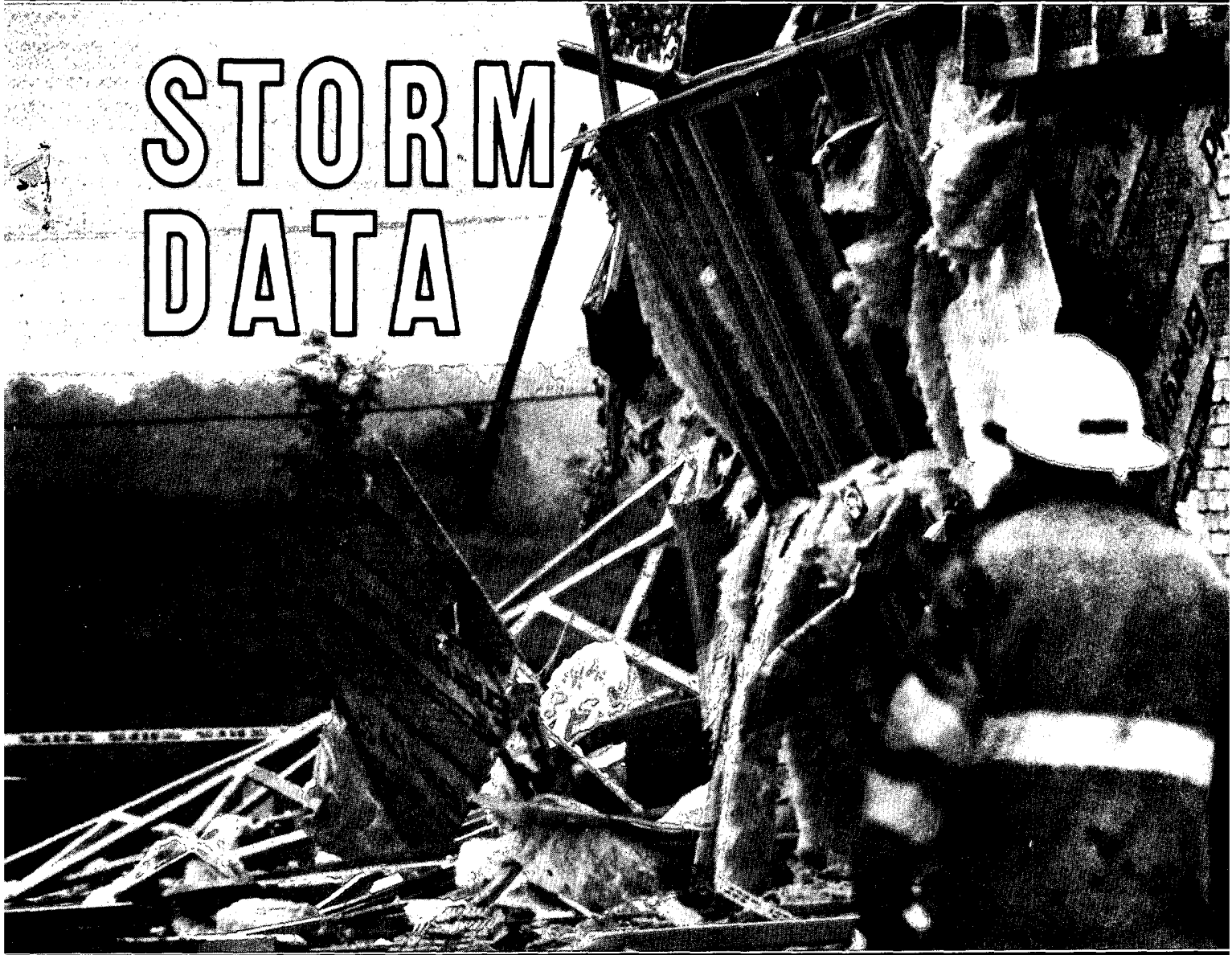


SEPTEMBER 1990

VOLUME 32

NUMBER 9

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: An emergency worker examines the damage to a home caused by a tornado in Novi, Michigan on September 14. Photo courtesy: The Novi (Michigan) News.

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STORM DATA

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National Climatic Data Center

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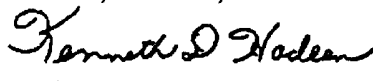
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(704) 259-0682 or (704) CLIMATE

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

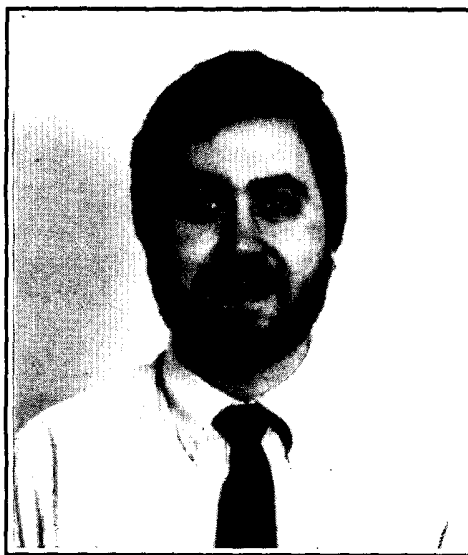
Mr. Vince Miller
1464 Wood Thrush Way
Marietta, GA 30062

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

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


Director
National Climatic Data Center

STORM FOLKS . . .



Biographical Sketch
MICHAEL T. ECKERT

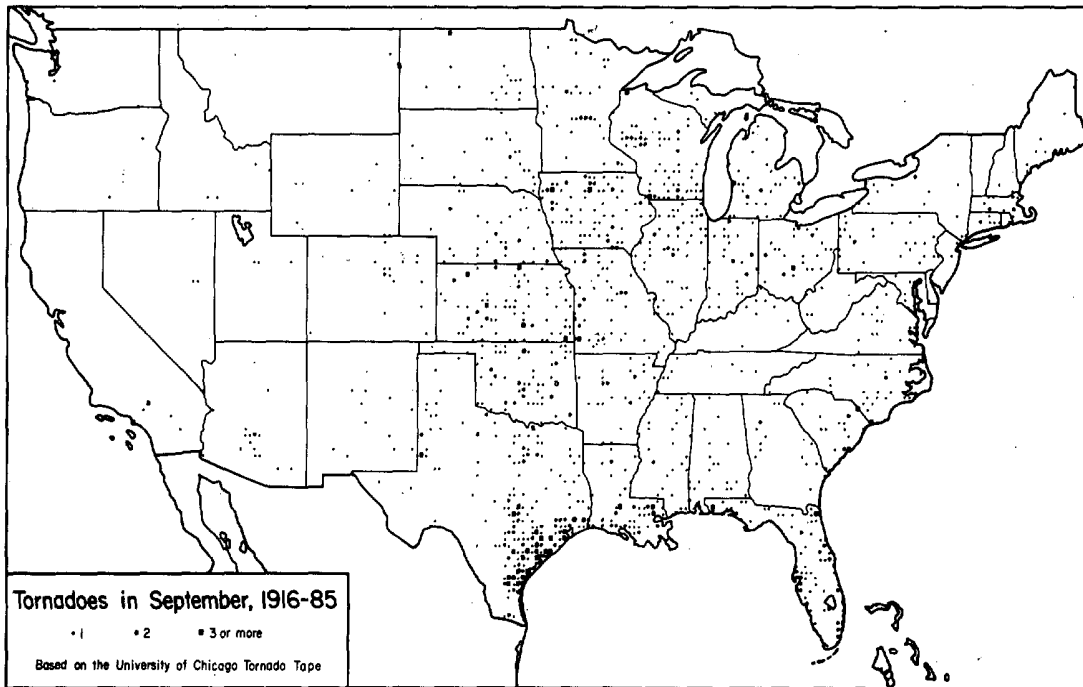
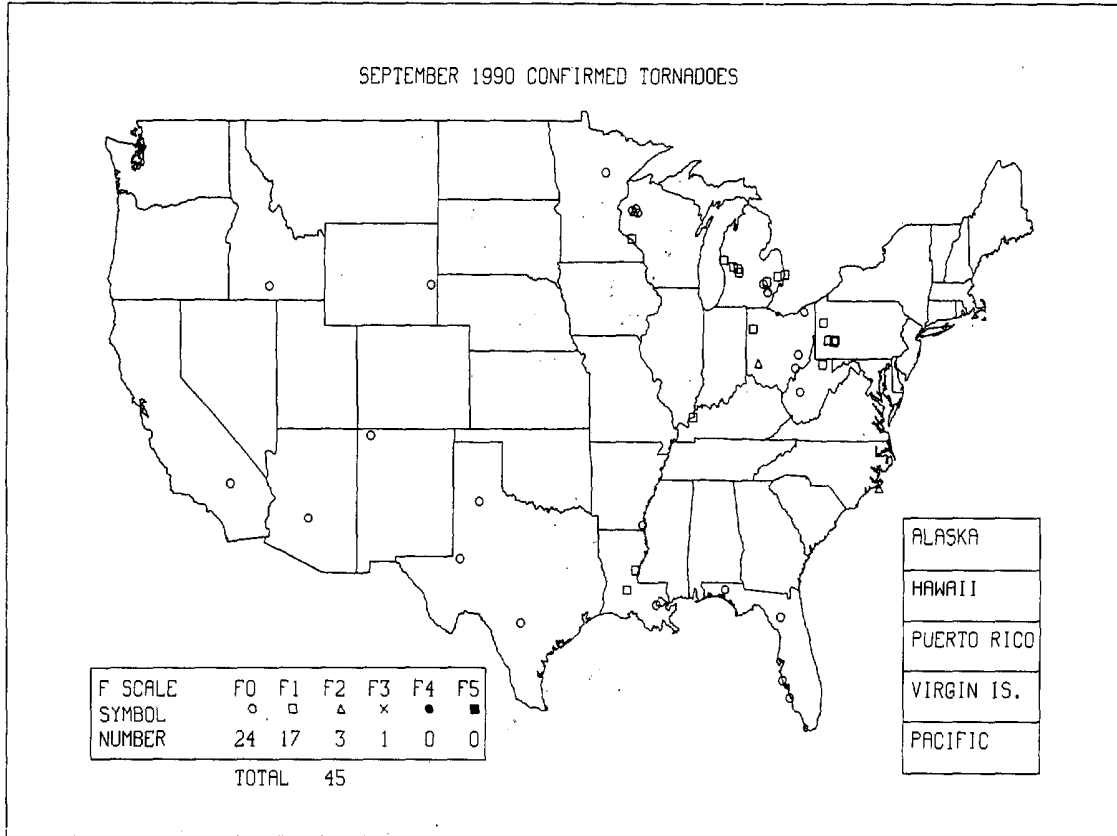
Mike received his Bachelor of Science Degree in Meteorology from the University of Oklahoma in May 1983. During his senior year he participated in the National Severe Storms Laboratory Tornado Chase program. This involved tornado chase activities with the TOTObe Tornado Observatory, TOTO.

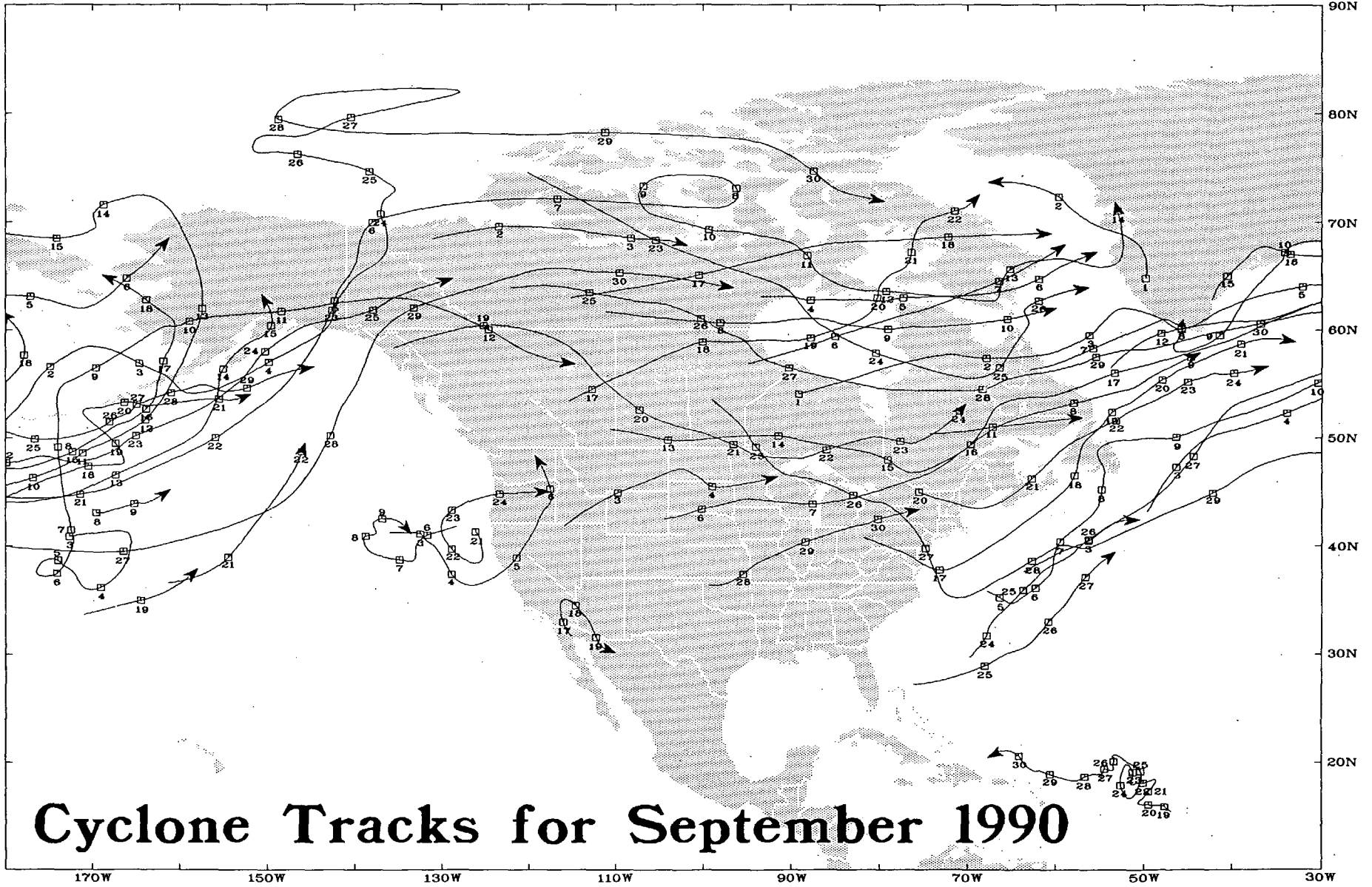
After graduation he was employed by Metracom, Inc. in Oklahoma City where he was an On-Air Meteorologist for OETA-TV and WKY Radio.

In April 1985, Mike joined the NWS at Toledo, Ohio as an Intern. While there he published two Eastern Regional Technical Attachments on severe weather. In September 1987 Mike was promoted to the WPM position at Cleveland, Ohio. Mike has automated the procedures for printing Storm Data and the Monthly Flood reports for Ohio.

Mike is married and has two girls. He enjoys fishing, camping, and bowling.

OUTSTANDING STORMS OF THE MONTH





Cyclone Tracks for September 1990

5

1. PRECIPITATION AND TEMPERATURE ANOMALIES - MAY 1990

Table 1 lists the 96-year temperature and precipitation rankings for the nine climatically homogeneous regions outlined in Fig. 1. The Northwest, Southeast, and western Corn Belt regions endured very dry conditions during September. The Northwest and Southeast regions observed the 2nd and 3rd driest September respectively of the last 96 years. The western Corn Belt received generally less than 50% of the normal precipitation. The wettest areas include the southern and central Rockies and High Plains, the Great Lakes region, and the eastern Ohio Valley. Alaska and Hawaii generally recorded normal to much above normal monthly precipitation. (Fig. 2 on the following page).

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

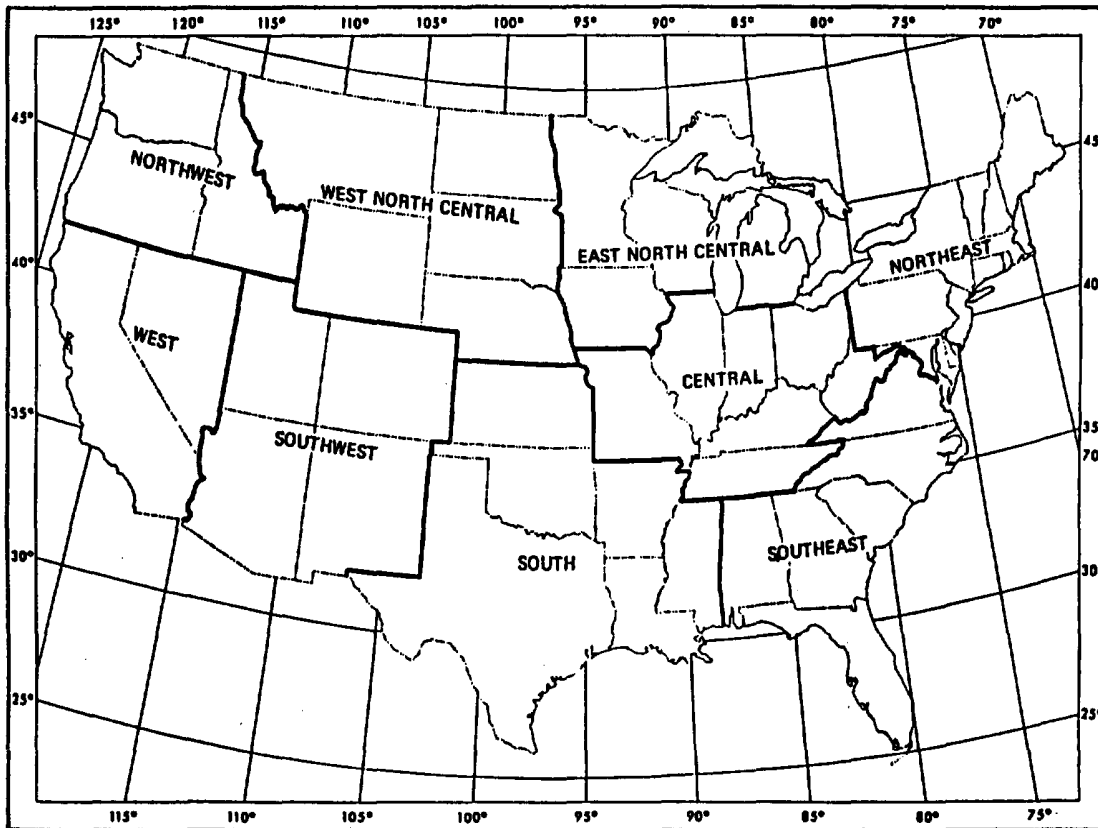
1 = DRIEST/COLDEST, 96 = WETTEST/HOTTEST.

<u>REGION</u>	<u>PRECIPITATION</u>	<u>TEMPERATURE</u>
Northeast	38	28
East North Central	22	76
Central	26	56
Southeast	3	62
West North Central	11	96
South	65	77
Southwest	68	90
Northwest	2	96
West	44	94
National	15	94

From National Climatic Data Center

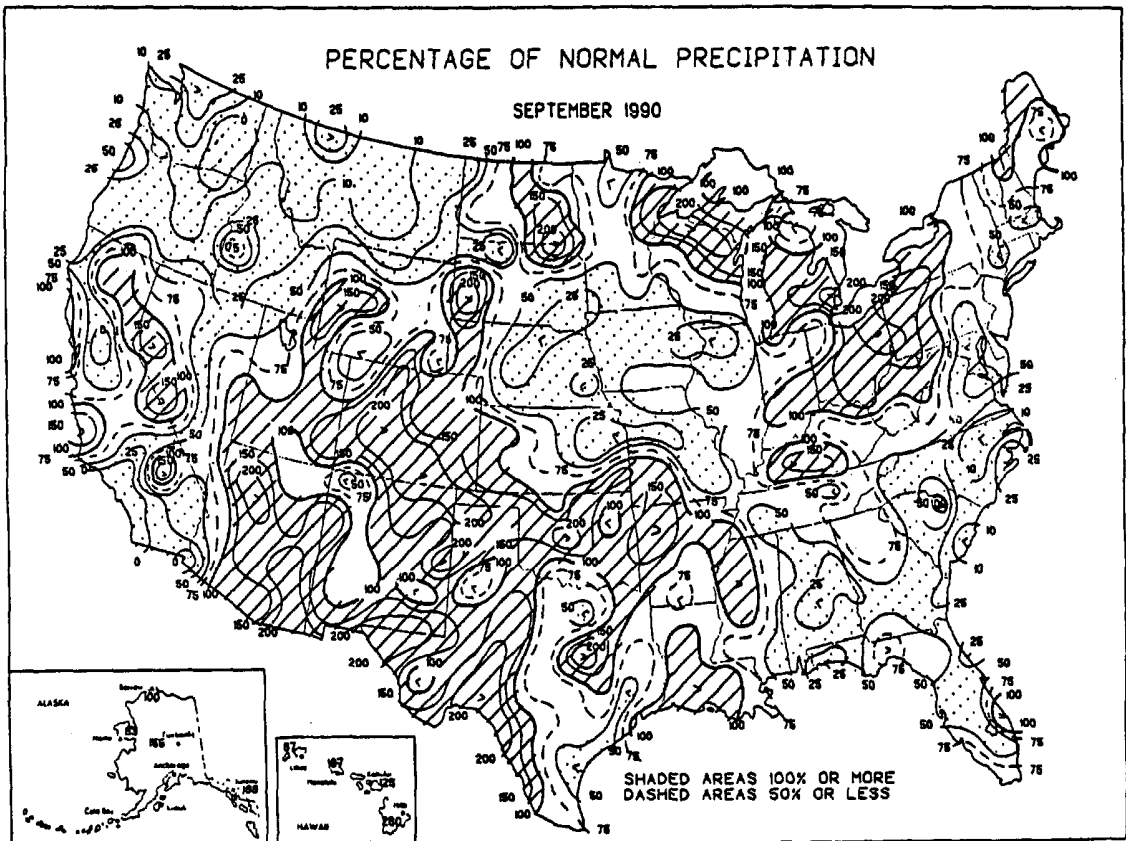
Temperatures for September averaged over the U.S. were well above the long-term mean. The only notable exceptions to above normal temperatures were recorded in the northeastern portion of the nation. Fig. 3 on page 7 depicts the departure of September 1990 average temperature from normal.

