over the central interior of the state. Winds reached 64 knots at Amchitka Island, 55 knots at Cold Bay, and 48 knots at Bethel.

Eastern Aleutians Kodiak Island	16	0000AST							High Winds
--	----	---------	--	--	--	--	--	--	------------

A strong low-pressure system over the western Bering Sea moved east-southeast resulting in high winds over the western and central Aleutian Islands. Gusts to 62 knots were reported at

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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

Amchitka and to 50 knots at Adak. As the front associated with this system crossed the Yukon-Kuskokwim Delta, high winds were reported. Gusts reached 48 knots at Bethel where the temperature rose from -4° F to 30° F in 5 hours.

Eastern Aleutians 30 0000AST 0 0 0 0 High Winds

A strong low-pressure system moved over the Bering Sea. High winds over the Aleutians reached 63 knots at Amchitka, and 51 knots at Adak.

HAWAII

Hawaii 09 1500LST 0 0 4 0 Flash Flood

Minor flash flooding problems around the windward side including the Hilo area on the Big Island of Hawaii.

All Islands 12 Unknown-18 0 0 5 0 Wind

Strong gusty trade winds affected the entire state for about a week as a large strong high-pressure system settled in for an extended period north of the islands. Winds gusted to 50 mph in the more windy areas and even higher in the Kohala and South Point areas on the Big Island.

Oahu 19 Unknown-23 1 0 7 0 Flash Flood

Serious flash flooding affected various sections of Oahu during a 5-day rainy spell which dropped as much as 30 inches of rain in some windward spots. Property damage was estimated near \$20 million and a 12-year-old-boy drowned in the flood waters as he was sucked into a storm drain while playing in rushing waters. The rain occurred in three separate episodes. The first began in the afternoon of the 19th and affected mainly windward areas from Waimanalo to Kahuku. Severe flooding was reported in the predawn hours at Laie and Kahuku early on the 20th. Also widespread flooding near Punaluu and Kahaluu. The second burst of heavy rains fell shortly after midnight on the 21st on the lee slopes of Koolau range above Mililani and Waipio and caused severe flooding within the Waiawa stream watershed beginning about 0300 LST. Three dwellings were carried off their foundations by the rising waters. The third episode began about noon on the 23rd as heavy showers moved in from the south and merged with a cloud band which came in from the west a little later. Flash flooding affected some of the same windward areas around Kahaluu and also some lee areas such as Hawaii Kai.

PACIFIC

None reported.

PUERTO RICO

None reported.

VIRGIN ISLANDS

None reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

MARCH 1991

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	

CORRECTIONS

JUNE 1990

TENNESSEE - Page 223

Knox County
Knoxville 09 1300CST 0 0 5 0 Thunderstorm Winds

A thunderstorm produced microburst winds, clocked up to 76 mph, damaging 14 small planes, flipping some over, and also a side of two buildings at McGhee Tyson Airport in Knoxville. The same storm blew down electrical lines and several trees in the city.

JANUARY 1991

TEXAS, Southern - Page 48

Duval County
San Diego 14 2051CST ? ? 4 2 Hail (1.75)

ADDITIONS

JANUARY 1991

TEXAS, Southern - Page 48

Duval County
Benavides 14 2215CST ? ? 2 ? Hail (1.50)

Another area of thunderstorm passed through Duval County approximately 90 minutes after larger hail was reported in San Diego. The county sheriff's office reported 1.50-inch hail in the town of Benavides.