Fig. 1



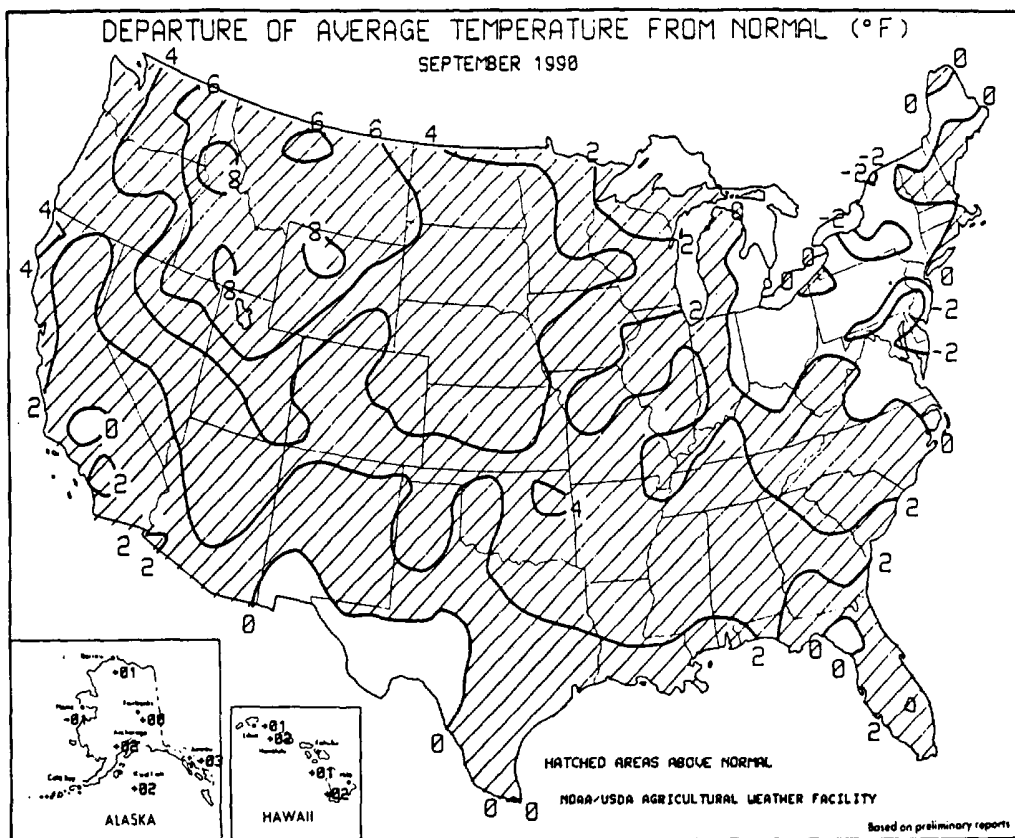
From National Climatic Data Center

Fig. 2



From *Weekly Climate Bulletin - October 1990*

Fig. 3



From *Weekly Weather and Crop Bulletin - October 10, 1990*

2. SEVERE TORNADO IN NOVI, MICHIGAN ON SEPTEMBER 14, 1990

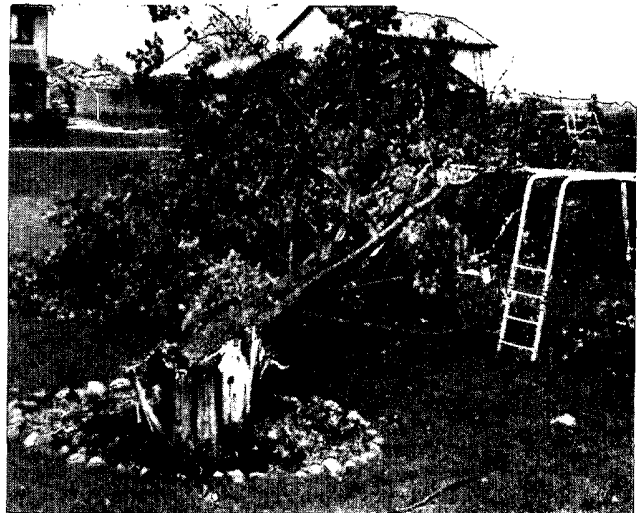
A tornado with an F3 (severe) classification cut a 24-mile swath through the town of Novi in Oakland County, Michigan on September 14th. An estimated \$2 million in damages resulted along its path with a maximum width of 90 yards. The damage was nearly continuous throughout its course as homes, businesses, and cars were badly damaged; many by falling trees. Direct damage caused by the tornado included windows blown out, walls of businesses and homes blown down, roofs lifted off residences and businesses, and broken windshields.



Tornado collapsed brick and frame wall of a residence in Novi. Note that the windows are unbroken. *Photo courtesy: Novi (Michigan) News.*



Severely damaged home in Novi after being hit by the F3 tornado. Debris, mostly from the home in center of photo, was scattered in a neighbor's backyard. *Photo courtesy: Bryan Mitchell, Novi (Michigan) News.*



A tree toppled by the tornado in Novi. The roof of the home in upper-left of photo was severely damaged. *Photo courtesy: Bryan Mitchell, Novi (Michigan) News.*

3. SEVERE WEATHER IN MINNESOTA - SEPTEMBER 5-7, 1990

FLASH FLOODING OF SEPTEMBER 5TH AND 6TH

Strong thunderstorms dumped more than 9 inches of rain over sections of Carlton and St. Louis counties of Minnesota from late evening on the 5th through early morning on the 6th. The resulting flash flooding caused extensive damage to highways, streets, and roads. Several culverts were washed out under Trunk Highway 210, forcing the evacuation and closure of Jay Cook State Park. Large sections of this highway and Highway 23 in Fond Du Lac were washed out; some up to 25-feet long. The Minnesota Department of Transportation estimated damages to city, township, and state roads to exceed \$1 million.

Some evacuations were conducted due to the concern for dams in the area. The streets of Thompson filled with nearly 2 feet of water flowing over the city dam. One hundred people were evacuated from Jay Cooke State Park due to the threat of a possible dam failure.

The only injuries reported as resulting from this flooding were of two young Carlton boys. They were rescued after attempting to wade in the swift moving waters and being swept into a road culvert.



Engineers and a highway maintenance supervisor surveying flash flood damage to Highway 210 at Jay Cooke State Park. Reprinted with permission of the Duluth News-Tribune, Duluth, MN.



Portions of Highway 23 were washed out by the raging Mission Creek. Reprinted with permission of the Duluth News-Tribune, Duluth, MN.



Washed out section of Highway 23 in Fond Du Lac. Richard Randall, District Bridge Safety Inspector, checks undermining of culvert footings. Reprinted with permission of the Duluth News-Tribune, Duluth, MN.



Teri Hackensmith and her brother, Joe Schrier, remove waterlogged belongings from his home on Highway 210. Reprinted permission Duluth News-Tribune, Duluth, MN.



Brooke Bong, Laurie Reed, and Stacy Hopp (left to right) survey the water from the front stoop of the Reed home in Carlton, MN. *Reprinted with permission of the Duluth News-Tribune, Duluth, MN.*



Driveway and garage foundation, owned by Mr. Ray Billings of Duluth, MN, suffered extensive flood/rain damage on September 5-6. *Reprinted with permission of the Duluth News-Tribune, Duluth, MN.*

THUNDERSTORM WIND AND HAIL ON SEPTEMBER 7TH

Southwestern Minnesota experienced strong thunderstorm winds and large hail (up to 2.00 inches) on the morning of September 7th. Considerable damage was reported in some areas.

Willmar reported scattered downed trees due to the strong winds, but the major damage was caused by 2-inch hail. Two automobile dealers suffered damage to a total of 225 cars. Damages

ranged from \$300 to \$2,000 per vehicle.

Trees were toppled and hail caused a swath of considerable crop damage from southeast of Willmar to Cosmos and later in Waseca County.

A barn was destroyed in Kingston by strong thunderstorm winds. Another barn was blown 20 feet off its foundation, collapsing the second floor onto the first.



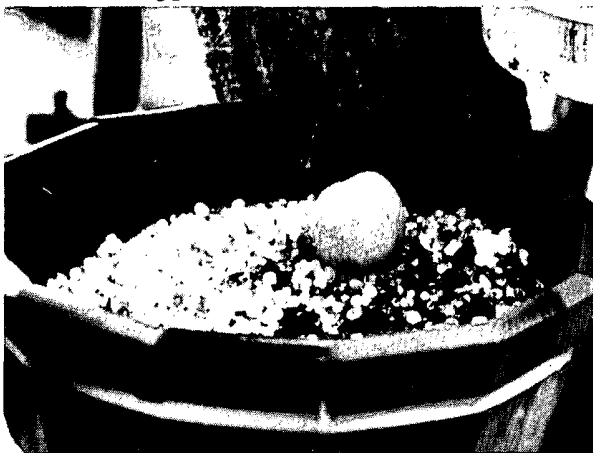
Thunderstorms with heavy rain, hail, and wind gusting to 70 mph resulted in damage such as this tree in Willmar, MN. *Photo credit: Bill Zimmer, West Central Tribune, Willmar, MN.*

4. SOUTHERN CALIFORNIA FLASH FLOOD - SEPTEMBER 5, 1990

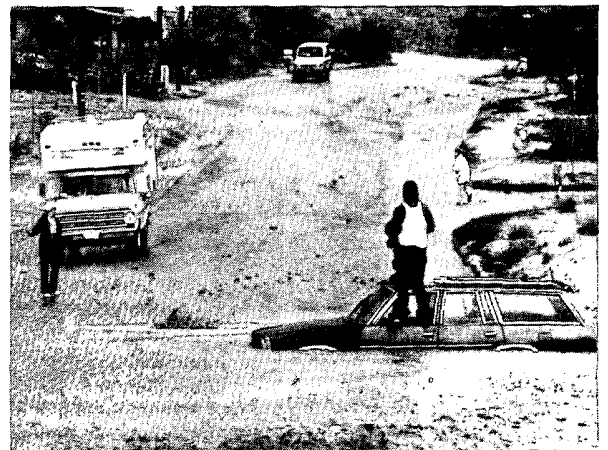
San Bernardino and Riverside counties experienced flash flooding caused by intense thunderstorms. Several motorists were forced to abandon their vehicles at flooded intersections; one was trapped in his car with water up to its

windshield until he was rescued.

Over 4,000 customers were without power in the area due to downed power lines and blown transformers.



Hail in a planter produced by an intense thunderstorm in Joshua Tree. *Photo credit: Jim Stewart, photographer, Hi-Desert Star (Yucca Valley, CA).*



Motorist stranded during flash flood in Joshua Tree. *Photo credit: Jim Stewart, photographer, Hi-Desert Star (Yucca Valley, CA).*

5. HOBBS, NEW MEXICO FLASH FLOOD -- SEPTEMBER 16, 1990

Thunderstorms produced flash flooding in Hobbs, New Mexico. Streets, ditches, homes, and businesses were flooded. Many cars were abandoned in high water.



Two off-duty Hobbs police officers pedal past a convenience store. The two stopped later to help stranded four-wheel vehicle occupants.



An unidentified girl in Hobbs, waist deep in water, makes her way to higher, drier ground.



Karon Raabe of Hobbs is helped by fire fighters after her vehicle stalled at a flooded intersection.

Photo credit for above three pictures: David Joles, photographer, Hobbs Daily News Sun.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

ALABAMA

Baldwin County	04	1600CST			0	0	?	?	Thunderstorm Wind
About 1 mile south of Point Clear a tree was uprooted and the tops were torn out of other trees. A portion of a pier and a sailing vessel were destroyed.									
Mobile County	04	1610CST			0	0	0	0	Hail (0.75)
Dime-size hail fell at Grand Bay.									
Mobile County	04	1630CST			0	0	?	?	Thunderstorm Wind (G70)
In Mobile thunderstorm winds were clocked at 70 mph. At the Alabama State Docks, the winds pushed a crane along the rails on which it travels and crashed it into a truck parked on the dock. The crane derailed and its boom struck the bridge of a ship. In the same vicinity, the roofs were blown off several buildings and power poles were blown down.									
Montgomery County	09	1700CST			0	0	?	?	Thunderstorm Wind
In the northeastern section of Montgomery, several trees were blown down. One tree was blown onto a car. There was also roof damage in the same area.									

ARIZONA

Pima County Tucson	03	1320MST			0	0	0	0	Thunderstorm Winds (G62)
Winds peaked at 71 mph at the airport. Hail about one-quarter-inch in diameter and 0.49 inch rain in 15 minutes was also recorded.									
Yuma County East Yuma	03	1400MST			0	0	5	0	Thunderstorm Winds
Thunderstorms formed over the Mohawk Mountains and moved eastward, toward Dateland. Downburst winds were as high as 70 mph in the foothills area, damaging a shed and downing trees. Two power poles were blown down in the north Gila Valley. About 3 inches of rain fell in the foothills and 2.75 inches about 5 miles west of Wellton. Winds in Yuma caused near-zero visibility.									
Yavapai County Cottonwood	03	1430MST			0	0	3	0	Thunderstorm Winds
Trees and power poles snapped, signs were blown down, and some roofs were damaged due to downburst winds.									
Pinal County Near Apache Junction	03	1530MST			1	0	0	0	Lightning
While playing golf at the Gold Canyon Ranch, a man was struck by lightning. The man had six or seven exit wounds from the lightning strike. (M330)									
Maricopa County Goodyear Phoenix	03	1620MST			0	0	?	0	Thunderstorm Winds (G60)
	03	1710MST	0.2	20	0	0	0	0	Tornado (F0)

A short-lived "gustnado" was reported by a spotter and local police, north of Union Hills Drive, between 7th Street and 7th Avenue. Movement was slowly northwesterly.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

ARIZONA Cont'd

Glendale	03	1800MST			0	0	6	0	Thunderstorm Winds Flooding
Mesa	03	1800MST			0	0	5	0	Thunderstorm Winds

A large area in metropolitan Phoenix sustained damage due to high winds and heavy rains. Winds were estimated as high as 80 mph in Apache Junction. Fourteen power poles were snapped when winds blew trees into lines. As much as 3.50 inches of rain fell in west Phoenix. Street flooding occurred in many areas, and some roads were under 5 feet of water.

Coconino County Supai, Western Grand Canyon

	03	1700MST			0	1	6	3	Flash Flood
--	----	---------	--	--	---	---	---	---	-------------

Very heavy rains sent rushing water, including a wall of water and debris, 14-feet high into the Havasupai Indian Reservation. About 100 local residents were airlifted from the village. The flood destroyed three homes and damaged the local water and sewer systems. Electricity and phone services were cut. Crops were ruined and many pets and livestock were killed.

Pinal County Stanfield

	04	1800MST			0	0	?	4	Hail
--	----	---------	--	--	---	---	---	---	------

Cotton fields sustained damage from large hail.

Cochise County 20 S Willcox

	08	1650MST			0	0	0	0	Funnel Cloud
--	----	---------	--	--	---	---	---	---	--------------

A pilot reported the funnel cloud.

Santa Cruz County Nogales

	13	1700MST			0	0	?	0	Flash Flood
--	----	---------	--	--	---	---	---	---	-------------

Late afternoon and evening thunderstorms left some minor flooding around the border-crossing area.

Pima County Tucson

	13	2020MST			0	0	4	0	Thunderstorm Winds (G51)
--	----	---------	--	--	---	---	---	---	--------------------------

Thunderstorms formed in the Redington Pass area and moved to the southwest. Eight high-voltage power poles were toppled on the city's south side. Davis Monthan AFB had three-eighths-inch hail along with winds that gusted to 59 mph. Rainfall amounted to 0.89 inch, which caused some minor flooding. Roof damage was reported at a manufacturing company on the east side of town.

Santa Cruz County Nogales

	14	1800MST			0	0	0	0	Flash Flood
--	----	---------	--	--	---	---	---	---	-------------

The Sheriff's Office reported streets and washes flooded.

Pima County Tucson

	14	1800MST			0	0	0	0	Thunderstorm Winds
--	----	---------	--	--	---	---	---	---	--------------------

There were numerous reports of downed power lines. On the southwestern side of town, power was lost for more than an hour. In addition, there was an unconfirmed report of a funnel cloud on the south side. Rain totals ranged from 0.23 to 1.03 inches and caused some minor flooding and temporary closure of several intersections.

Maricopa County Mesa, Gilbert, Chandler

	14	2130MST			0	0	6	0	Thunderstorm Winds
	14	2150MST			0	0	5	0	Hail (1.75)
	14	2140MST			0	1	0	0	Lightning
	14	2315MST			0	0	0	0	Flash Flooding

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

ARIZONA Cont'd

High winds, estimated to be 50 to 60 mph, tore the roof off a portable building at Gilbert High School. The roof sailed more than 50 yards across the football field into a parking lot. A 22-year-old man was struck by lightning at Compadre Stadium and was hospitalized. Hail dented the wings and cracked the windshield of a Boeing 727 air cargo plane over Apache Junction. A 2-mile stretch of the Beeline Highway was closed by the Department of Public Safety as water up to 3-feet deep covered some areas.

Pima County
Tucson

18 1135MST 0 0 0 0 Hail (1.75)

The Oro Valley Fire Department reported golf ball-size hail.

ARKANSAS

Randolph County
6 SW Pocahontas

07 1355CST 0 0 2 0 Thunderstorm Winds

Thunderstorm winds blew some trees down along Highway 62.

Fulton County
Vidette

07 1450CST 0 0 0 0 Hail (0.75)

Lawrence County
3 W Imboden
Imboden

07 1548CST 0 0 0 0 Hail (0.75)
07 1550CST 0 0 3 0 Thunderstorm Winds

Thunderstorm winds downed trees, power lines, and damaged some roofs. Two homes were damaged by falling trees, as were numerous fences. Trees were also blown down across sections of Highway 63 and Highway 115.

Carroll County
15 S Berryville

07 1815CST 0 0 3 0 Thunderstorm Winds

Thunderstorm winds took the siding off one wall of a house.

Chicot County
5 N Eudora

08 1510CST-
1520CST 0.20 30 0 0 0 0 Tornado (F0)

A small tornado briefly touched down in open country north of Eudora.

Faulkner County
Conway

09 2000CST 0 0 3 0 Thunderstorm Winds (G43)

Thunderstorm winds blew down trees and damaged a house under construction.

Desha County
McGehee

19 1540CST 0 0 5 0 Thunderstorm Winds (G50)

A thunderstorm downburst damaged the roofs of two businesses, downed some trees, and caused minor damage to the roofs of a few homes. A department store and a factory both lost part of their roofs. Shopping carts also damaged some cars as they flew across the parking lot. The factory suffered water damage as a result of the damaged roof.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

ARKANSAS Cont'd

**Faulkner County
Conway** 20 1330CST 0 0 5 0 **Thunderstorm Winds (G50)**

A severe thunderstorm roared through Conway, causing a multitude of problems, including street flooding, power outages, and damaged homes from falling trees. The northern and central areas of town received the most damage. Numerous homes were damaged as the winds flattened large oak trees. Classes at a junior high school were canceled the next day due to lack of electricity. An official with the local power company described it as the worst storm to hit their system in ten years.

**Phillips County
West Helena** 21 1832CST **Funnel Cloud**

CALIFORNIA, Northern

**San Luis Obispo
County** 21 1625PDT 0 0 0 5 **Hail (0.50)
Heavy Rain**

Thunderstorms produced hail and heavy rains with damage primarily to the grape crop.

**Santa Barbara
County
17 W New Cuyama** 21 1900PDT-
2100PDT 0 0 4 0 **Flash Flood**

**Santa Barbara
County
17 W New Cuyama** 22 1630PDT-
1830PDT 0 1 4 0 **Flash Flood**

**San Luis Obispo
County
Eastern Half** 22 1700PDT 0 0 4 0 **Flash Flood**

Heavy rains on successive days washed out the same stretch of Highway 166 in Santa Barbara County. On the 21st, 2.14 inches fell in a two-hour period with another inch on the 22nd. Mud and debris closed the highway twice, while Highway 58 in San Luis Obispo County was similarly closed on the 22nd.

**Monterey County
King City** 22 1800PDT 0 3 3 0 **Flash Flood**

Santa Cruz County 22 2000PDT 0 0 3 0 **Lightning**

As the area of thunderstorms moved northward, injuries were reported in a trailer park in King City with lightning damage later in the evening to a house in Santa Cruz County.

**Siskiyou, Tehama,
and Shasta
Counties** 23 1800PDT 0 0 0 0 **Severe Thunderstorm**

Paradise Craggy Lookout and Scott Valley, both in Siskiyou County, reported winds of 70 mph and 65 mph, respectively.

**Lake County
Kelseyville** 25 1300PDT-
1400PDT 0 0 3 0 **Hail (1.50)**

Hail caused damage to the grape and walnut crops.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

FLORIDA Cont'd

Monroe County 5 E Key West	23	1147EST			0	0	0	0	Waterspout
A waterspout was observed off the Boca Chita Naval Air Station.									
Palm Beach County West Palm Beach	27	1025EST			0	0	0	0	Waterspout
A waterspout was sighted by the Coast Guard east of Jonathan Dickinson State Park.									
Palm Beach County Jupiter Inlet	28	0630EST			0	0	0	0	Waterspout
A waterspout was observed off Jupiter Inlet in northern Palm Beach County.									
Volusia County Ormond Beach	28	1220EST			0	0	0	0	Waterspout
A small waterspout was observed east of Ormond Beach.									
Alachua County Newberry	28	1345EST			0	0	0	0	Tornado (F0)
A pilot reported a small tornado touched down briefly with no damage.									
Santa Rosa County 1 SE Bagdad	28	1408EST			0	0	0	0	Thunderstorm Wind Hail (0.75)
Several trees were downed by thunderstorm winds. Large hail was also reported.									
Monroe County Long Key	28	1528EST			0	0	0	0	Waterspout
A small waterspout was observed east of Long Key.									
Monroe County Saddlebunch Keys	30	0640EST			0	0	0	0	Waterspout
A waterspout was observed near the Saddlebunch Keys.									
Monroe County Sombbrero Key	30	0649EST			0	0	0	0	Waterspout
A waterspout was noted 2 miles south of Sombbrero Key.									
Monroe County Tavernier	30	0856EST			0	0	0	0	Waterspout
A waterspout was observed 5 miles southeast of Tavernier.									
Pinellas County Indian Rocks	30	1820EST			0	0	0	0	Waterspouts
Several waterspouts were observed 5 to 20 miles off Indian Rocks Beach.									

GEORGIA

Clinch County 12 NE Fargo	01	Evening			0	0	?	?	Lightning
-------------------------------------	----	---------	--	--	---	---	---	---	-----------

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

GEORGIA Cont'd

Clayton County		10	1715EST			0	0	?	?	Hail (0.75)
Forest Park						0	0	2	?	Thunderstorm Wind
Lake City		10	1715EST			0	0	2	?	

Hail developed at Fort Gillem and street flooding occurred over other portions of Forest Park. At Lake City, one large tree and a few tree limbs were blown down across Georgia Highway 54. Scattered power outages occurred over northern Clayton County.

Dougherty County		10	1855EST			0	0	3	?	Lightning
Albany										

Lightning struck through the bedroom window of a home and set a room on fire.

Mitchell County		11	1900EST			0	0	?	?	Thunderstorm Wind
Southeastern Mitchell County										

Scattered large tree limbs were broken off by the winds. Brief power outages resulted.

Pickens County		13	0838EST			0	0	3	?	Thunderstorm Wind
3 W Jasper Jasper										

Thunderstorm winds ripped a portion of a building's roof off just west of Jasper. Scattered power outages developed around Jasper when trees and lines were blown down. Street flooding developed.

Cherokee County		13	2100EST			0	0	3	?	Thunderstorm Wind
Woodstock										

Many trees were blown down by the winds. Minor flooding developed over low-lying areas and roads.

IDAHO

Twin Falls County		03	1415MST	0.1	10	0	0	0	0	Tornado (F0)
Twin Falls 2 SW										

Bannock County		05	1230MST			0	0	0	0	Heavy Rain
Inkom 3 S										

A thunderstorm dropped 1.25 inches of rain in 25 minutes on Rapid Creek in the hills above Inkom.

Boise County		07	1400MST			0	0	0	5	Lightning
Elmore County										

Lightning ignited 14 forest fires in the Boise National Forest including two fires near the Bogus Basin Ski Area which burned for four days. These fires were associated with a much warmer-than-normal hot spell September 4th through the 11th.

Ada County			Summer Season			?	?	?	?	Unusually Hot
Boise										

Fifteen days with temperatures 100° or more during the summer is a new record. The old record was 11 days during the summer of 1960.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

IDAHO Cont'd

Ada County
Boise

26 2130MST 0 0 4 0 **Heavy Rain**

Thunderstorms with small hail and heavy rains left 3 feet of water under the Orchard Street overpass at Business Interstate 84; water was knee deep in downtown Boise at 17th and Main Streets.

ILLINOIS

ILZ001-015

07 1200CST 0 0 ? ? **Heat**

During the first week of September, unusual heat caused schools to reschedule hours. Afternoon temperatures were well into the 90s over most of Illinois, from September 1st through the 7th.

Johnson County
Near Goreville

07 Afternoon 1 0 0 0 **Lightning**

Paul E. Price, 30, of Marion, died instantly after being struck by lightning. He had taken shelter on the porch of a building at the Refuge Ranch near Goreville. Lightning struck a nearby tree and then jumped to the porch. Mr. Price was a volunteer, helping to build a home for underprivileged children. (M300)

Hardin County
46 NE PAH

07 1430CST 3.0 50 0 0 4 ? **Tornado (F1)**

A funnel cloud was spotted at the intersection of Illinois Routes 146 and 1 between 1430 CST and 1500 CST. A rooftop that had been constructed over a mobile home on Illinois 146 was ripped off and a double-wide mobile home in Cave-In-Rock was split in half. Other trees and power lines were downed.

Union County
32 NW PAH

07 1530CST 0 0 4 0 **Thunderstorm Wind**

Trees were downed on power lines and homes by thunderstorm winds at Dongola.

Alexander County
McClure

07 1545CST 0 0 4 0 **Thunderstorm Wind**

The roof was blown off a school building by thunderstorm winds in McClure, 8 miles northeast of Cape Girardeau, MO.

Pulaski County
28 NW PAH

07 1600CST 0 0 4 0 **Thunderstorm Wind**

Thunderstorm winds blew a tree down on Highway 51 in Pulaski. Numerous other power lines were down at Olmsted and throughout rural Pulaski County.

Wabash County
Mt. Carmel

07 Afternoon 0 0 4 ? **Thunderstorm Wind**

Thunderstorm winds caused scattered damage to trees and homes.

White County
Carmi

07 1820CST 0 0 ? ? **Hail (0.88)**

Near Carmi

07 1839CST 0 0 4 0 **Thunderstorm Wind**

Thunderstorm winds downed power lines and trees near Carmi. Lightning started at least seven house fires and exploded two oil tank batteries.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

ILLINOIS Cont'd

Clay County
34 ENE SLO 28 1727CST 0 0 ? ? Hail (1.75)
Hail was reported at Sailor Springs.

Richland County
40 E SLO 28 1754CST 0 0 ? ? Hail (0.75)
Hail was reported at Noble.

INDIANA

Boone County
Thorntown 07 1132EST 0 0 ? ? Hail (1.00)

Vanderburgh County
Evansville 07 1600EST 0 0 ? ? Thunderstorm Winds (G48)
A wind gust to 58 mph was reported at Evansville Weather Service Office.

Gibson County
Patoka 07 1502EST 0 0 2 ? Thunderstorm Winds
07 1502EST 0 0 5 0 Lightning
Lightning struck the Patoka Presbyterian Church causing over \$100,000 in damage.

Princeton 07 1505EST 0 0 3 ? Hail (1.75)
Francisco 07 1520EST 0 0 2 ? Thunderstorm Winds
Thunderstorm Winds

Thunderstorm winds uprooted and tore limbs off trees. Golf ball-size hail was reported at Princeton.

Pike County
Dodge City 07 1537EST 0 0 ? ? Hail (1.00)
Washington County 07 1545EST 0 0 0 0 Hail (1.75)
Clark County 07 1614EST 0 0 0 0 Hail (2.50)

Posey County
Mt. Vernon 07 1905EST 0 0 4 ? Thunderstorm Winds
St. Philip 07 1912EST 0 0 3 ? Thunderstorm Winds

Thunderstorm winds broke and downed several telephone poles in Mt. Vernon. Several trees were blown down at St. Philip.

Floyd County 07 2220EST 0 0 0 0 Hail (1.00)
Clark County 07 2235EST 0 0 0 0 Hail (1.25)

Greene County 12 0358EST 0 0 ? ? Flash Flooding
Six inches of water covered State Road 54 just west of Bloomfield.

Marion County 12 1620EST 0 0 ? ? Flash Flooding
Six inches of water covered the road at 56th Street and Georgetown Road.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

INDIANA Cont'd

St. Joseph County

South Bend	14	1101EST			0	0	?	?	Thunderstorm Winds
Mishawaka	14	1110EST			0	0	4	?	Thunderstorm Winds
Three Rivers	14	1120EST			0	0	?	?	Flash Flooding

A large tree was blown down by thunderstorm winds at Western and Chicago Streets in South Bend. A utility pole and power lines were blown down by thunderstorm winds at Day and Fir Roads in Mishawaka. Concrete block walls of a 10,000-square-foot building under construction on North Main Street collapsed. The building was one-third complete. Streets and small streams were flooded at Three Rivers.

Montgomery County Crawfordsville

	14	1142EST			0	0	?	?	Thunderstorm Winds
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Eight-inch-diameter tree limbs were blown down by thunderstorm winds. Wind gusts to 65 mph were reported at Crawfordsville.

Madison County .5 E Anderson

	14	1310EST			0	0	?	?	Thunderstorm Winds
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Tree limbs and power lines were blown down.

Rush County

	14	1433EST			0	0	?	?	Thunderstorm Winds
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Tree limbs of 4- to 10-inches were blown down.

Decatur County 5 SW Greensburg

	14	1435EST			0	0	?	?	Thunderstorm Winds
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Trees were blown down, blocking State Roads 3 and 46.

Wayne County Abington

	14	1440EST			0	0	?	?	Thunderstorm Winds
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Trees were blown down by thunderstorm winds.

Clark County Floyd County

	14	1535EST			0	0	5	2	Thunderstorm Winds
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Strong thunderstorm winds overturned a mobile home, damaged roofs on several houses, and knocked trees onto several houses and cars.

Ripley County Milan Versailles

	14	1514EST			0	0	?	?	Thunderstorm Winds
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Trees were blown down.

Dearborn County Bright Moore's Hill

	14	1530EST			0	0	?	?	Thunderstorm Winds
--	----	---------	--	--	---	---	---	---	--------------------

Trees were blown down at Bright and power lines were down at Moore's Hill.

Allen County Fort Wayne Wells County Bluffton Travisville

	22	1650EST			0	0	?	?	Hail (0.75)
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	22	1730EST			0	0	?	?	Hail (0.75)
--	----	---------	--	--	---	---	---	---	-------------

Delaware County Muncie

	22	1808EST			0	0	?	?	Hail (1.75)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

INDIANA Cont'd

Franklin County Brookville	22	1845EST			0	0	?	?	Hail (0.75)
Vermillion County Cayuga	28	1533EST			0	0	?	?	Hail (1.00)

IOWA

Louisa County Wapello	02	0935CST			0	0	4	0	Lightning
Thunderstorms moved over the Wapello area during the morning hours. Numerous lightning strikes damaged several homes in the city.									
Warren County 4 NE Indianola	06	1915CST			0	0	4	2	Thunderstorm Winds (G50+)
A thunderstorm moved over Warren County. The storm collapsed, producing a downburst northeast of Indianola. Trees were blown down and windows were knocked out of the one house that was hit.									
Appanoose County 2 E Centerville	07	0452CST			0	0	5	0	Lightning
Thunderstorms moved across Appanoose County during the early morning hours. Lightning struck a barn east of Centerville, setting it on fire and destroying it. Four Tennessee Walking Horses were killed in the blaze.									
Buena Vista County Newell	07	1700CST			0	0	4	5	Hail (2.00)
Pocahontas County Laurens	07	1720CST			0	0	3	3	Thunderstorm Winds (G50+)
A cold front set off a line of thunderstorms in northwestern and northern Iowa. Most were not severe, but did produce pea- to marble-size hail and winds of up to 50 mph. Large hail fell at Newell, causing some property damage and significant damage to crops in the area. High winds moved through the Laurens area, downing trees, and causing some minor damage.									
Decatur County Lamoni	08	0315CST- 0325CST			0	0	3	5	Hail (0.75)
Thunderstorms developed over southern Iowa during the early morning hours. Most of the storms produced pea- to marble-size hail and gusty winds. One cell dropped dime-size hail on Lamoni for a ten minute period.									

KANSAS

Sedgwick County Wichita	07	1525CST			0	0	3	0	Hail (2.00)
Sedgwick County Wichita	07	1526CST			0	0	3	0	Thunderstorm Wind (G57)
Strong winds and large hail produced some damage on the northern and western side of Wichita.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

KANSAS Cont'd

Cowley County 4 SE Winfield	10	1611CST			0	0	3	0	Hail (2.00)
Cowley County 7 W Dexter	10	1615CST			0	0	4	0	Lightning
Lightning struck an oil farm setting fire to three oil tanks. Damage was estimated at \$10,000.									
Cowley County 2 SW Arkansas City	10	1630CST			0	0	3	0	Thunderstorm Wind (G52)
Thunderstorm winds caused roof damage to a home southwest of Arkansas City.									
Cowley County 4 S Dexter	10	1635CST			0	0	3	0	Thunderstorm Wind (G55)
Strong winds uprooted a large tree that blocked U.S. Highway 166.									
Sumner County Caldwell	10	1650CST			0	0	3	0	Thunderstorm Wind (G55)
Several large trees and a number of power lines were blown down.									
Barton County Hosington	20	1358CST			0	0	3	0	Thunderstorm Wind (G55)
Rice County 2.5 N Lyons	20	1440CST			0	0	3	0	Thunderstorm Wind (G52)
A severe thunderstorm developed in the Hosington area producing a strong wind gust that downed several power poles. The storm moved east-northeast into Rice County producing a 60 mph wind gust north of Lyons.									

KENTUCKY

Taylor County	07	1541EST			0	0	4	0	Thunderstorm Wind
Strong winds blew a 100- to 150-foot section of roof from a storage building in Campbellsville and several barns were also damaged.									
Wayne County Monticello	07	1545EST			0	0	4	0	Thunderstorm Wind
Strong thunderstorm winds downed many trees and power lines. In addition, several roofs from homes and businesses were damaged.									
Oldham County	07	1639EST			0	0	0	0	Hail (1.00)
Anderson County	07	1656EST			0	0	3	0	Thunderstorm Wind
Strong winds blew down several trees and power lines throughout the county.									
Taylor County	07	1657EST			0	0	0	0	Hail (1.00)
Anderson County Alton	07	1657EST			0	0	0	0	Hail (1.75)
Muhlenberg County Greenville	07	1608CST			0	0	0	0	Hail (0.88)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

LOUISIANA

St. John the Baptist Parish

4 ENE LaPlace 02 1040CST 0.50 30 0 0 2 0 **Waterspout-Tornado (F0)**

A waterspout over Lake Pontchartrain apparently moved onshore for a short distance. A boat was damaged, several trees were downed, and large tree limbs snapped.

Washington Parish

5 W Franklinton 04 1800CST 0 0 3 0 **Thunderstorm Wind**

Tangipahoa Parish

Amite 04 1815CST 0 0 4 0 **Thunderstorm Wind**

Orleans Parish

Rigolets 04 1900CST 0 0 2 0 **Thunderstorm Wind (G54)**

St. Tammany Parish

Slidell 04 1905CST 0 0 3 0 **Thunderstorm Wind**

St. Bernard Parish

Arabi 04 1915CST 0 0 4 0 **Thunderstorm Wind**

Orleans Parish

Lakefront Airport (NEW) 04 1943CST 0 0 4 0 **Thunderstorm Wind (G72)**

Jefferson Parish

10 N Metairie 04 1958CST 0 0 0 0 **Thunderstorm Wind (G61)**

New Orleans Intl. Airport (MSY)

04 2004CST 0 0 4 0 **Thunderstorm Wind (G50)**

St. Charles Parish

Hahnville 04 2009CST 0 0 4 0 **Thunderstorm Wind**

St. James Parish

Grammercy 04 2025CST 0 0 4 0 **Thunderstorm Wind**

St. Mary Parish

Patterson 04 2154CST 0 0 3 0 **Thunderstorm Wind (G61)**

Evangeline Parish

Basile 05 0200CST 0 0 3 0 **Thunderstorm Wind**

Jefferson Davis Parish

Welsh 05 0245CST 0 0 3 0 **Thunderstorm Wind**

An area of thunderstorms which developed over the southern portions of Alabama and Mississippi and their adjacent coastal waters, intensified and moved rapidly west-southwest across southern Louisiana. Wind gusts of 60 to 70 mph were recorded at several locations. The highest recorded wind gust was 82 mph at Lakefront Airport in New Orleans. There were scattered reports of downed trees and large tree limbs, damage to permanent signs, as well as power outages caused by snapped power lines and utility poles. A falling tree heavily damaged a trailer near Welsh.

Rapides Parish

Libuse 09 1439CST 0 0 0 0 **Hail (1.00)**

Evangeline Parish

Ville Platte 09 1445CST 0.30 30 0 0 3 0 **Tornado (F1)**

Grant Parish

Southeastern Portion 09 1530CST 0 0 2 0 **Thunderstorm Wind**

Concordia Parish

Monterey 09 1640CST 0.30 30 0 0 2 0 **Tornado (F1)**

Several severe thunderstorms developed over south-central and east-central Louisiana during the afternoon. A weak tornado touched down near Ville Platte damaging a mobile home and power lines. Near Monterey, another weak tornado snapped off the crown of several pine trees which blocked Louisiana Highway 129.

Lincoln Parish

Ruston 10 1315CST 0 0 4 0 **Lightning**

Lightning struck a house, igniting a fire which caused \$30,000 damage.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MAINE Cont'd

Penobscot County	02	Afternoon			0	0	5	0	Lightning
<p>A lightning storm burned a hole in the roof of a garage and burned the top portion of the First Congregational Church steeple in Lincoln causing \$10,000 damage. In East Corinth an electrical storm caused a structure fire on Route 2 and destroyed a riding stable. Estimated damage was \$75,000 to \$100,000.</p>									
Washington County	02	Afternoon			0	0	?	0	Lightning
<p>Lightning hit a utility pole transformer sending a fireball along the wires and into a grocery store.</p>									
Cumberland County	02	1800EST			0	0	?	0	Hail (1.00)
<p>One-inch-size hail fell at Sebago Lake Village while Standish reported 0.75-inch hail from the same storm.</p>									
Cumberland County	02	1900EST			0	0	?	0	Hail (0.75)
<p>Three-quarter-inch size hail fell from a thunderstorm in North Scarborough.</p>									
York County	02	1900EST			0	0	?	0	Hail (1.75)
<p>Hail the size of golf balls (1.75-inch) fell from a severe thunderstorm in Old Orchard Beach.</p>									

MARYLAND and D.C.