STORM SUMMARY

March 1991

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	5		7	12				11	8	1	6	4	13	17	1	4					15	1	2	3	1		
Days	22		14	0				4	5	1	7	1	2	13	1	1				1	0	0	0	0			
Deaths	0		0	0				0	0	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	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		
Crop Damage	0		0	0				0	0	0	0	0	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	0	0	0	0	0		
Injuries	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		
Crop Damage	0		0	0				0	0	0	0	0	0	0	0	0				0	0	0	0	0	0		
THUNDERSTORM WINDS																											
Deaths	0		0	0			0	0	0	0	0	1	0	0	0	0				0	0	0	0	0	0		
Injuries	14		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		
Crop Damage	0		0	0			0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0		
HIGH WINDS																											
Deaths		0		0				0	0	0	0	1	0	0	0	0				0	0	0	0	0	0		
Injuries		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		
Crop Damage		0		0				0	0	0	0	0	0	0	0	0				0	0	0	0	0	0		
LIGHTNING																											
Deaths				0				0	0	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	0	0	0		
Property Damage				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		
FLASH FLOODS																											
Deaths		1		0				0	0	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	0	0	0	0		
Property Damage		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		
FLOODS																											
Deaths		0		0				0	0	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	0	0	0	0		
Property Damage		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		
HEAVY SNOWSTORMS AND BLIZZARDS a																											
Deaths		0		0				0	0	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	0	0	0	0		
Property Damage		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		
ICE STORMS #																											
Deaths											0	0															
Injuries											0	0															
Property Damage											0	0															
Crop Damage											0	0															
HURRICANES AND TROPICAL STORMS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ALL OTHERS																											
Deaths				2																							
Injuries				26																							
Property Damage				0																							
Crop Damage				0																							

STORM SUMMARY

March 1991

TYPE	NEW JERSEY	NEW MEXICO	NEW YORK	NORTH CAROLINA	NORTH DAKOTA	OHIO	OKLAHOMA	OREGON	PENNSYLVANIA	RHODE ISLAND	SOUTH CAROLINA	SOUTH DAKOTA	TENNESSEE	TEXAS	UTAH	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING	ALASKA	HAWAII	PACIFIC	PUERTO RICO	VIRGIN ISLANDS	& INJURY NATIONAL DEATHS	TOTALS
TORNADOES				13	0	1	17				7		6	2			1			1				0	0	0	13	
Deaths				0		0	0				0		0	0			0			0							0	
Injuries				40		18	6				6		0	0			0			0							298	
Property Damage				0		0	0				0		0	0			0			0								
Crop Damage				0		0	0				0		0	0			0			0								
HAIL																											1	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
THUNDERSTORM WINDS																											6	
Deaths																											0	
Injuries																											60	
Property Damage																												
Crop Damage																												
HIGH WINDS																											3	
Deaths																											10	
Injuries																												
Property Damage																												
Crop Damage																												
LIGHTNING																											2	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
FLASH FLOODS																											3	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
FLOODS																											2	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
HEAVY SNOWSTORMS AND BLIZZARDS a																											3	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
ICE STORMS #																											6	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
HURRICANES AND TROPICAL STORMS																												
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												
ALL OTHERS																											2	
Deaths																												
Injuries																												
Property Damage																												
Crop Damage																												

STORM DAMAGE CATEGORIES

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.