Wicomico County Salisbury	07	1615EST			0	0	0	0	Thunderstorm Winds
<p>Winds gusted to 67 mph at a television station.</p>									
Montgomery County Damascus	16	1523EST			0	0	0	0	Thunderstorm Winds Hail (0.75)
<p>Strong winds downed a few trees at Damascus and in scattered areas elsewhere in the county.</p>									
District of Columbia	16	1637EST			0	0	3	0	Thunderstorm Winds
<p>Winds were recorded at 61 mph in the northwestern part of the District. About 25 trees were reported downed. About 1,400 homes in the northwestern and northeastern parts of the District lost power.</p>									

MASSACHUSETTS

Middlesex County Chelmsford	15	0830EST			0	0	4	0	Lightning
<p>A bolt of lightning struck a house, blowing a hole in the roof, destroying the chimney, and causing extensive damage to the second floor. Several household appliances were ruined.</p>									

MICHIGAN

MIZ019-021-024-027- 028-029-030-035 Southeastern Lower Michigan	06 07	1400EST- 0100EST			0	0	6	0	Urban Flooding
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MICHIGAN Cont'd

Genesee County 7 E Flint	06	1602EST			0	0	3	0	Thunderstorm Wind
A railroad crossing gate was blown off at Davison and Irish roads.									
Genesee County S 1/2 City of Flint	06	1610EST			0	0	0	0	Thunderstorm Wind
Many large trees and large tree limbs were blown down near the School for the Deaf on Court Street.									
Genesee County NE corner of Flint	06	1615EST			0	0	5	0	Thunderstorm Wind
Several mobile homes were overturned in the Richfield Trailer Park.									
Oakland County near Oxford	06	1620EST			0	0	0	0	Hail (0.75)
St. Clair County 22 N Mt. Clemens	06	1620EST- 1630EST	2.0	40	0	0	3	0	Tornado (F1)
This tornado caused damage to a few homes and cars. Several trees were uprooted and many power lines downed.									
Oakland County 2 W Lake Orion	06	1629EST			0	0	4	0	Thunderstorm Wind (G61)
A citizen reported two small boats sunk on Heather Lake.									
Lapeer County Berlin Township	06	1630EST			0	0	4	0	Lightning
Lightning struck a barn on Almont Road and burned it to the ground. There was a horse in the barn but it was saved.									
Genesee County 2 W Montrose	06	1631EST			0	0	4	0	Thunderstorm Wind
Trees were uprooted, a 30-x-20-foot pole barn was blown down, and a table weighing 150 pounds moved 100 feet.									
Shiawassee County Owosso	06	1635EST			0	0	0	0	Thunderstorm Wind
Tree limbs were downed in the city of Owosso.									
Genesee County Davison	06	1636EST			0	0	5	0	Thunderstorm Wind
The city of Davison was hit hard by the storm. Many large trees and tree limbs up to 1-foot in diameter were blown down. Many cars and buildings were damaged by very strong winds or falling trees or branches. A large Action Auto sign was destroyed by the very strong winds. A chimney was also blown off the roof of a home. A church was damaged by a falling tree. Falling trees also took down many wires. Most of the damage was in a 1-mile-path through the center of town. The damage was caused by straight-line winds.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MICHIGAN Cont'd

**Wayne County
Canton Township** 06 2035EST-2045EST 1.0 30 0 0 0 0 Tornado (F0)

A weak tornado touched down, uprooting a few trees.

**Wayne County
Livonia** 06 2100EST 0 0 3 0 Lightning

Lightning struck a home at 15297 Riverside just as the home owners went to bed, unaware lightning had set the roof on fire. By the time a police officer noticed the fire, most of the roof was destroyed. About \$25,000 in damage was estimated. No injuries occurred.

**Wayne County
Livonia** 06 2220EST 0 0 4 0 Lightning

Lightning struck a home at 39345 Ross. The chimney was blown apart and bricks were found all over the lawn. The lightning also caused the insulation in the attic to burn. Damage was estimated over \$5,000. No injuries occurred.

**Calhoun County
Northwestern
Corner of County** 06 2350EST 0 0 0 0 Thunderstorm Wind (G52)

**Calhoun County
West-Central
Calhoun County** 06 2350EST 0 0 0 0 Thunderstorm Wind

Oak trees 2-feet in diameter were pushed over by strong winds.

**Calhoun County
Many Locations
in County** 07 0015EST 0 0 3 0 Thunderstorm Wind

There were many reports of downed power lines and tree limbs.

**Branch County
Many locations
in county** 07 0100EST 0 0 3 0 Thunderstorm Wind (G52)

There were many reports of downed power lines and tree limbs.

**Monroe County
Many areas** 07 0045EST 0 0 6 5 Thunderstorm Wind

There were numerous reports of damage to homes, farms and some buildings between 0045 EST and 0100 EST. The county fair building, which was under construction, was destroyed. The repairs cost close to \$400,000. Additional costs of the damage to barns, homes, and other property is over \$100,000. Damage to crops, in barns or other storage, is around \$100,000.

**Jackson County
Many Locations
in County** 07 0200EST 0 0 3 0 Thunderstorm Wind

There were many reports of power lines and tree limbs downed.

**Oceana County
Near Ferry** 14 0735EST-0745EST 5.0 30 0 0 4 0 Tornado (F1)

This tornado touched down only for a short while. During these few minutes, the tornado destroyed a barn and uprooted several big trees. The tornado just missed the home of the farmer with the destroyed barn. It uprooted several trees that were within several yards of the home.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MICHIGAN Cont'd

Lake County
Near Chase 14 0815EST 0 0 0 0 **Thunderstorm Wind**
Strong winds damaged a barn.

S Newaygo County
N Kent County 14 0905EST-0925EST 7.0 30 0 0 4 0 **Tornado (F1)**
A weak tornado touched down in extreme southeastern Newaygo County, moved southeast to just southwest of Sand Lake, in Kent County, before dissipating shortly after that. Several trees were blown down, and one home just west of Sand Lake had the roof blown off.

NE Kent County
W Montcalm County 14 0927EST-0940EST 5.0 30 0 0 3 0 **Tornado (F1)**
The same storm that caused the tornado near Sand Lake developed another tornado near Lake Lincoln in extreme northeastern Kent County. This weak tornado moved southeast into extreme western Montcalm County before dissipating near the town of Gowen. Damage from this tornado was limited to trees and a few power lines.

Montcalm County
Near Gowen 14 0930EST 0 0 4 0 **Lightning**
Lightning struck a home near the town of Gowen. Minor damage occurred before the fire was extinguished.

Isabella County
Beal City 14 0932EST 0 0 0 0 **Thunderstorm Wind**
Strong winds blew down several trees.

Kent County
Northeastern Part of County 14 0940EST 0 0 0 0 **Thunderstorm Wind**
The county sheriff reported many trees downed in the northeastern corner of the county. This damage was not associated directly with the tornado that moved through this area about the same time.

Montcalm County
Southern Part of County 14 0940EST 0 0 0 0 **Thunderstorm Wind**
The county sheriff reported many trees downed in the extreme eastern one-fourth of the county. This damage was not associated directly with the tornado that moved through this area.

Ionia County
Near Belding 14 0949EST-1015EST 2.0 30 0 0 4 0 **Tornado (F1)**
A brief touch down occurred near Belding. One auto repair shop had the roof ripped off as it passed over the shop. No injuries were reported.

Allegan County
Otsego 14 1000EST 0 0 5 0 **Thunderstorm Wind**
Very strong winds blew through the center of town. The winds broke glass on some front windows. Several storage sheds were destroyed and some roofs were damaged as the storm passed diagonally through the city of Otsego. Many trees had limbs broken and several big trees were blown down. People in the area at the time said high winds caused the damage, as no tornado was seen while the damage was being done.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MICHIGAN Cont'd

Van Buren County Paw Paw	14	1030EST			0	0	0	0	Thunderstorm Wind Strong winds blew down several trees in the city of Paw Paw.
Van Buren County Glendale	14	1045EST			0	0	5	0	Lightning Lightning struck and destroyed a home at 4330 Michigan Highway 43 near Glendale. The home was engulfed in flames by the time fire fighters arrived.
Van Buren County Paw Paw	14	1045EST			0	0	4	0	Lightning Lightning caused a home to suffer significant damage before the fire could be put out.
Van Buren County Paw Paw	14	1050EST			0	0	3	0	Lightning Lightning caused another home to suffer minor damage before this fire could be put out.
Allegan County 2 S Plainwell	14	1053EST			0	0	0	0	Thunderstorm Wind The Wayland State Police reported several homes damaged by strong winds just south of the city of Plainwell in extreme southern Allegan County.
Van Buren County	14	1100EST			0	0	0	0	Thunderstorm Wind Several trees were reported down by the State Police.
Allegan County NE part of county	14	1100EST			0	0	0	0	Thunderstorm Wind Several trees were reported down by the State Police.
Kalamazoo County	14	1100EST			0	0	0	0	Thunderstorm Wind Several trees were reported down by the State Police.
Barray County Prairieville	14	1120EST			0	0	0	0	Thunderstorm Wind One tree was blown down in Prairieville.
Bay County Essexville	14	1130EST			0	0	3	0	Thunderstorm Wind Near Kramer Junior High School, two teachers saw high winds cause several trees and a few power lines to be blown down by very strong winds. A lot of debris was seen whirling in the air as all this happened, but the teachers said there was no funnel, just strong winds. These same very strong winds blew down a metal storage shed. Trees and power lines were blown down.
Shiawassee County Ern part of county	14	1150EST			0	0	0	0	Thunderstorm Wind (G52)
Tuscola County	14	1205EST			0	0	0	0	Hail (0.75)
Shiawassee County Near Durand	14	1213EST			0	0	0	0	Thunderstorm Wind (G52) A SKYWARN spotter reported very strong winds blew down a tree 2-feet in diameter near the city of Durand.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MICHIGAN Cont'd

Oakland County Waterford Township	14	1315EST			0	0	3	0	Thunderstorm Wind (G62) Strong winds hurled a picnic table through the wall of a nearby home. A boat on Wormer Lake was also damaged.
Oakland County Bloomfield Hills	14	1320EST			0	0	0	0	Thunderstorm Wind (G62) Strong winds uprooted several 30- to 40-foot trees.
Oakland County Troy	14	1325EST			0	0	3	0	Thunderstorm Wind (G62) Strong winds ripped off a 20 x 20-foot section of a gymnasium roof.
Oakland County Auburn Hills	14	1325EST			0	0	4	0	Thunderstorm Wind (G62) Strong winds uprooted about 15 large trees, some 40-feet tall. One tree fell on a two-story golf course clubhouse and caused major damage to the building.
Oakland County Lake Angelus	14	1325EST			0	0	0	0	Thunderstorm Wind (G62) Strong winds uprooted several trees up to 50-feet tall.
Wayne County Highland Park	14	1330EST			0	0	4	0	Thunderstorm Wind (G62) Very strong winds removed the roofs from four apartment buildings.
Macomb County Harrison Township	14	1330EST			0	0	3	0	Thunderstorm Wind (G62) Several power lines were blown down by strong winds.
Macomb County Clinton Township	14	1330EST			0	0	3	0	Thunderstorm Wind (G62) Several 40-foot trees were uprooted, and several power lines were blown down.
St. Clair County 1 N Port Huron	14	1355EST- 1405EST	2.0	35	0	0	4	0	Tornado (F1) This tornado touched down briefly, but caused damage to a few buildings, uprooted several large trees, and took down a few power lines.
St. Clair County Gratiot Township	14	1400EST			0	0	3	0	Thunderstorm Wind (G62) Many large trees and numerous power lines were blown down by very strong winds.
St. Clair County Marine City	14	1400EST			0	0	3	0	Thunderstorm Wind (G62) Several large trees were uprooted and power lines were blown down by strong winds.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MINNESOTA

Carlton County Wright	05	1619CST			0	0	?	?	Hail (1.25)
Aitkin County McGregor	05	1700CST			0	0	?	0	Hail (1.75)
Tamarac	05	1710CST			0	0	?	0	Thunderstorm Winds Hail (2.75)

Large trees were uprooted north of Tamarac.

5 N Libby	05	1718CST			0	0	?	0	Thunderstorm Winds
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Large trees were downed north of Big Sandy Lake.

Carlton County Kettle River	05	1720CST			0	0	?	0	Hail (2.00)
Cromwell	05	1725CST			0	0	?	0	Hail (1.75)

St. Louis County 15 NW Duluth	05	1730CST			0	0	?	0	Thunderstorm Winds
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There were reports of uprooted trees.

Carlton County Mahtowa	05	2200CST			0	0	?	0	Thunderstorm Winds
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There were reports of downed trees.

Southern St. Louis County	05	2300CST-			0	2	6	0	Flash Flood
Carlton County	06	0500CST							

Strong thunderstorms dumped more than 9 inches of rain over sections of Carlton and St. Louis counties. The heaviest rains were located in a 70-mile-wide band from Grand Rapids on the west to Ashland, Wisconsin on the east. In the wake of these heavy rains, segments of some highways collapsed and the streets of Thompson filled with nearly 2 feet of water as it flowed over the city dam. Due to this high flow, there were concerns about the integrity of the dam and some evacuations were conducted. In addition about 100 people were evacuated from the Jay Cooke State Park due to the threat of a possible dam failure.

Damages were fairly extensive to city, township, and state roads. The Minnesota Department of Transportation estimated damages to exceed \$1 million. Trunk Highway 210 accessing Jay Cooke Park had seven culverts wash out forcing the subsequent evacuation and closure of the park. The flooding created several holes 10 by 25 feet along the road.

The Cloquet High School suffered nearly \$150,000 in damages due to the torrent of water that flowed through the school. Through this entire event only two injuries were reported. Two young Carlton boys were injured when they attempted to wade some of the swift-moving waters. They were subsequently swept away through a road culvert but were rescued.

Swift County Benson	07	0312CST			0	0	?	?	Hail (0.75)
Douglas County Alexandria	07	0314CST			0	0	?	?	Thunderstorm Winds (G65)
Stevens County Morris	07	0345CST			0	0	?	?	Thunderstorm Winds
Kandiyohi County Willmar	07	0455CST			0	0	5	0	Thunderstorm Winds (G61)

Large hail and strong winds caused havoc in Willmar. Scattered trees were downed but the greatest damage was to two car dealerships. Between the two, 225 cars were damaged by hail. Damages ranged from \$300 to \$2,000 per vehicle.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

MINNESOTA Cont'd

Brown County New Ulm	14	0015CST			0	0	?	?	Hail (1.75)
Nicollet County Courtland	14	0020CST			0	0	?	?	Hail (0.75)
Le Sueur County Le Center	14	0110CST			0	0	?	?	Hail (0.75)

MISSISSIPPI

Jones County Laurel	02	1845CST			0	0	3	0	Thunderstorm Winds Hail (0.80) Several trees and power lines were blown down.
Rankin County 2 W Brandon	04	1500CST			0	0	3	0	Thunderstorm Winds Numerous trees were blown down in Crossgates subdivision.
Jasper County 8 E Bay Springs	04	1515CST			0	0	4	0	Thunderstorm Winds Three barns and three houses had minor roof damage. Several trees were blown down and many limbs and tops of trees off in a half-mile-wide area.
Rankin County 4 N Luckney	04	1707CST			0	0	3	0	Thunderstorm Winds (G80) The tower at Ross Barnett Reservoir spillway recorded wind gusts of 75 knots and 80 knots in a five-minute period. Doors were blown off the tracks at the Reservoir Fire Station.
Harrison County Wool Market	04	1820CST			0	0	3	0	Thunderstorm Winds A house trailer was blown off its blocks.
Hancock County 3 NW Sellers and Kiln	04	1830CST			0	0	0	0	Hail (0.75)
Humphreys County Isola	08	1635CST			0	0	0	0	Hail (0.75)
Oktibbeha County	09	1405CST			0	0	3	0	Thunderstorm Winds Numerous large trees were blown down on power lines causing extensive power outages across northern Oktibbeha County.
Clay County	09	1440CST			0	0	3	0	Thunderstorm Winds Numerous trees were blown down across western Clay County.

MISSOURI

Jefferson County DeSoto	09	2107CST			0	0	0	0	Hail (1.75) Hail to 1.75-inch diameter was reported just north of DeSoto.
Gentry County	27	1630CST			0	0	0	0	Hail (1.00) Hail to 1-inch diameter was reported in the southwestern portion of the county.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

MISSOURI Cont'd

Gentry County King City	27	1720CST			0	0	0	4	Hail (1.75)
Hail ranging in size from 1.25- to 1.75-inch diameter produced crop damage.									
Daviess County Pattonburg	27	1815CST			0	0	0	0	Hail (1.75)
There was hail to 1.75-inch diameter.									
Grundy County Trenton	27	1945CST			0	0	2	0	Hail (0.75) Thunderstorm Winds
Hail to 0.75-inch diameter and wind gusts to 46 mph knocked down some tree limbs. One-half inch of rain fell in five minutes.									

MONTANA

None reported.

NEBRASKA

Wayne County 7 E Wayne	02	Early Morning			0	0	5	0	Lightning
Lightning struck a television antenna on a house, starting a fire which completely destroyed the house and its contents.									
Keith County 9 N Ogallala	03	Evening			0	0	5	0	Thunderstorm Winds
Thunderstorm winds destroyed three boats at Lake McConaughy. A dozen other boats were blown from their moorings into open waters of the lake.									
Lancaster County Lincoln	07	1735CST			0	0	?	?	Hail (1.50)
One and one-half-inch size hail fell at 14th and Old Cheney Road in Lincoln.									
Richardson County Falls City	07	2050CST			0	0	4	0	Thunderstorm Winds
Strong gusts ripped off part of the roof on a business.									
Adams County Hastings	09	1730CST			0	0	2	0	Hail (0.75) Thunderstorm Winds (G50)
Hail and thunderstorm winds gusting to 58 mph caused minor tree damage.									
Box Butte County 15 SW Alliance	26	Late Night			0	0	0	3	Lightning
Lightning started a fire in a stack of hay bales. About 25 tons of hay was destroyed, with an estimated value of \$3,600.									

NEVADA

Clark County	02	1600PST			1	1	0	0	Lightning
Lightning struck and killed a motorcycle driver and injured his passenger in Las Vegas.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

NEVADA Cont'd

Clark County	03	1300PST			1	1	0	0	Thunderstorm Winds
Thunderstorm winds estimated by the National Park Service at over 60 mph overturned a boat on Lake Mead. One person was drowned and another injured.									
Clark County	18	1600PST			0	0	?	0	Flash Flood
The National Park Service reported several roads into the Lake Mead National Recreation Area closed due to flooding. A nearby automated rain gage reported nearly 2 inches of rain in an hour from a thunderstorm.									
Washoe County	25	1330PST			0	0	0	0	Funnel Cloud
A weather spotter reported a funnel cloud spawned by a thunderstorm in Palomino Valley, 15 miles north of Reno. The funnel cloud was visible for five minutes before dissipating.									

NEW HAMPSHIRE

None reported.

NEW JERSEY, Northern

None reported.

NEW JERSEY, Southern

None reported.

NEW MEXICO

Sandoval County Jemez Springs	07	1145MST- 1300MST			0	0	2	0	Flash Flood
Two-inch rains in a 40-minute period produced flooding of highways and roadways. Later in the day, at 1631 MST, boulders were removed from State Highway 4 around Jemez Springs.									
Roosevelt County N Portales	10	2030MST			0	0	5	?	Hail (1.75)
Golf ball-size hail fell for one-half hour with accumulations of 6 inches in some places. Damage occurred to homes, windows, vehicles, sheds, trees, and crops. The public reported golf ball-size hail still on the ground 12 hours after the storm passed.									
Roosevelt County Portales	10	2050MST			0	0	0	0	Hail (1.00)
Nickel-size hail was reported in Portales by the sheriff's office.									
Eddy County Lakewood	14	1225MST							Funnels
The public reported two funnel clouds near Lakewood.									
Lea County Hobbs	16	1535MST- 1740MST			0	0	4	0	Flash Flood
The Civil Defense Director for Lea County reported flooding in Hobbs with streets and ditches full of water. Some houses and businesses were inundated with water; many cars were reportedly abandoned.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

NEW YORK, Central Cont'd

Area Wide 18 AM 0 0 ? ? Cold

An abnormal cold snap produced several date-record low temperatures. This early frost caused significant damage to crops.

NEW YORK, Coastal

Suffolk County
Sound Beach 02 2100EST 0 0 0 0 Hail (0.75)

Strong thunderstorms developed along and ahead of a cold front moving across Long Island. One such thunderstorm produced dime-size hail at Sound Beach.

NEW YORK, Western

Erie County
Clarence 14 1900EST 0 0 4 0 Thunderstorm Winds

A vigorous cold front crossed western New York accompanied by thunderstorms containing heavy rains and strong winds. Numerous trees and wires were downed in the town of Clarence. Damage reports included: one auto crushed by a falling tree, some siding stripped from a house, a basketball pole and backboard doubled over, a garage door bent inward, and a fence blown down.

NORTH CAROLINA

Dare County
Duck 01 1223EST 2 0 0 0 Rip Currents

Heavy surf and steady onshore winds produced numerous rip currents along the coast north of Cape Hatteras. Two young children were drowned near Duck. During the weekend of September 1st and 2nd over 50 swimmers required assistance because of the rip currents.

Hyde County
Swan Quarter 03 1415EST 1 4 0 0 Lightning

Four people were injured and one person was killed when they were struck by lightning after taking refuge under a wooden pier at Swan Quarter. (M240)

Person County
Roxboro 07 1750EST 0 0 0 0 Hail (0.75)

Halifax County
Near Enfield 07 1915EST 0 0 0 0 Thunderstorm Winds

Martin County 07 2025EST 0 0 0 0 Thunderstorm Winds

Bertie County 07 2355EST 0 0 0 0 Thunderstorm Winds

Thunderstorm winds blew down trees and power lines across northern and eastern parts of the state. Nickel-size hail fell in Roxboro.

Catawba County
Southwest 08 1805EST 0 0 0 0 Hail (0.75)

Lincoln County
Northern Lincoln County 08 1830EST 0 0 0 0 Hail (0.75)

Nickel-size hail fell in Catawba and Lincoln counties.

Alexander County 10 1450EST 0 0 0 0 Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

NORTH CAROLINA Cont'd

Iredell County	10	1525EST			0	0	0	0	Thunderstorm Winds
Cleveland County North of Falston	10	1605EST			0	0	0	0	Hail (0.75)
Anson County Lilesville	10	1637EST			0	0	0	0	Hail (0.75)
Johnston County West of Smithfield	10	1715EST			0	0	0	0	Thunderstorm Winds
Stanley County New London	10	1800EST			0	0	0	0	Hail (0.75)
Pitt County 2 E Greenville	10	2150EST			0	0	0	0	Hail (1.00)

Thunderstorms over the piedmont produced dime- to nickel-size hail in many areas. Trees and power lines were blown down in Alexander and Iredell counties. Two trees were blown down just west of Smithfield.

Dare County W of Salvo and Wave	14	0930EST			0	0	0	0	Waterspout
Carteret County	14	1030EST			0	0	0	0	Waterspout

Numerous waterspouts were sighted west of Salvo in the Pamlico Sound from 0930 EST to 1115 EST. As many as three at a time were visible from the shore. A waterspout was sighted in the coastal waters off Carteret County.

Carteret County Harkers Island	15	0545EST	0.5	40	0	0	5	0	Waterspout Tornado (F2)
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A small waterspout-tornado touched down in Back Sound between Harkers Island and Shackleford Banks. The tornado moved on land at the Cape Lookout National Seashore site on Harkers Island. A motel being renovated sustained major damage. The tornado overturned an automobile, destroyed a picnic shelter, and a small ferry concession office. Damage estimates were near \$100,000.

NORTH DAKOTA

Wells County Fessenden	06	2225CST			0	0	0	0	Thunderstorm Winds (G52)
8 SW Hurdsfield	06	2230CST			0	0	0	0	Hail (0.75)
Stutsman County Jamestown	06	2250CST			0	0	4	4	Hail (1.75)
Medina	06	2325CST			0	0	4	4	Hail (1.75)
Jamestown (JMS)	06	2339CST			0	0	4	4	Thunderstorm Winds (G62)
Montpelier	06	2355CST			0	0	4	4	Thunderstorm Winds (G61)

A wind gust to 71 mph was recorded at the Jamestown Airport. The winds overturned a tractor-semitrailer on Interstate 94, blew over sunflower stalks, and downed trees.

Barnes County Litchville	07	0015CST			0	0	4	4	Thunderstorm Winds (G52)
Valley City	07	0105CST			0	0	4	4	Thunderstorm Winds (G52)

Winds blew down trees and power lines, damaging cars, and a few homes. The winds also blew down corn and sunflower stalks along the Barnes and LaMoure County line.

Ransom County Enderlin	07	0020CST			0	0	5	5	Thunderstorm Winds (G61)
Sheldon	07	0045CST			0	0	5	5	Thunderstorm Winds
McLeod	07	0110CST			0	0	0	0	Thunderstorm Winds (G52)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

NORTH DAKOTA Cont'd

The combination of wind, hail, and rain caused extensive crop damage over 55 square miles in northern Ransom County. The heaviest damage was near the towns of Enderlin and Sheldon. The storm downed power poles and lines, destroyed farm buildings and equipment, ravaged crops, and damaged homes and other buildings.

La Moure County Marion	07	0030CST			0	0	4	4	Thunderstorm Winds (G52)
Sargent County Gwinner	07	0103CST			0	0	0	0	Thunderstorm Winds (G52)
Richland County Abercrombie	07	0120CST			0	0	3	3	Thunderstorm Winds
Wahpeton	07	0130CST			0	0	3	3	Thunderstorm Winds
5 W Fairmount	07	0140CST			0	0	3	3	Thunderstorm Winds

Winds downed trees and power poles causing widespread power outages.

Cass County Amenia	07	0155CST			0	0	3	3	Thunderstorm Winds (G52)
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A cluster of fast-moving thunderstorms developed over central North Dakota moving southeastward at 50 mph. These storms did most of their damage over southeastern North Dakota, destroying mature corn and sunflower crops.

OHIO

Guernsey County Byesville	02	1747EST			0	0	4	0	Thunderstorm Winds
Countywide	02	1747EST- 1900EST			0	0	4	0	Urban and Small Stream Flooding

Thunderstorms blew down power lines in Byesville and many creeks and streams flooded.

Lorain County Penfield	06	1345EST			0	0	4	0	Thunderstorm Winds
Wellington and Brighton									
Geauga County Novelty	06	1355EST			0	0	?	0	Hail (0.75)
Summit County Twinsburg	06	1412EST			0	0	?	0	Hail (0.75)
Ashland County Ashland	06	1420EST			0	0	4	0	Thunderstorm Winds
					0	0	?	0	Hail (0.75)
Wayne County 2 W Clinton	06	1445EST			0	0	4	0	Thunderstorm Winds
Ashtabula County Countywide	06	1455EST			0	0	4	0	Thunderstorm Winds
Holmes County 2 W Wilmot	06	1500EST			1	1	0	0	Lightning
Stark County Jackson Township	06	1500EST			0	0	4	0	Thunderstorm Winds
Summit County Clinton	06	1500EST			0	0	4	0	Thunderstorm Winds
Trumbull County Hubbard Township	06	1530EST			0	0	4	0	Thunderstorm Winds

Thunderstorms moved across northeastern Ohio blowing down trees and power lines in many areas and dropping large hail. Lightning killed a woman and injured her daughter while they were out in a field. (F500)

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

OHIO Cont'd

Geauga County 1 SW Chardon	06	1408EST- 1413EST	1.0	20	0	0	4	0	Tornado (F0)
A tornado touched down on Bass Lake Road damaging trees and some buildings.									
Cuyahoga County Countywide	06	1915EST			3	3	4	0	Thunderstorm Winds
Lake County Painesville	06	1920EST			0	0	4	0	Thunderstorm Winds
Willowick	06	1920EST			0	0	4	0	Thunderstorm Winds
Medina County Medina	06	1930EST			0	0	4	0	Thunderstorm Winds
Mahoning County Berlin Lake	06	1940EST			0	0	4	0	Thunderstorm Winds Hail (0.75)
Columbiana County Countywide	06	2000EST			0	0	4	0	Thunderstorm Winds
Trumbull County Warren	06	2013EST			0	0	4	0	Thunderstorm Winds
Mahoning County Beaver Township	06	2020EST			0	0	4	0	Thunderstorm Winds
Stark County Massillon	06	2100EST			0	0	4	0	Thunderstorm Winds
Summit County Twinsburg	06	2310EST			0	0	?	0	Hail (0.75)
Portage County Streetboro	06	2350EST			0	0	4	0	Thunderstorm Winds

Thunderstorms moved through northeastern Ohio for the second time during the evening of the 6th. Trees and power lines were again damaged with some damage to buildings. Winds gusted to 62 mph at the Cleveland Light House and campers were overturned at Berlin Lake. Three women were killed and three men were injured when their sailboat was pushed onto the breakwall near Cleveland Harbor. Large hail fell in some areas. (F500, F550, F370)

Cuyahoga, Lorain, Medina, Lake, Ashtabula, Geauga Counties	06 07	1900EST- 0700EST			0	0	6	0	Urban and Small Stream Flooding
Wayne, Summit, Stark, Portage, Trumbull Counties	06 07	2100EST- 0900EST			0	0	6	0	Urban and Small Stream Flooding
Mahoning, Columbiana, Carroll Counties	06 07	2300EST- 1000EST			0	0	6	0	Urban and Small Stream Flooding
Jefferson County	07	0000EST- 1200EST			0	0	6	0	Urban and Small Stream Flooding

Thunderstorms repeatedly moved through northeastern Ohio dropping 2 to 5 inches of rain in many areas. Flooded basements and overflowing streams and creeks were widespread. Damage from backed up sewers occurred throughout much of Lorain and Cuyahoga counties. Steubenville, in Jefferson County, evacuated hundreds of people as creeks throughout town flooded.

Summit County Old Portage	07	0030EST- 0900EST			0	0	4	0	Flood
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OHIO Cont'd

Shelby County Pimberton	14	1510EST			0	0	4	0	Thunderstorm Winds
Champaign County Countywide	14	1515EST			0	0	5	0	Thunderstorm Winds
Huron County Norwalk	14	1530EST			0	0	4	0	Thunderstorm Winds
Marion County 1 N Prospect	14	1530EST			0	0	4	0	Thunderstorm Winds
Madison County Plain City	14	1543EST			0	0	4	0	Thunderstorm Winds
Lorain County Lorain	14	1555EST			0	0	4	0	Thunderstorm Winds
Delaware County Delaware	14	1600EST			0	0	4	0	Thunderstorm Winds
Clermont County 1 E Amelia	14	1610EST			0	0	4	0	Thunderstorm Winds
Cuyahoga County Countywide	14	1615EST			0	0	5	0	Thunderstorm Winds
Franklin County Columbus	14	1630EST			0	1	5	0	Thunderstorm Winds
Pickaway County 2 W Tarlton	14	1700EST			0	0	4	0	Thunderstorm Winds
Licking County Alexandria	14	1710EST			0	0	4	0	Thunderstorm Winds
Ross County Northern half	14	1710EST			0	0	4	0	Thunderstorm Winds
Stark County Justus	14	1720EST			0	0	4	0	Thunderstorm Winds
Fairfield County Countywide	14	1725EST			0	0	4	0	Thunderstorm Winds
Ashtabula County Northern half	14	1730EST			0	0	4	0	Thunderstorm Winds
Trumbull County Champion	14	1746EST			0	0	4	0	Thunderstorm Winds
Warren Mosquito Lake					0	0	?	0	Hail (0.75)
Carroll County Countywide	14	1820EST			0	0	4	0	Thunderstorm Winds
Hocking County Logan	14	1820EST			0	0	4	0	Thunderstorm Winds
Mahoning County Youngstown	14	1820EST			0	0	4	0	Thunderstorm Winds
Columbiana County 2 S Damascus	14	1829EST			0	0	4	0	Thunderstorm Winds
Harrison County Countywide	14	1840EST			0	0	4	0	Thunderstorm Winds
Athens County Nelsonville	14	1845EST			0	0	5	0	Thunderstorm Winds
Washington County Fleming	14	1855EST			0	0	4	0	Thunderstorm Winds
1 N Newport					0	0	4	0	Thunderstorm Winds

Thunderstorms moved across much of Ohio, downing trees and power lines, and damaging buildings. Large hail fell in some areas. A school lost its roof and a barn was destroyed in Republic and winds gusted to 60 mph in Plain City. Winds gusted to 71 mph at the Lorain Light House, 63 mph at Cleveland's Burke Lake Front Airport, and 82 mph at the Cleveland Light House. The third floor of a building in downtown Columbus collapsed, crushing many cars and injuring one woman.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

OHIO Cont'd

Warren, Clinton
Fayette Counties
2 NE Waynesville to
Washington Court
House

14 1545EST-1655EST 37 200 0 6 6 0 Tornado (F2)

A tornado touched down in extreme northeastern Warren County and traveled almost due east into Clinton County at 1600 EST and into Fayette County at 1630 EST. Four people were injured in Warren County and two were injured in Clinton County. Many homes, barns and outbuildings were damaged, trees were uprooted or blown over, and power lines were blown down. One home was destroyed in Warren County and two mobile homes were destroyed in Clinton County. Seven barns and outbuildings were destroyed along the path.

Cuyahoga County
Cleveland

16 0956EST 0 0 ? 0 Thunderstorm Winds

A thunderstorm moving along Lake Erie's shore produced winds of 71 mph at the Cleveland Light House and 62 mph at Cleveland's Burke Lake Front Airport.

Washington County
1 NW Dunbar

16 1315EST-1320EST 1 20 0 0 5 0 Tornado (F0)

A tornado touched down and moved a large shed off its foundation, moved around some heavy equipment, took the roof off a building, and blew windows out of a van.

Cuyahoga County
Cleveland
Lake County
Mentor

23 1915EST 0 0 3 0 Thunderstorm Winds
23 2058EST 0 0 4 0 Thunderstorm Winds

Thunderstorms moving along Lake Erie's south shore produced wind gusts to 67 mph at the Cleveland Light House and 59 mph at Cleveland's Burke Lake Front Airport. Trees and power lines were blown down in Mentor.

Clark County
1 E Springfield
Madison County
5 NW London
Fayette County
Jeffersonville
Brown County
Russellville
Highland County
Mowrystown

29 1630EST 0 0 4 ? Hail (1.50)
29 1720EST 0 0 4 ? Hail (1.00)
29 1745EST 0 0 4 0 Thunderstorm Winds
29 1830EST 0 0 4 0 Thunderstorm Winds
29 1830EST 0 0 4 0 Thunderstorm Winds

Thunderstorms moved through southern Ohio blowing down trees and power lines and dropping large hail, which damaged vehicles and broke windows.

OKLAHOMA

Blaine County
Canton
Major County
1 S Cedar
Springs
Major County
Near Cedar
Springs

10 1405CST 0 0 ? ? Hail (0.88)
10 1407CST 0 0 ? ? Hail (1.75)
10 1410CST 0 0 ? ? Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL	STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OKLAHOMA Cont'd

Grant County 6 W Medford	10	1620	CST			0	0	?	?	Hail (1.00)
Beckham County Sayre	10	1625	CST			0	0	4	?	Lightning
Kay County 1 E Newkirk	10	1637	CST			0	0	?	?	Hail (1.75)
Grant County 12 N Newkirk	10	1705	CST			0	0	?	?	Hail (0.75)
Osage County Foraker	10	1530	CST			0	0	?	?	Hail (0.88)
Pawnee County 2 W Pawnee	10	1740	CST			0	0	?	?	Hail (0.75)

Thunderstorms produced golf ball-size hail and damaging winds across northern and western Oklahoma. Trees were uprooted near Cedar Springs and minor damage to outbuildings was reported. Lightning struck an oil rig in Sayre, resulting in \$20,000 damage.

Carter County Ardmore	16	1900	CST			0	0	?	?	Hail (1.00)
Carter County Ardmore	16	1900	CST			0	0	4	?	Thunderstorm Wind

Strong thunderstorm winds resulted in damage to the roofs of two buildings. The roof of the Ardmore High School Gymnasium suffered wind damage which allowed water to enter the building and extensively damage the new wood floor. Several large trees were also uprooted.

Lincoln County 3 SE Meeker	17	1753	CST			0	0	5	?	Lightning
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Lightning struck a home and the resulting fire destroyed the structure. Damage was estimated at \$80,000.

Pottawatomie County 1 SE Trosdale	18	1500	CST			0	0	?	?	Thunderstorm Wind (G52)
Payne County 4 S Stillwater	18	1604	CST			0	0	?	?	Hail (0.88)
Payne County 8 E Stillwater	18	1610	CST			0	0	?	?	Thunderstorm Wind
Craig County 9 SW Vinita	18	1740	CST			0	0	?	?	Thunderstorm Wind (G52)
Craig County 7 W Bernice	18	1820	CST			0	0	?	?	Thunderstorm Wind (G52)

Thunderstorm winds resulted in damage to a barn 8 miles east of Stillwater. In Craig County large tree limbs were downed and several trees were uprooted.

Grady County 6 E Tuttle	19	1400	CST			0	0	?	?	Thunderstorm Wind (G70)
Pushmataha County 8 NE Moyers	19	1730	CST			0	0	?	?	Hail (1.75)
Pushmataha County 8 WNW Antlers	19	1825	CST			0	0	?	?	Hail (0.75)
Osage County 1 S Hulah	19	1425	CST			0	0	?	?	Hail (1.00)
McIntosh County S Eufaula	19	1500	CST			0	0	?	?	Hail (1.75)
McIntosh County S Eufaula	19	1500	CST			0	0	?	?	Thunderstorm Wind
Haskell County Stigler	19	1510	CST			0	0	?	?	Thunderstorm Wind

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

OKLAHOMA Cont'd

Thunderstorms produced damaging winds which downed trees and large limbs 6 miles east of Tuttle, in Eufaula and at Stigler. A barn was also destroyed 6 miles east of Tuttle. Golf ball-size hail at Eufaula resulted in damage to automobiles and to roofs. Damage is estimated by the National Weather Service at \$50,000.

Oklahoma County Countywide

20	2330CST				0	0	5	?	Flash Flood
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Slow-moving thunderstorms resulted in 5 to 7 inches of rain across the county during the overnight hours. Forty trailers were evacuated from Oklahoma State Fairgrounds due to the flooding. A homeless shelter near Crutch Creek was evacuated as six feet of water flooded the building. Damage to the roofs of the Oklahoma County Courthouse and Annex Building was estimated at \$500,000.

Haskell County Countywide Pittsburg County Countywide Latimer County Countywide

21	0900CST				0	0	?	?	Flash Flood
21	0930CST				0	0	?	?	Flash Flood
21	0930CST				0	0	?	?	Flash Flood

Thunderstorms resulted in up to 6 inches of rain that closed many county and rural roads for several hours. Highway 82 was closed for a short time 6 miles south of Stigler. Some residents in Kinta were threatened by rising waters and one person was trapped on an oil rig by rising waters. State Highway 2 north of the Pushmataha County line and Highway 82 between Red Oak and Talihina were closed.

Lincoln County Wellston Lincoln County Wellston Pottawatomie County McCloud Lincoln County 3 E Chandler Muskogee County Nr Ft Gibson

29	1415CST				0	0	?	?	Hail (0.88)
29	1415CST				0	0	?	?	Thunderstorm Wind
29	1430CST				0	0	?	?	Hail (0.75)
29	1442CST				0	0	?	?	Hail (0.75)
29	1815CST				0	0	?	?	Thunderstorm Wind

Thunderstorm winds downed trees in Wellston and near Fort Gibson. Minor roof damage was also reported in Fort Gibson, but damage estimates were not available.

OREGON

None reported.

PENNSYLVANIA, Eastern

Lackawanna County Scranton 3 NE Wilkes- Barre-Scranton (Arpt AVP)

02	1500EST				0	0	3	0	Thunderstorm Wind
02	1600EST				0	0	3	0	Thunderstorm Wind (G60)

Thunderstorm wind gusts damaged trees and caused power outages in Scranton. Station WNEP-16, located northeast of the Wilkes-Barre-Scranton Airport, measured a wind gust to 69 mph. There was also some tree damage in that general area.

Susquehanna County Hop Bottom

02	1500EST				0	0	3	0	Thunderstorm Wind
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Thunderstorm wind gusts damaged trees and caused power outages.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

PENNSYLVANIA, Eastern Cont'd

Luzerne County Pittston	02	1600EST			0	0	3	0	Thunderstorm Wind
Thunderstorm wind gusts damaged trees and caused power outages.									
Pike County Blooming Grove	02	1609EST			0	0	3	0	Thunderstorm Wind (G53)
Thunderstorm wind gusts reported at over 60 mph brought down tree limbs.									
Carbon County 1 S Meckesville Lehighton	02	1723EST			0	0	3	0	Thunderstorm Wind
	02	1752EST			0	0	3	0	Thunderstorm Wind
Thunderstorm wind gusts broke off large trees south of Meckesville and downed large limbs in Lehighton. Small hail was also reported in Lehighton.									
Lancaster County Gap	02	2100EST			0	0	5	0	Lightning
A lightning-caused fire destroyed a barn near Gap and all its contents. The barn was used as an antique shop and the loss was estimated at \$120,000.									
Centre County State College State College Bealsburg	14	2150EST			0	0	?	0	Thunderstorm Wind (G55)
	14	2155EST			0	0	3	0	Thunderstorm Wind (G55)
	14	2200EST			0	0	4	0	Lightning
Thunderstorm wind gusts were measured at 63 mph on the Pennsylvania State University campus and numerous trees were downed. The first 63 mph gust was at 2150 EST and then gusts reached that same value again between 2155 and 2210 EST. In nearby Bealsburg two cows and four calves were killed by lightning.									
Huntingdon County McAlveys Fort	14	2210EST			0	0	3	0	Thunderstorm Wind
Thunderstorm wind gusts downed many trees near McAlveys Fort.									
Huntingdon County	14	2220EST			0	0	?	0	Flooding
Heavy rain caused street and basement flooding in the Mount Union area. Flooding occurred between 2220 and 2245 EST.									
Mifflin County	14	2230EST			0	0	?	0	Flooding
Heavy rain, as much as 1.90 inches in 1.25 hours, caused street flooding in Menne, Union, and Brown Townships. Route 322 was covered by 1 foot of water near Reedsville. Flooding occurred between 2230 and 2330 EST.									
Lycoming County 2 N Williamsport	14	2310EST			0	0	3	0	Thunderstorm Wind
Thunderstorm wind gusts uprooted trees, blew down fences, and tore shingles and spouting off roofs of houses in Loyalsock Township.									