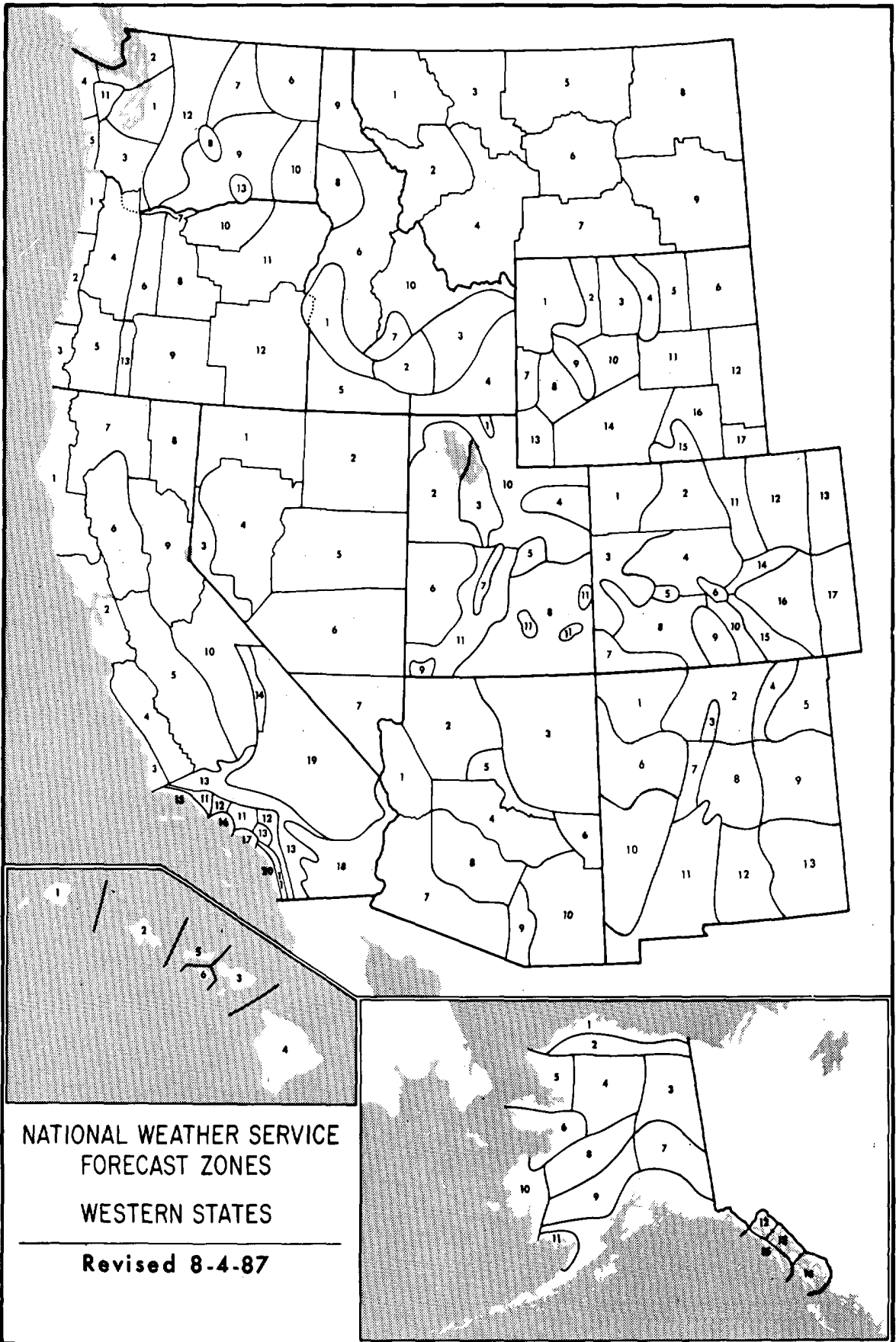
(F5) Incredible tornado (261-318 mph): Incredible damage
Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 m; trees debarked; incredible phenomena will occur.