PENNSYLVANIA, Western

Somerset County 9 W Somerset	02	1605EST			0	2	0	0	Hail (0.75) Lightning
Three-quarter-inch hail was reported at Hidden Valley. Two people were struck by lightning.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

8 SW Somerset	02	1630EST			0	0	0	0	Thunderstorm Wind
Power lines were downed by thunderstorm wind in Rockwood.									
Westmoreland County 12 S Greensburg	02	1635EST			0	0	0	0	Thunderstorm Wind
Trees were blown down on Route 31 in Mt. Pleasant.									
Greensburg	02	1640EST			0	1	0	0	Thunderstorm Wind Lightning
Power lines were downed near Greensburg. One person was hit by lightning.									
Erie County 6 NE Erie	05	0449EST			0	0	4	0	Lightning
Lightning started a house fire in Harbor Creek. Damage was \$15,000.									
Clarion County 11 N Clarion	05	0810EST			0	0	?	0	Thunderstorm Wind Lightning
A few large trees were downed in Fryburg. A roof was hit by lightning.									
Erie County 20 SW Erie	06	1430EST			0	0	0	0	Thunderstorm Wind
Power lines were downed in Cranesville.									
Crawford County 14 W Meadville	06	1445EST			0	0	0	0	Thunderstorm Wind
Power lines were downed in Linesville.									
Meadville	06	1505EST			0	0	0	0	Thunderstorm Wind
Power lines and large trees were downed in Meadville. An asphalt truck was blown on its side.									
15 NW Meadville	06	1505EST			0	0	4	0	Thunderstorm Wind
At Conneautville trees were downed and the pole lights and gas pumps at a gas station were knocked down. One pump caught fire from the lamps.									
5 E Meadville	06	1515EST			0	0	0	0	Thunderstorm Wind
Large trees and power lines were downed in Frenchtown.									
Butler County 13 NW Butler Butler	06	1605EST			0	0	3	0	Funnel Cloud Lightning
A funnel cloud was reported over Portersville. Lightning struck a home in Butler setting an attic ablaze. Loss estimated at \$3,000.									
Butler	06	1610EST			0	0	0	0	Thunderstorm Wind
Trees were down in Butler.									
19 NW Butler	06	1610EST- 1612EST	0.1	40	0	0	0	0	Tornado (F1)
Huge trees were twisted off in Harrisville.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

Lawrence County	06	1628EST			0	0	0	0	Thunderstorm Wind
									Trees were downed throughout the county due to thunderstorm winds.
Verango County Franklin	06	1630ESST			0	0	0	0	Thunderstorm Wind
									Trees and power lines were downed in Franklin.
Beaver County 7 SE Beaver 8 SW Beaver	06	1630EST			0	0	0	0	Thunderstorm Wind
									Trees and power lines were downed in Baden, Midland, and Center.
Allegheny County 9 SE Pit	06	1630EST			0	0	0	0	Thunderstorm Wind
									Power lines were downed in South Fayette.
15 NE Pit	06	1652EST			0	0	0	0	Thunderstorm Wind
									Power lines were downed in Wexford.
13 E Pit	06	1700EST			0	0	0	0	Thunderstorm Wind
									Three-foot trees were downed in North Hills.
Indiana County 15 SW Indiana 14 SE Indiana	06	1700EST			0	0	0	0	Thunderstorm Wind
									Large trees were downed in Conemaugh and Buffington Townships.
Westmoreland County	06	1700EST			0	0	0	0	Thunderstorm Wind
									Trees were downed throughout the county.
Washington County	06	1700EST			0	0	0	0	Thunderstorm Wind
									Trees were downed throughout the county.
Allegheny County 13 N Pit	06	1710EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in Bradford Woods.
Washington County Washington	06	1712EST			0	0	0	0	Funnel Cloud
									A funnel cloud was sighted over Washington.
Jefferson County 15 SE Brookville	06	1714EST			0	0	0	0	Thunderstorm Wind
									Power lines were down in Punxsutawney.
Allegheny County 24 E Pit	06	1730EST			0	0	4	0	Heavy Rain
									A Sears store roof collapsed in Monroeville from the weight of accumulated rain.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

PENNSYLVANIA, Western Cont'd

Westmoreland County

19 SW Greensburg 06 1730EST 0 0 ? 0 Lightning
A house was struck by lightning in Monessen. Severe damage occurred from the ensuing fire.

11 E Greensburg 06 1730EST 0 0 ? 0 Lightning
Fire damaged a school in North Huntingdon struck by lightning. The roof and hallway ceiling were damaged.

11 NE Greensburg 06 1730EST 0 0 0 0 Funnel Cloud
A funnel cloud was sighted over New Alexandria.

12 NW Greensburg 06 1730EST-1735EST 0.2 40 0 0 0 0 Tornado (F1)
Trees were lifted onto roads in Murrysville.

12 NE Greensburg 06 1740EST-1742EST 0.2 40 0 0 0 0 Tornado (F1)
A tornado touched down briefly between New Alexandria and Derry.

9 E Greensburg 06 1743EST 0 0 0 0 Funnel Cloud
A funnel cloud was sighted between Lloydsville and Latrobe.

Indiana County 06 1750EST 0 0 0 0 Funnel Cloud
A funnel cloud was seen over wooded areas.

Westmoreland County
16 NE Greensburg 06 1800EST 0.1 40 0 0 0 0 Tornado (F1)
A tornado touched down briefly downing trees near Bairdstown.

Armstrong County
8 SW Kittanning 06 1811EST 0 0 0 0 Thunderstorm Wind
Power lines were downed in south Buffalo Township.

Greene County
14 W Waynesburg-12 E Waynesburg 06 1815EST 0 0 0 0 Thunderstorm Wind
Trees were downed in Wind Ridge and Carmichael.

Fayette County
Uniontown 06 1820EST 0 0 0 0 Thunderstorm Wind
Trees were downed in Uniontown.

Westmoreland County 06 1820EST 0 0 0 0 Thunderstorm Wind
Trees and power lines were downed throughout the county.

Somerset County
8 SW Somerset 6 N Somerset 06 1830EST 0 0 0 0 Thunderstorm Wind
Trees were downed in New Centerville and Sipesville.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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PENNSYLVANIA, Western Cont'd

Erie County 12 SW Erie	06	1935EST			0	0	0	0	Hail (0.75) Three-quarter-inch-size hail fell at Walnut Creek access in Fairview.
5 SW Erie	06	1945EST			0	0	2	0	Lightning Two Millcreek homes were struck by lightning with little damage.
14 SW Erie	06	1950EST			0	0	0	0	Hail (0.75)) Three-quarter-inch-size hail was reported 2 miles south of Fairview.
Erie County Erie	06	1950EST			0	0	0	0	Hail (0.75) Thunderstorm Wind Dime-size hail was reported at Erie. Trees and power lines were also downed.
Crawford County 16 NW Meadville	06	2005EST			0	0	0	0	Hail (0.75) Three-quarter-inch-size hail was reported at Conneautville.
Crawford County 5 W Meadville	06	2015EST			0	0	?	0	Lightning Lightning struck the Vermont Township Gee Bee store roof setting it ablaze.
Erie County 4 E Erie	06	2030EST			0	0	4	0	Flash Flood Street flooding on the east side of Erie and high waters on Four Mile Creek closed roads. Three cars were stranded with water over roof tops. A narrow bridge on Four Mile Creek was picked up by high water and debris and broken up. Six homes had major structural damage.
Lawrence County	06	2115EST			0	0	0	0	Thunderstorm Wind Trees were downed throughout the county due to thunderstorm wind.
Washington County 4 NE Washington	06	2315EST			0	0	0	0	Flash Flood Flooding occurred at Donaldsons Crossroads and in north Strabane. Roads were closed and water was knee deep on Route 19.
16 NW Washington	06	2340EST			0	0	0	0	Flash Flood Flooding occurred in Burgettstown.
16 NW Washington	07	0105EST			0	0	0	0	Flash Flood There was flooding in Avella and 100 evacuations along Cross Creek.
Butler County 12 NW Butler	07	0130EST			0	0	4	0	Lightning A barn was struck by lightning and set ablaze. It was completely destroyed, and loss was estimated at \$20,000, contents and structure.
Allegheny County 24 E Pit	07	0200EST			0	0	0	0	Flash Flood A small creek overflowed and the flood protection wall destroyed in Monroeville.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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PENNSYLVANIA, Western Cont'd

Crawford County 9 NE Meadville	14	1833EST			0	0	0	0	Thunderstorm Wind
									Power lines were downed near Woodcock Dam.
Erie County 29 SE Erie	14	1843EST			0	0	3	0	Thunderstorm Wind
									A tree was downed on a trailer in Corry.
Lawrence County New Castle	14	1845EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in New Castle.
Beaver County 17 SW Beaver	14	1910EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in Raccoon State Park.
Butler County Butler 13 SW Butler	14	1910EST			0	0	0	0	Thunderstorm Wind
									Trees were downed near Butler. Power lines were downed in Zelienople.
Washington County 11 N Washington	14	1921EST			0	0	0	0	Thunderstorm Wind
									Wind gusted to 58 mph at Cecil.
Allegheny County 21 NE Pit 17 SE Pit	14	1929EST			0	1	0	0	Thunderstorm Wind Lightning
									Power lines and trees were downed in Oakmont, Pleasant Hills, and South Park with some minor basement flooding in Pleasant Hills. A man was struck by lightning while standing near a flagpole in Station Square.
Westmoreland County	14	2000EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in eastern Westmoreland County.
Armstrong County 15 S Kittanning	14	2000EST			0	0	0	0	Thunderstorm Wind
									Trees and power lines were downed in Parks and Kiskiminetas Townships.
Westmoreland County 15 E Greensburg	14	2030EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in Ligonier.
Indiana County	14	2030EST			0	0	0	0	Thunderstorm Wind
									Trees were downed over the entire county.
Jefferson County 16 NE Brookville	14	2035EST			0	0	0	0	Thunderstorm Wind
									Trees were downed in Brockway.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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PENNSYLVANIA, Western Cont'd

Armstrong County
17 S Kittanning 14 2042EST 0 0 0 0 **Thunderstorm Wind**
Trees and power lines were downed in Kiskiminetas Township.

Washington County
3 N Washington 14 2050EST 0 0 0 0 **Thunderstorm Wind**
Trees were downed in Washington, Canonsburg, Houston, North Strabane, and Chartiers Townships.

Cambria County
5 SE Johnstown 14 2130EST 0 0 0 0 **Thunderstorm Wind**
Power lines and trees were downed in Richland Township.

Clearfield County
Clearfield 14 2130EST 0 0 0 0 **Thunderstorm Wind**
Trees were down in Clearfield.

Blair County
18 S Altoona 14 2230EST 0 0 4 0 **Thunderstorm Wind**
Parts of two barn roofs were lifted off. A block wall was demolished and a silo roof was blown off southeast of Curryville.

RHODE ISLAND

Washington County 15 0800EST-0915EST 0 0 4 0 **Lightning**
Thunderstorms with heavy rain left about 1.20 inches of rain in about 1 hour while lightning knocked out power to about 700 electric customers.

SOUTH CAROLINA

SCZ006
Aiken County 02 Unknown 1 0 0 0 **Heat**
A 23-year-old man died of exposure to sun and heat in Aiken County. (M23O)

Charleston County
Folly Beach 03 1730EST 0 0 4 0 **Thunderstorm Winds**
Orangeburg County
1 SW Orangeburg 03 1830EST 0 0 0 0 **Funnel Clouds**
Orangeburg 03 1830EST 0 0 ? ? **Hail (0.75)**
Rowesville 03 1830EST 0 0 0 0 **Thunderstorm Winds**
Bowman 03 1900EST 0 0 ? 0 **Thunderstorm Winds**
Branchville 03 1900EST 0 0 ? 0 **Thunderstorm Winds**

In Orangeburg County, two funnel clouds were sighted along U.S. Hwy. 301, 1 mile southwest of Orangeburg. Dime-size hail was reported in Orangeburg. In Rowesville, Bowman, and Branchville, tree limbs and power lines were downed by thunderstorm winds. At Folly Beach, Charleston County, thunderstorm winds broke or damaged 53 trees, and bent 30 others 30° from vertical.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

SOUTH CAROLINA Cont'd

Orangeburg County Orangeburg	08	1430EST			0	0	?	?	Thunderstorm Winds
Kershaw County Camden	08	1445EST			0	0	?	?	Hail (1.00)
Countywide	08	1430EST- 1530EST			0	0	?	?	Lightning
Oconee County Walhalla	08	1657EST			0	2	3	0	Lightning

Lightning struck and injured two brothers, ages 72 and 56, in Walhalla. The bolt also killed a coon hound. The lightning struck a pine tree as the brothers walked beneath it. Both men were thrown to the ground by the bolt. It stripped the bark off the tree for 60 feet to within 7 feet of the ground, and leaped to a tin shed to which the dog was tied. Hail the size of ice cubes was reported in Camden, and numerous lightning strikes caused fires throughout Kershaw County. In Orangeburg, the stadium at South Carolina State College was damaged by thunderstorm winds. One section of the south wall of the stadium, constructed of aluminum, was blown away. Also on the campus, a satellite dish was pulled out from the concrete bed to which it was bolted.

Pickens County Norris	08	PM			0	0	?	0	Lightning
Horry County Loris	08	1738EST			0	0	?	0	Lightning
Abbeville County Due West	08	1825EST			0	0	?	?	Hail (0.75)
York County Northern and Eastern Sections	08	1830EST			0	0	?	0	Thunderstorm Winds Lightning Hail (0.75)
Rock Hill	08	1830EST			0	0	?	0	Flooding
York County Rock Hill	08	2011EST			0	0	?	?	Hail (0.75) Urban Flooding
Eastern Sections	08	2045EST			0	0	?	?	Hail (0.75) Thunderstorm Winds Urban Flooding
Greenville County Countywide	08	2130EST			0	0	?	0	Lightning
Spartanburg County Spartanburg	08	2120EST- 2140EST			0	0	3	0	Thunderstorm Winds Hail (1.00) Lightning
Union County Countywide	08	2200EST			0	0	?	0	Lightning

One area of thunderstorms moved through southern sections of the upstate early in the evening, producing large hail at Due West. Another band of storms developed rapidly late in the evening causing considerable lightning-related problems. Some wind damage was reported in Spartanburg, along with large hail. Gusty winds and lightning were reported from Union County. A thunderstorm knocked out a main power transformer in Norris, leaving much of the town without electricity for several hours. Small hail was reported in Lee County. In Loris, lightning knocked out power to the Loris Community Hospital after striking a transformer. In York County, thunderstorm winds knocked down trees and started minor fires. Dime-size hail was reported in Rock Hill. Hail of unknown size was reported in Fort Mill. In Rock Hill, urban flooding occurred in the Rock Hill Mall area along Cherry Road, and on Celanese Road. Some vehicles were stranded in the high water.

Greenville County Simpsonville	10	1750EST			0	0	4	0	Thunderstorm Wind (G55) Hail (1.50)
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STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

SOUTH CAROLINA Cont'd

Aiken County
Aiken 10 PM 0 0 ? 0 **Lightning Thunderstorm Winds**

One thunderstorm among many became severe and produced large hail and some minor wind damage in Simpsonville, especially on the west side of town. There was considerable lightning; limbs and signs were damaged and some construction material was blown about. In Aiken, lightning struck a tree at Hayne Avenue and Trafalgar Street and traveled down power lines into a house. There were at least two fallen trees from thunderstorm winds in Aiken.

Marlboro County
Bennettsville 11 1514EST 0 0 2 0 **Lightning**

Lightning ignited insulation material inside the Tootal American plant on S.C. Highway 385, causing an estimated \$500 in damage.

Oconee County
Walhalla area 13 0600EST-0800EST 0 0 ? ? **Flash Flooding**

Nearly 6 inches of rain in a short time caused brief, but impressive, flooding in and around Walhalla. Several bridges were covered and numerous small streams flooded roads around the area. The cooperative observer reported a total of 7 inches of precipitation on the 13th and 14th.

SCZ001-002-003-004-005-006-007
Statewide 01-30 0 0 0 ? **Drought**

The driest September since 1986 continued the drought in South Carolina that began in April 1990. It was the driest September since record keeping began in 1738 in downtown Charleston, with 0.18 inch of precipitation reported. The previous record at that location was set in 1901.

SOUTH DAKOTA

Meade County
Sturgis 01 1122MST 0 0 0 0 **Hail (0.75)**
Meade County
Tilford City 01 1135MST 0 0 ? ? **Hail (1.75)**
Harding County
Buffalo 01 1549MST 0 0 ? 0 **Thunderstorm Wind (G86)**
Harding County
Reva and Bison 01 1635MST 0 0 2 ? **Hail (2.00)**
Perkins County
Sorum 01 1655MST 0 0 5 ? **Hail (4.00)**

This series of severe thunderstorms dumped huge hail which caused a good deal of structural damage to houses as well as farm buildings.

Meade County
Red Owl 02 1430MST 0 0 ? ? **Hail (0.75)**

Haakon County
Philip 02 1545MST 0 0 4 ? **Thunderstorm Wind**

This thunderstorm produced straight-line winds strong enough to blow the roof off an outbuilding and caused approximately \$50,000 damage to the farm. Debris from the wreckage was found up to two miles away.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

TENNESSEE

Monroe County Madisonville	05	1800CST			0	0	3	0	Thunderstorm Wind
Thunderstorm winds destroyed an unfinished two-story log house between Madisonville and Sweetwater.									
Hamilton County Ooltewah	07	1420CST			0	0	2	0	Thunderstorm Wind
Numerous trees were downed and some shingles blown off a house.									
Cheatham County Bethel	07	1520CST			0	0	2	0	Thunderstorm Wind
A few trees were downed and power poles snapped in Bethel.									
Montgomery County Clarksville	07	1530CST			0	0	2	0	Thunderstorm Wind
High winds destroyed a metal shed, hurling a rafter into a propane tank.									
McNairy County Selmer	07	1830CST			0	0	3	0	Thunderstorm Wind
A thunderstorm downburst ripped the roof off a truck shop building and knocked down several trees.									
Hancock County Sneedville	07	1900CST			0	0	2	0	Thunderstorm Winds
Trees were blown down, power lines broken, and a couple of roofs taken off barns.									
Bedford County Shelbyville	07	2130CST			0	0	3	0	Thunderstorm Winds Lightning
Tree limbs fell on some power lines and lightning killed seven cows near Deason.									
Sumner County	10	1230CST			0	0	2	0	Hail (0.75) Thunderstorm Wind
Numerous trees were toppled in the Gallatin and Portland areas and hail was reported.									
Macon County Western Macon County	10	1305CST			0	0	0	0	Hail (1.75)
Hamilton County NW Hamilton County	10	1320CST			0	0	0	0	Hail (1.00)
Cumberland County Southeastern Cumberland County	10	1405CST			0	0	0	0	Hail (0.75) Thunderstorm Wind
Bradley County 2 SE Georgetown	10	1430CST			0	0	0	0	Hail (0.88)

Severe thunderstorms on the afternoon of the 10th rumbled through parts of eastern Tennessee causing mainly tree damage from gusty winds and hail up to the size of golf balls.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

TENNESSEE Cont'd

**Shelby County
Memphis** 11 1800CST 0 0 2 0 **Thunderstorm Wind**

A microburst in the midtown section of the city snapped two large trees, a power line pole, and toppled a carport structure that was bolted to concrete.

**Davidson County
Nashville** 11 1830CST 0 0 2 0 **Thunderstorm Wind**

Thunderstorm winds downed some trees and power lines.

**Knox County
Knoxville** 14 2130CST 0 0 4 0 **Thunderstorm Wind**

A 5-mile-long microburst, which varied from one-half to three-quarter miles in width, damaged 25 residential homes in the northern fringes of the city. Most of the damage involved shingles that were blown off roofs and windows that were broken out. Several small outbuildings were completely destroyed. The powerful winds blew a car into a tree and two others into a field. Three 500-gallon fuel tanks were dislocated and numerous trees and power poles were downed.

TEXAS, Northern

**Coryell County
10 NE Copperas
Cove** 01 0500CST 0 0 4 ? **Thunderstorm Wind**

Strong winds uprooted several trees, lifted shingles off the roof of several buildings, and damaged a barn.

**Lampasas County
Rumley** 01 0514CST 0 0 4 ? **Thunderstorm Wind**

Strong winds destroyed a couple of outbuildings, damaged the roof of a home, blew down a fence, and the window of a home.

**Erath County
Dublin** 01 1045CST 0 0 3 ? **Thunderstorm Wind**

A downburst damaged a portion of a school roof.

**Brown County
1 SE May** 01 1400CST 0 0 4 ? **Thunderstorm Wind**

Strong winds uprooted several trees and lifted the roof off a couple of barns and homes.

**Coleman County
Coleman** 01 1430CST 0 0 4 ? **Thunderstorm Wind**

A downburst overturned a mobile home, lifted off the metal roof of a storage building, damaged a hay barn, and blew down several trees.

**McLennan County
Waco** 01 1430CST 0 0 3 ? **Thunderstorm Wind**

A downburst blew down several power poles and trees and the chimney of seven apartment units.

**Bosque County
Clifton** 01 1436CST 0 0 4 ? **Thunderstorm Wind**

A downburst lifted the roof off a mobile home, damaged a radio station satellite dish, the crossing guard at a railroad crossing, blew down a fence, and uprooted several trees.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

TEXAS, Northern Cont'd

Hamilton County Hamilton	01	1545CST			0	0	3	?	Thunderstorm Wind
A downburst lifted the roof off a shed and blew large tree limbs onto power lines.									
Tarrant County Arlington	08	1140CST			0	0	5	?	Lightning
Lightning ignited a fire to a home in Arlington where \$100,000 in damage occurred.									
Ellis County Ike	08	1442CST			0	0	3	?	Thunderstorm Wind (G56)
A downburst blew down several trees.									
Johnson County I N Alvaredo	08	1445CST			0	0	4	?	Thunderstorm Wind
A downburst lifted the roof off a building, destroyed several outbuildings, and blew down power lines.									
Red River County	11	1755CST- 2100CST			0	0	3	?	Flash Flooding
Heavy rains resulted in the flash flooding of U.S. Highway 271 between Deport and Rugby, Farm to Market Road 1502 near Blossom, and Farm to Market Road 410 at Mustang Creek.									

TEXAS, Southern

Maverick County Eagle Pass	01	?			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm snapped a utility pole off in Eagle Pass.									
Cameron County Brownsville	01	1300CST			0	0	?	?	Hail (1.75)
	01	1300CST			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm uprooted trees, downed fences, damaged awnings, and blew over signs in Brownsville. Falling trees damaged at least one automobile and downed power lines. A few palm trees were snapped in two. One mobile home was turned over and demolished. Two businesses were damaged.									
Burnet County Spicewood	01	1240CST			0	0	?	?	Hail (0.75)
Wilson County	01	1335CST			0	0	?	?	Hail (1.75)
Golf ball-size hail fell in the northern part of the county between Sutherland Springs and La Vernia.									
Comal County Canyon Lake	01	1400CST			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm blew over trees in the Canyon Lake area. Some of the falling trees downed power lines.									
Robertson County	01	1430CST			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm blew a home off its foundation in Hearne.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

TEXAS, Southern Cont'd

Bexar County San Antonio	01	1435CST			0	0	?	?	Hail (0.75)
Three-quarter-inch-size hail was reported over the northeastern part of the city of San Antonio.									
Atascosa County	01	1450CST			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm uprooted trees east of Pleasanton.									
Bexar County Randolph AFB	01	1455CST			0	0	?	?	Thunderstorm Wind (G50)
Lee County Giddings	01	Afternoon			0	0	5	?	Thunderstorm Wind (?)
High winds from a thunderstorm blew the roof off a home just east of Giddings. Trees were downed in the area. Several barns lost their roofs. Near Dime Box, a mobile home was blown off its foundation.									
Zavala County Crystal City	01	1810CST			0	0	3	?	Thunderstorm Wind (?)
High winds from a thunderstorm uprooted trees and downed telephone poles in Crystal City.									
Liberty County	05	1650CST			0	0	?	?	Thunderstorm Wind (?)
High winds from a thunderstorm blew over trees onto roadways at several locations in the county.									
Orange County Vidor	05	1700CST			0	0	5	?	Thunderstorm Wind (?)
High winds from a thunderstorm damaged one home and uprooted several trees in Vidor. One large tree fell on a home and severely damaged it. One business lost a front plate glass window.									
Jefferson County Beaumont	05	1730CST			0	0	5	?	Thunderstorm Wind (?)
A severe thunderstorm moved across the city of Beaumont producing very strong winds. The high winds downed trees and damaged buildings. Roofs were blown off a furniture store and a restaurant. Another building was blown off its foundation. Falling trees downed power lines.									
Harris County Houston	05	1800CST			0	0	5	?	Thunderstorm Wind (?)
	05	1800CST			1	0	?	?	Lightning
High winds from a thunderstorm downed trees in Humble. Some of the falling trees downed power lines. Lightning struck and killed a boy on the north side of Houston. (M100)									
Milam County 3 N Cameron	08	2105CST			0	0	4	?	Thunderstorm Wind (?)
High winds from a thunderstorm blew the roof and a carport off a home 3 miles north of Cameron.									
Caldwell County 10 N Lockhart	09	1835CST			0	0	?	?	Hail (1.75)
Bexar County San Antonio	10	1600CST			0	0	4	?	Thunderstorm Wind (?)
High winds from a thunderstorm ripped about 150 feet of roofing material off a row of mini-storage sheds on the north side of the city of San Antonio.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

TEXAS, Western

Coke County									
9 N Bronte	01	1615CST			0	5	3	2	Hail (1.75)
9 N Bronte	01	1620CST			0	0	4	2	Thunderstorm Wind (G61)
3 N Robert Lee	01	1645CST			0	0	2	2	Hail (1.75)

A severe thunderstorm brought golf ball-size hail and 70 mph downburst winds to Oak Creek Reservoir in northeastern Coke County. A group of five people was caught on the reservoir's dam when the storm struck. All five were injured by the hail; two of the people jumped into the reservoir and drowned. The wind damaged boat docks and small buildings around the reservoir. As the storm moved through Coke County, the Sheriff's Office reported golf ball-size hail north of Robert Lee at 1645 CST.

Tom Green County									
San Angelo	01	1700CST			0	0	3	2	Thunderstorm Wind (G55)

Downburst winds uprooted a tree which damaged a pickup truck in San Angelo at 1700 CST.

Hansford County									
5 E Gruver	06	2055CST			0	0	3	1	Thunderstorm Wind (G56)

Downburst winds downed 13 power poles between Gruver and Spearman, according to the Hansford County Sheriff's Office.

Midland County									
6 SW Midland	09	1530CST			0	0	0	0	Thunderstorm Wind (G53)

Downburst winds gusted to 61 mph at the National Weather Service Office at Midland International Airport. No damage resulted.

Dallam County									
5 NW Dalhart	09	1658CST			0	0	0	0	Hail (0.75)
8 NW Dalhart	09	1723CST			0	0	0	0	Hail (0.75)

The public reported dime-size hail covering the ground to a depth of 3 inches in southern Dallam County at 1658 CST. Dime-size hail fell again at 1723 CST, according to the public. No damage was reported.

Hartley County									
10 WSW Dalhart	09	1717CST			0	0	3	1	Thunderstorm Wind
9 WSW Dalhart	09	1720CST			0	0	2	3	Hail (1.00)

The public reported broken windows in a home, roof damage, and tree damage from hail and downburst winds in northern Hartley County.

Howard County									
1 S Big Spring	10	1315CST			0	0	0	0	Hail (0.75)
Big Spring	10	1330CST			0	0	1	0	Hail (0.75)

The Howard County Sheriff's Office reported dime-size hail just south of Big Spring at 1315 CST. Fifteen minutes later, a volunteer fireman observed dime-size hail in Big Spring. No significant damage resulted.

Glasscock County									
1 SW Garden City	10	1400CST			0	0	2	0	Hail (1.25)
Garden City	10	1415CST			0	0	0	0	Hail (0.75)

According to the public, half-dollar-size hail fell southwest of Garden City at 1400 CST. The public reported dime-size hail in Garden City at 1415 CST. No significant damage was observed.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSSL	

TEXAS, Western Cont'd

Dawson County
Lamesa
2 E Lamesa

10	1400CST				0	0	0	0	Hail (0.75)
10	1425CST				0	0	0	0	Hail (1.00)

A Skywarn spotter reported dime-size hail in Lamesa at 1400 CST. The Dawson County Sheriff's Office and the public observed quarter-size hail just east of Lamesa at 1425 CST. No damage was noted.

Midland County
1 NE Midland

10	1440CST				0	0	2	2	Hail (1.75)
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The public reported golf ball-size hail northeast of Midland at 1440 CST. No significant damage resulted.

Carson County
5 W Panhandle
10 SW Panhandle

10	1625CST				0	0	0	0	Hail (1.00)
10	1636CST				0	0	0	0	Hail (1.00)

The Texas Department of Public Safety and the Carson County Sheriff's Office observed quarter-size hail in southwestern Carson County between 1625 and 1636 CST. No damage was noted.

Pecos County
Fort Stockton

10	1700CST				0	0	2	1	Hail (1.75)
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Golf ball-size hail fell in Fort Stockton at 1700 CST. No significant damage resulted.

Armstrong County
7 W Claude

10	1758CST				0	0	0	0	Hail (0.75)
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The Armstrong County Sheriff's Office reported dime-size hail in northwestern Armstrong County at 1758 CST. No damage resulted.

Crosby County
Crosbyton

10	1930CST				0	0	3	0	Thunderstorm Wind (G51)
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Downburst winds estimated at 60 mph damaged the roof of a business in Crosbyton.

Howard County
1 SW Big Spring

16	1640CST				0	0	0	0	Funnel Cloud
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The public reported a funnel cloud southwest of Big Spring at 1640 CST.

Schleicher and Sutton Counties

17	0035CST				0	0	2	2	Flash Flood
17	0500CST				0	0	5	2	Flood

Up to 9 inches of rain fell across the southern Concho Valley, resulting in flooding and flash flooding. Many secondary highways in the area were closed. Sonora, in Sutton County, experienced the worst of the flooding when the Dry Devils River overflowed. Several homes and businesses were damaged by the floodwaters and some downtown streets had sections of pavement washed away. The flooding persisted until around 1100 CST.

Winkler County
Wink

18	1506CST				0	0	0	0	Thunderstorm Wind (G50)
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Downburst winds gusted to 58 mph at the Winkler County Airport at 1506 CST. No damage resulted.

Dawson County
Lamesa

18	1920CST				0	0	4	0	Flash Flood
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Nearly 3 inches of rain fell in and near Lamesa in a 1 hour period. The resulting flash flood damaged several homes in Lamesa, according to the Lamesa Police Department.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

VIRGINIA Cont'd

Sussex County	07	1713EST			0	0	0	0	Thunderstorm Winds
Trees were downed in the western part of the county.									
Surry County Cabin Point	07	1730EST			0	0	0	0	Thunderstorm Winds
Trees were downed by high winds at Cabin Point; also in the southeastern part of the county.									
City of Virginia Beach 4 N Chesapeake Beach	07	1747EST			0	0	0	0	Thunderstorm Winds
Winds gusted to 55 knots (62 mph) at the South Island of the Chesapeake Bay Bridge Tunnel.									
Southampton County Courtland	07	1750EST			0	0	0	0	Hail (1.00)
Isle of Wight County Walters	07	1800EST			0	0	0	0	Thunderstorm Winds
Trees were downed by strong winds.									
City of Bristol	07	2030EST			0	0	3	0	Lightning
Lightning struck a small herd of cattle, killing 11 animals. Estimated value of the lost cattle was \$10,000.									
City of Virginia Beach Back Bay	14	1505EST			0	0	0	0	Waterspouts
Two short-lived waterspouts were observed in the Back Bay area, about 15 miles south of the Virginia Beach resort.									
Fairfax County 1 N River Oaks	16	1635EST			0	0	0	0	Hail (1.75)
City of Alexandria	16	1710EST			0	0	0	0	Thunderstorm Winds Hail (0.75)
Winds were estimated at up to 60 mph, also 0.75-inch hail covered the ground.									

WASHINGTON

WAZ010 Southeastern Washington	07	1545PST			0	0	0	0	Dust Storm
Winds up to 35 mph caused blowing dust in Garfield and Whitman counties. Visibilities, reduced to near-zero, were responsible for a 14-vehicle accident 8 miles south of the town of Dusty on State Highway 127. Five people were injured, two requiring hospitalization. State Highways 26 and 195 were also temporarily closed. Activities at a local fair in Colfax were delayed a few hours until the dust storm had subsided.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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WEST VIRGINIA

**Brooke County
Wellsburg** 06 1630EST 0 0 0 0 **Thunderstorm Winds**

Several trees were blown down.

**Preston County
Masontown
Reedsville
Kingwood** 06 1835EST 0 0 0 0 **Hail (0.75)**
**Marion County
Fairmont-Colfax** 06 1850EST 0 0 ? 0 **Thunderstorm Winds**
**Taylor County
Grafton** 06 1850EST 0 0 3 0 **Thunderstorm Winds**

Several trees and large limbs were blown down in southern Marion County and in the Boothsville-Grafton region of Taylor County. One car was damaged in Taylor County.

**Brooke County
Follansbee-
1 S Follansbee** 06 2315EST-
0400EST 0 0 6 0 **Flash Flood**

Severe flash flooding occurred along Allegheny and Cross Creeks. Five- to six-feet of water was on some streets. Most significant damage was along Main, Penn, and Allegheny Streets, plus Virginia Ave. Sixty to 70 people were evacuated. Several vehicles floated down streets. Forty vehicles were ruined, including an ambulance for the Brooke County Emergency Medical services. The sophisticated diagnostic and treatment equipment inside the ambulance was also destroyed. Approximately 50 homes, 15 businesses, and one church were damaged. One private bridge along Cross Creek was destroyed. Damage was estimated around \$1 million.

**Brooke County
Colliers** 07 0030EST-
0400EST 0 0 5 0 **Flash Flood
Mudslide**

Harmon Creek flooded and destroyed three low-cost homes while damaging six others. A hillside above a residential home gave way, sending a tree through a second floor bedroom and shoving mud through its foundation. Three residents of the home narrowly escaped. The house was a total loss. Estimated damage was \$100,000 to dwellings and \$100,000 for slide clean-up and to stabilize the hillside.

**Hancock County
Weirton** 07 0030EST-
0100EST 0 0 4 0 **Thunderstorm Winds**

Numerous windows were broken, ventilator vents damaged, and fencing downed at the sewage treatment plant. Five and a half inches (5.56) of rain were measured at the plant in the 24 hours ending at 0900 EST. Power lines and falling trees occurred elsewhere in the city. Estimated damage was \$6,000.

**Boone County
Ramage** 07 1650EST 0 0 0 0 **Hail (1.00)**
**Mingo County
Gilbert** 07 1815EST 0 0 0 0 **Thunderstorm Winds**
**Logan County
4 NE Logan** 07 1815EST 0 0 0 0 **Hail (0.75)
Thunderstorm Winds**

Large trees were blown down around Gilbert and on Blair Mountain of Logan County.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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WEST VIRGINIA Cont'd

Taylor County
1 N Grafton 14 2105EST 0 0 0 0 **Thunderstorm Winds**

Many trees were down along Route 310.

Monongalia County
6 S Morgantown 14 2130EST 0 0 2 0 **Thunderstorm Winds**

Straight-line wind damage occurred at the Mountaineer Boy Scout Camp located off Route 119 near Gum Springs. An estimated 100 trees were uprooted or snapped off in an area 35 yards wide and 100- to 120-yards long. No other damage occurred, other than a wire baseball backstop which was moved 15 yards.

Preston County
Aurora,
Fellowsville 14 2135EST 0 0 0 0 **Thunderstorm Winds**

Several trees were blown down. The thunderstorms on the 14th interrupted or canceled many high school football games throughout the state.

Webster County
Webster Springs 16 1600EST 0 0 0 0 **Hail (1.00)**

WISCONSIN

Pierce County
1 S Black River Falls 09 1810CDT 0 0 ? ? **Hail (1.75)**
Beldenville 09 1830CDT 0 0 4 ? **Hail (2.75)**
Ellsworth 09 1830CDT 0 0 4 ? **Hail (1.75)**
Plum City 09 1928CDT 0 0 4 ? **Thunderstorm Winds**

Waushara County
3 S Plainfield 09 1930CDT 0 0 ? ? **Hail (0.75)**

Buffalo County
Trempealeau County
Nelson to Waumandee to 2.5 SSE Arcadia 09 2000CDT-2112CDT 30 3.0 0 1 6 6 **Tornado (F1)**

Green Lake County
Berlin 09 2030CDT 0 0 ? ? **Hail (0.75)**

Clark County
Greenwood 09 2111CDT 0 0 ? ? **Hail (1.00)**
Neillsville 09 2135CDT 0 0 5 4 **Hail (2.75)**
Neillsville 09 2135CDT 0 0 4 ? **Thunderstorm Winds**
10 S Neillsville 09 2205CDT 0 0 4 ? **Thunderstorm Winds**

Trempealeau County
Ettrick 09 2130CDT 0 0 ? ? **Hail (1.50)**

La Crosse County
Holmen 09 2145CDT 0 0 ? ? **Hail (0.75)**

Adams County
2 N Friendship 09 2310CDT 0 0 ? ? **Hail (0.75)**

Milwaukee County
Milwaukee 10 0247CDT 0 0 ? ? **Thunderstorm Winds (G55)**

Severe thunderstorms hit western and central Wisconsin causing widespread damage and dropping hail up to baseball size. A tornado touched down in the town of Nelson (Buffalo County) caused one injury and moved southeast. One million dollars in damage occurred in the Nelson area as 95% of the town was affected. Thirty homes and 31 mobile homes were

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

WISCONSIN Cont'd

destroyed, 24 homes and businesses received major damage. The tornado skipped along a 30-mile-path causing barn damage near Waumandee. It then entered west-central Trempealeau County and produced \$600,000 damage to sheds and agriculture buildings south of Arcadia before lifting up 2.5 miles south-southeast of Arcadia. Three million dollars in crop damage occurred to 1,000 acres of soybeans, 7,000 acres of corn, and 11,000 acres of hay. Baseball-size hail damaged crops, buildings, and over 100 cars around the Beldenville (Pierce County) and Neillsville (Clark County) areas.

Barron County									
6 W Rice Lake	11	1745CDT	1.5	100	0	0	5	5	Tornado (F2)
1 E Cumberland	11	1750CDT	0.5	50	0	0	5	?	Tornado (F1)
Rice Lake	11	1758CDT			0	0	6	5	Hail (2.75)
Rice Lake	11	1758CDT			0	0	5	?	Thunderstorm Winds
Rice Lake	11	1845CDT			0	0	4	4	Hail (1.00)
Canton	11	1910CDT	3.0	2500	0	0	6	6	Tornado (F2)
Haugen	11	2000CDT	0.5	50	0	0	4	4	Tornado (F1)
Rice Lake	11	2000CDT			0	0	4	4	Hail (0.75)
Rusk County									
10 NW Ladysmith	11	1947CDT			0	0	?	?	Hail (0.75)
Washburn County									
Spooner	11	2035CDT			0	0	?	?	Hail (1.00)
Trego	11	2117CDT			0	0	?	?	Hail (2.75)
Sawyer County									
Stone Lake	11	2128CDT			0	0	?	?	Hail (0.75)

Clusters of severe thunderstorms produced hail up to baseball-size over portions of northwestern Wisconsin and generated four tornadoes in Barron County. A tornado touched down 6 miles west of Rice Lake and destroyed a farm and mobile home with damages over \$300,000. A second tornado caused trailer and tree damage just east of Cumberland. The third and most destructive tornado hit Canton causing almost \$1 million in damage to 28 homes and many surrounding agriculture buildings. A fourth small tornado was noted near Haugen. In the city of Rice Lake baseball-size hail damaged over 300 cars on automobile dealer's lots alone. Strong winds downed trees and caused minor structural damage. Across Barron County over \$2 million in crop damage was sustained to 21,000 acres of corn and 500 acres of snap beans.

Douglas County									
Lake Nebagamom	12	2135CDT			0	0	?	?	Hail (1.75)

Hail up to golf ball-size fell from a severe thunderstorm at Lake Nebagamom.

Bayfield County									
Iron River	13	2035CDT			0	0	?	?	Thunderstorm Winds
Sawyer County									
Round Lake	13	2100CDT			0	0	4	?	Thunderstorm Winds
Ashland County									
Glidden	13	2130CDT			0	0	?	?	Thunderstorm Winds
Price County									
Park Falls	13	2155CDT			0	0	?	?	Thunderstorm Winds
Vilas County									
Lac Du Flambeau	13	2215CDT			0	0	4	?	Thunderstorm Winds
St. Germain	13	2225CDT			0	0	4	?	Thunderstorm Winds
Oneida County									
Minocqua	13	2220CDT			0	0	6	?	Thunderstorm Winds
Chippewa County									
1 W Holcombe	13	2300CDT			0	0	4	?	Thunderstorm Winds
Outagamie County									
Black Creek	14	0300CDT			0	0	4	?	Thunderstorm Winds
Sheboygan County									
Sheboygan	14	0520CDT			0	0	3	?	Thunderstorm Winds

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

WISCONSIN Cont'd

Intense, severe thunderstorm winds hit portions of northeastern Wisconsin. A 5-mile-path of destruction took place from Lac Du Flambeau (Vilas County) to Minocqua (Oneida County) to St. Germain. Minocqua was hardest hit with over \$2 million in damage to homes, businesses, hundreds of trees, and power lines. The high school roof was ripped off, boats tipped over, and an ice cream stand flattened. Strong severe thunderstorm winds knocked down 62 trees in the Round Lake area (Sawyer County) and leveled a barn near Holcombe (Chippewa County).