(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
-



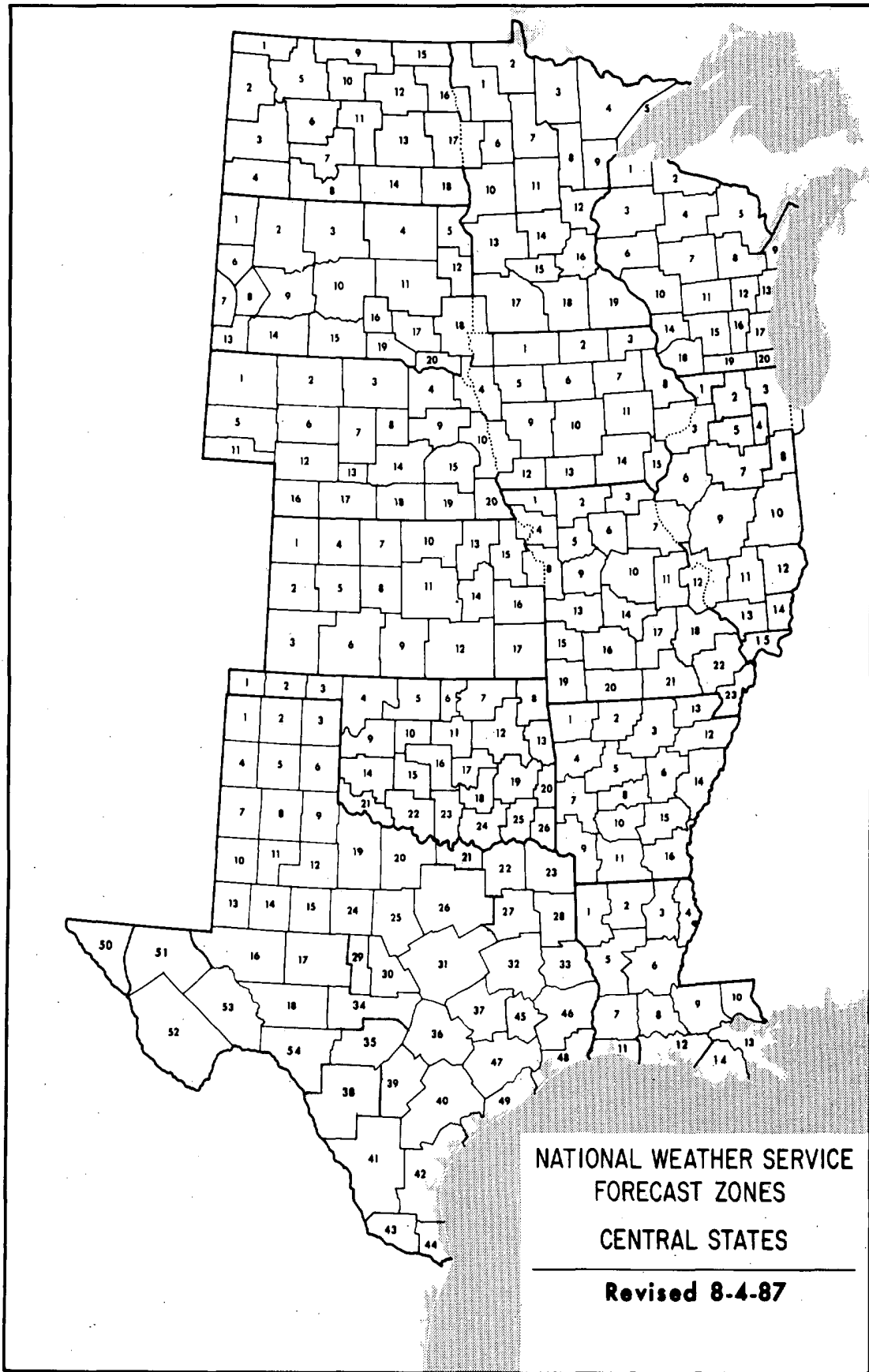
From J. Atmos. Sci., August 1981, p. 1517-1519