Outagamie County									
Hortonville	15	1830CDT			0	0	?	?	Hail (0.75)
Freedom	15	1900CDT			0	0	4	?	Thunderstorm Winds
Fond Du Lac County									
Campbellsport	15	1915CDT			0	0	?	?	Thunderstorm Winds
Manitowoc County									
Branch	15	1955CDT			0	0	?	?	Hail (1.75)

Scattered severe thunderstorms dropped hail up to golf ball-size and produced gusty thunderstorm winds which damaged residences at Freedom (Outagamie County) and knocked down trees and power lines at Campbellsport (Fond Du Lac County).

Milwaukee County									
3 E Milwaukee	16	1200CDT			0	0	0	0	Waterspout

A waterspout was sighted just east of the Milwaukee Coast Guard Station.

WYOMING

Laramie County									
27 NE Cheyenne	02	1405MST- 1410MST			0	0	0	0	Hail (0.75)

A thunderstorm produced dime-size hail about 27 miles northeast of Cheyenne around 1405 to 1410 MST.

Laramie County									
Near Albin	02	2000MST			0	0	0	0	Thunderstorm Winds (G50)

Thunderstorm winds of 50 to 60 mph blew through the Albin area around 2000 MST.

Albany County									
Near Laramie	03	1630MST			0	0	0	0	Hail (0.75)

Thunderstorms produced hail up to 0.75 inch and heavy rain in the Laramie area around 1630 MST.

Albany County									
30 NNE Laramie	03	1830MST			0	0	0	0	Hail (1.50)

Thunderstorms brought hail up to 1.50 inches and heavy rain to the Sybille Canyon area around 1830 MST.

Laramie County									
Near Pine Bluffs	06	1600MST- 1620MST			0	0	0	0	Thunderstorm Winds (G50)

A band of thunderstorms moving through far southeastern Laramie County produced winds to 60 mph from Pine Bluffs to about 15 miles northwest of Pine Bluffs between 1600 and 1620 MST.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

WYOMING Cont'd

Laramie County
Near Cheyenne 19 1210MST 0 0 0 0 **Funnel Cloud**

A brief funnel cloud was sighted just west of Cheyenne around 1210 MST.

Sheridan County
10 NW Sheridan 19 1340MST-
1345MST 0 0 0 0 **Funnel Cloud**

A brief funnel cloud was visible about 10 miles northwest of Sheridan from 1340 to 1345 MST.

Niobrara County
10 S Lusk 19 1632MST-
1642MST 0.1 10 0 0 0 0 **Tornado (F0)**

A weak tornado was observed touching down twice near the Niobrara/Goshen County line about 10 miles south of Lusk between 1632 and 1642 MST. No damage occurred as it touched down in open country.

WYZ001-009
Northwest Mountains
Wind River
Mountains

20 0400MST-
1600MST 0 0 0 0 **Heavy Snow**

An early snowfall of 4 to 8 inches, with up to a foot over the higher peaks, occurred above 9,000 feet in the Wind River Mountains and the southern part of Absaroka Range.

ALASKA, Southern

Cook Inlet 12 0400ADT 0 0 4 0 **High Winds**

A strong low pressure system over southwestern Alaska combined with high pressure over the Gulf of Alaska coast produced high winds which knocked over trees and cut electricity up to 3,200 users around Anchorage. Strongest reported wind gusts were 69 mph on Upper DeArmoun Road, 53 mph at Glen Alps, and 49 mph on Old Muldoon Road.

Cook Inlet
Central Gulf
Coast

19 0000ADT
20 0 0 0 0 **High Winds**
Flooding

A moderate low moved northward across Kodiak Island and Cook Inlet then weakened. Strong winds hit the upper hillside area of Anchorage with gusts reported as high as 84 mph. The same low also brought rain which caused minor flooding in the Seward area where the Resurrection River reached 13.2 feet during the night of September 19th and 20th, above the flood stage of 12.5 feet.

Aleutians 21 1900ADT
22 0 0 0 0 **High Winds**

An intense 967 mb low, ex-Typhoon "Flo", moved eastward just south of the Aleutians. Amchitka reported northeast winds 40 mph with gusts to 55 mph on the evening of the 21st. Adak reported northeast winds to 43 mph on the afternoon of the 22nd.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

ALASKA, Southern Cont'd

Kodiak Island									
Central Gulf Coast	26	1300ADT							
Pribilof Islands	27				0	0	0	0	High Winds

A strong 972 mb low moved northeastward and stalled near Cold Bay with a strong occluded front moving northeastward across Kodiak Island then onshore on the northern Gulf of Alaska coast. Sitkinak reported northeast winds gusting to 75 mph and Kodiak 40 mph sustained with gusts to 60 mph on the night of the 26th. Middleton Island had east winds to 63 mph and nearby ships reported 60 to 80 knots on the morning of the 27th. Saint Paul in the Pribilofs reported north winds to 40 mph with gusts as high as 54 mph on the 26th.

ALASKA, Southeastern

All Southeastern Alaska		28 1000			0	0	?	N/A	Fall Extratropical Cyclone
-------------------------	--	---------	--	--	---	---	---	-----	----------------------------

Damage during this event was limited to tree falls and power outages. Several residences had significant damage caused by tree falls. This type of storm is typical for southeastern Alaska during this season. Maximum sustained wind was 60 mph. Maximum gusts were 75 mph.

HAWAII

None reported.

PACIFIC

None reported.

PUERTO RICO

Utuaado		06 Afternoon			0	0	5	0	Flash Flood
---------	--	--------------	--	--	---	---	---	---	-------------

Several Utuaado families were relocated to shelters as their houses were threatened by landslides from heavy showers. No severe flooding nor fatalities were reported.

VIRGIN ISLANDS

None reported.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1990

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

JULY 1990 - Page 4

Outstanding Storms of the Month - July 1990 confirmed tornadoes.
 Number of F0 should be 88 and not 86.
 Total should be 106 and not 104.

AUGUST 1990 - Page 4

Outstanding Storms of the Month - August 1990 confirmed tornadoes.
 Number of F0 should be 43 and not 41.
 Total should be 59 and not 57.

STORM SUMMARY

CORRECTIONS

JANUARY 1990

NEW YORK - Page 65

Heavy Snowstorms and Blizzards - Deaths should read 3 and not 4.

VERMONT - Page 65

Heavy Snowstorms and Blizzards - Deaths should read 2 and not 4.

STORM SUMMARY

SEPTEMBER 1990

TYPE	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	IDAHO	ILLINOIS	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND & D.C.	MASSACHUSETTS	MICHIGAN	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE
TORNADOES							0																				
Number		1	1	1				5		1	1					3				10	1						0
Days		0	0	0				0		0	0					0				0	0						0
Deaths		0	0	0				0		0	0					0				0	0						0
Injuries		0	0	0				0		0	0					0				0	0						0
Property Damage		0	0	0				0		0	0					0				0	0						0
Crop Damage		0	0	0				0		0	0					0				0	0						0
HAIL																											
Deaths		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		
Property Damage		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		
THUNDERSTORM WINDS																											
Deaths	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0		1	0	0	0	0	0	0	1
Injuries	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0		1	0	0	0	0	0	0	1
Property Damage	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
Crop Damage	0	0	0			0		0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0
HIGH WINDS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
LIGHTNING																											
Deaths		1		0	1	0	1	0	0	0	1	0	0	0	0	0	0		0	0	0				0	1	
Injuries		1		0	1	0	1	0	0	0	0	0	0	0	0	0	0		0	0	0				0	1	
Property Damage		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0				0	0	
Crop Damage		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0				0	0	
FLASH FLOODS																											
Deaths		0		0									0								0						
Injuries		0		0								0									0						
Property Damage		0		0								0									0						
Crop Damage		0		0								0									0						
FLOODS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
HEAVY SNOWSTORMS AND BLIZZARDS a																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ICE STORMS #																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
HURRICANES AND TROPICAL STORMS																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
ALL OTHERS																											
Deaths																											
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.

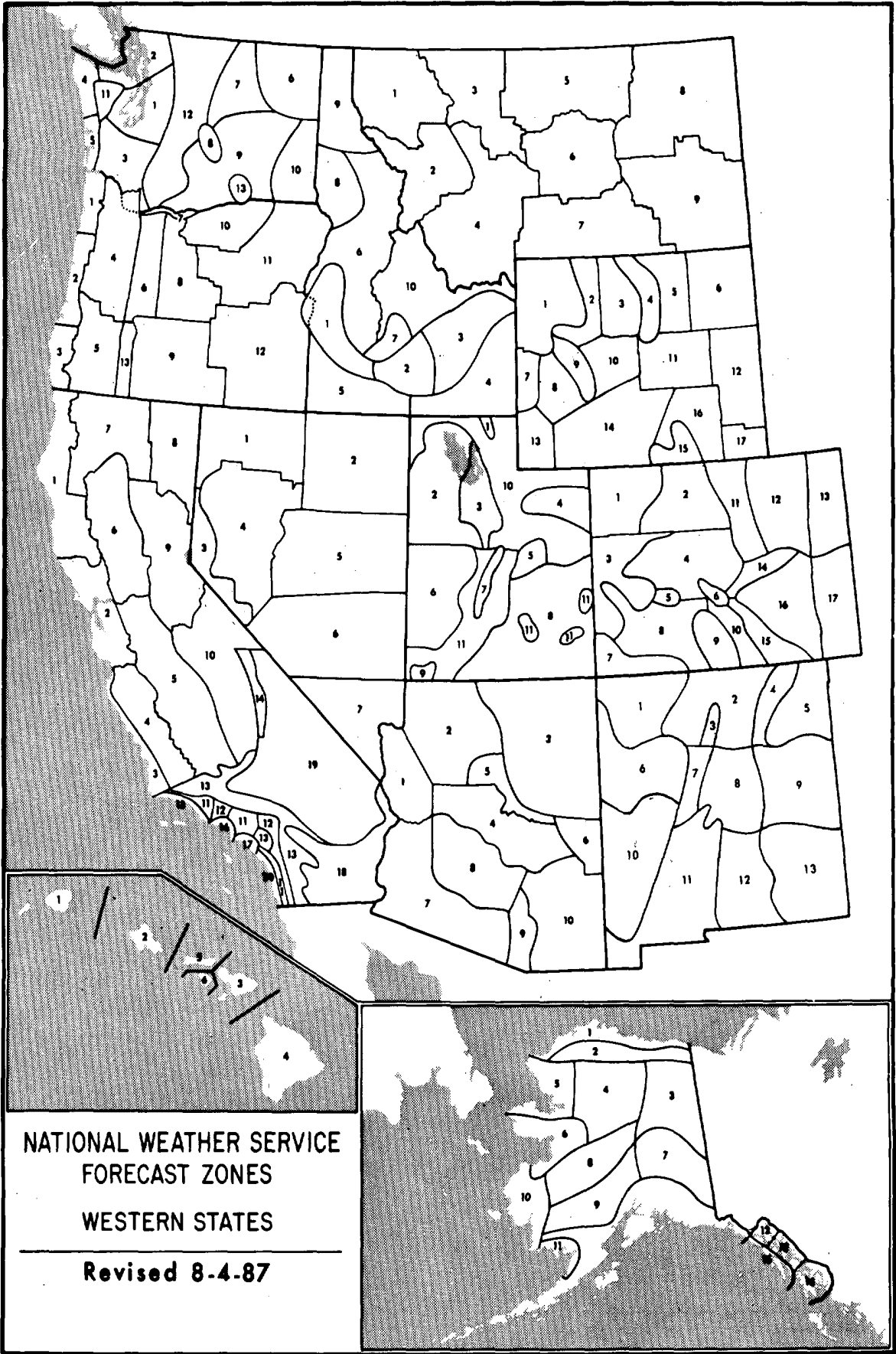
Definition of Fujita Tornado Scale (F scale)

- (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.

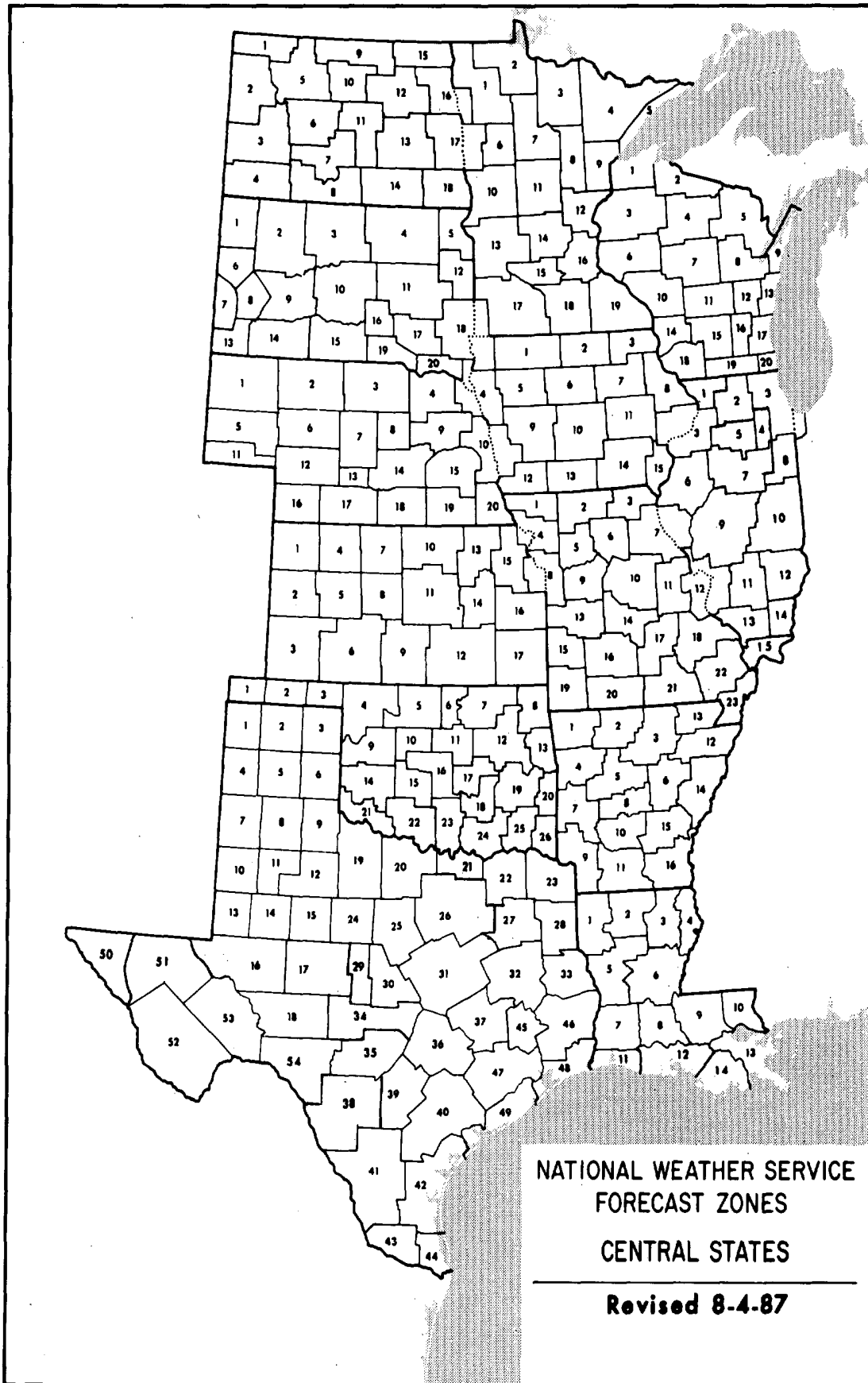


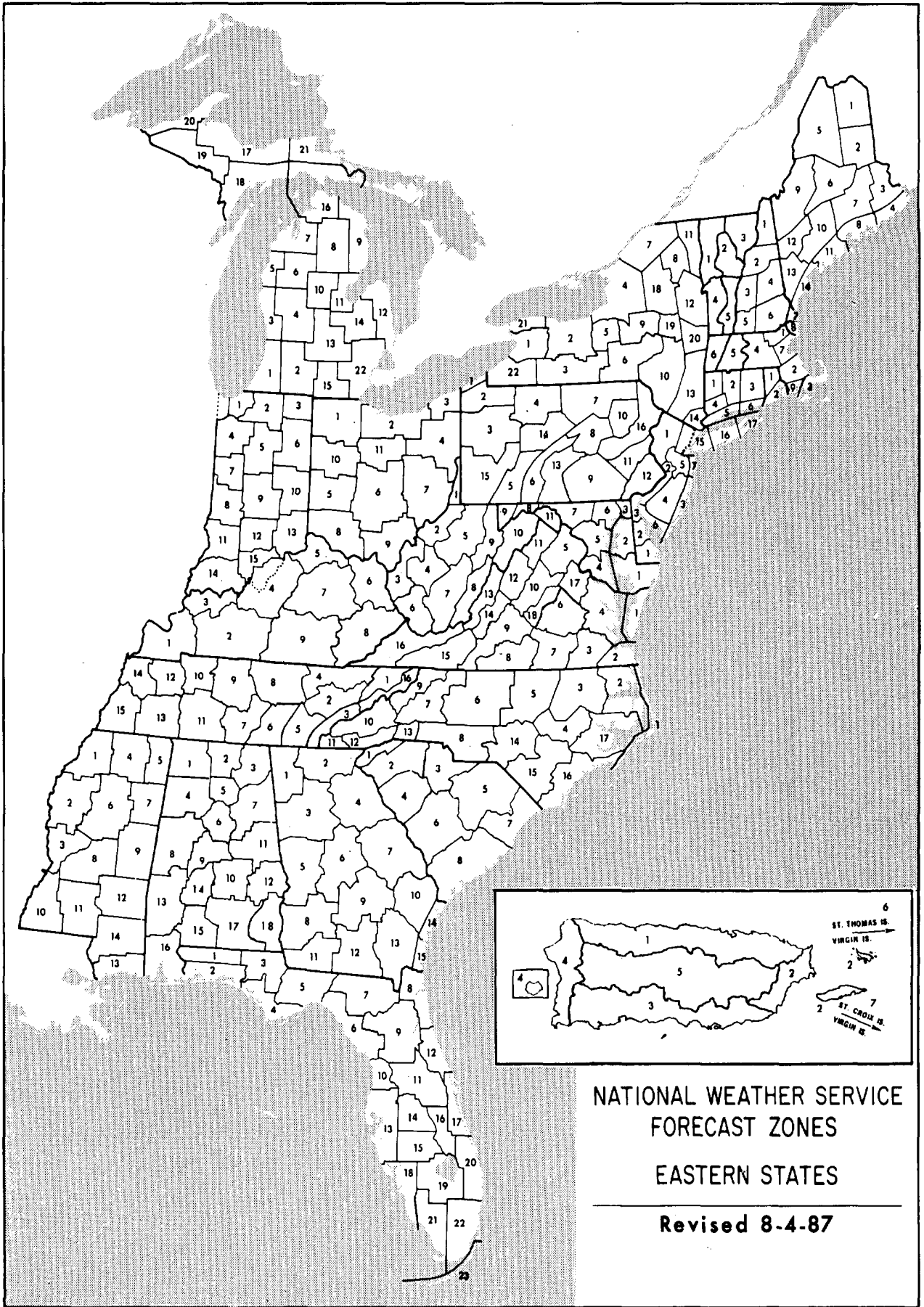
(F0+F1) Weak Tornado
(F2+F3) Strong Tornado
(F4+F5) Violent Tornado

From J. Atmos. Sci., August 1981, p. 1517-1519



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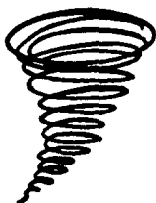
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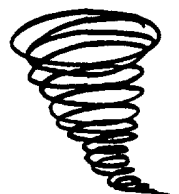
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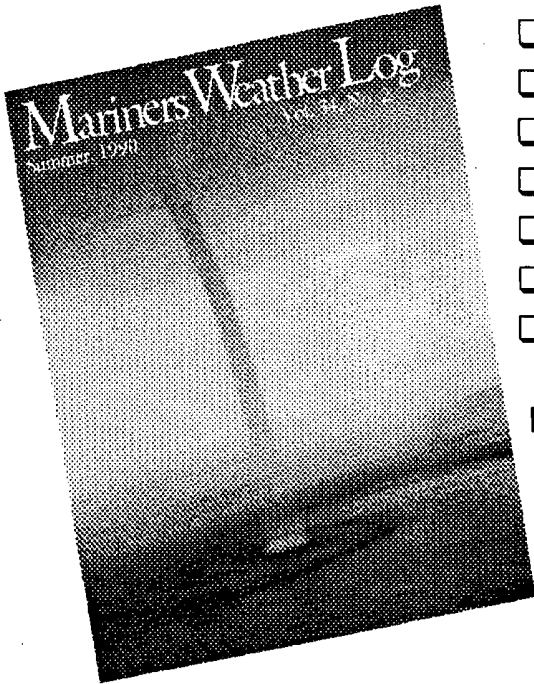
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