NATIONAL WEATHER SERVICE
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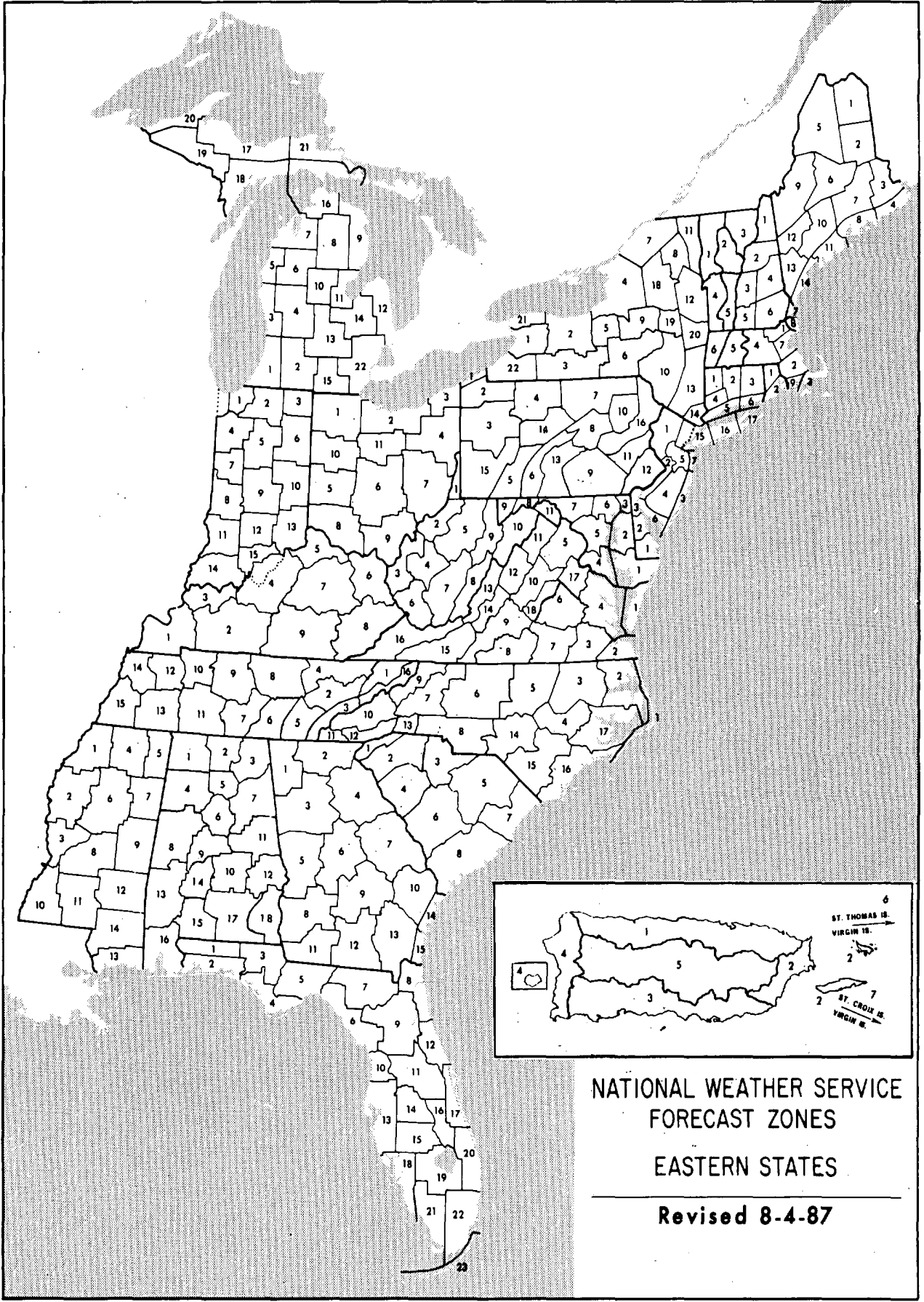
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Monthly issue presents daily, hourly and maximum short duration data for the recording gage stations for each state except Alaska. The annual issue tabulates monthly and annual totals, and annual maximum precipitation data by selected time categories.

Comparative Climatic Data
For the United States
1980
VOLUME 84 NUMBER 13

Local Climatological Data
Annual Summary With Comparative Data
1980
CHICAGO, ILLINOIS
O'HARE INTERNATIONAL AIRPORT

Local Climatological Data
ANNEX 1 - LINDSEY

CLIMATOLOGICAL DATA
ANNUAL SUMMARY
CALIFORNIA
TEMPERATURE AND PRECIPITATION EXTREMES
JUNE 1981
VOLUME 23 NUMBER 6

MONTHLY CLIMATIC DATA FOR THE WORLD
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ANNUAL SUMMARY
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VOLUME 11 NUMBER 1

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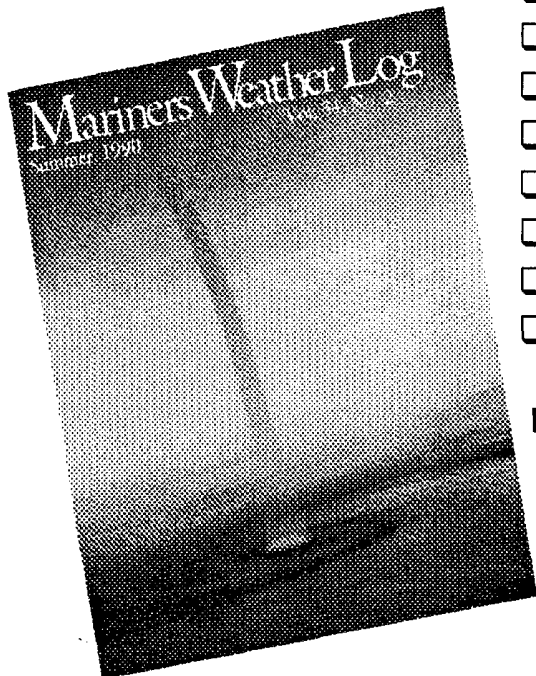
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