

AUGUST 1984

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NUMBER 8

# STORM DATA



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**noaa**

NATIONAL OCEANIC AND  
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NATIONAL CLIMATIC DATA CENTER  
ASHEVILLE, N.C.

C O N T E N T S

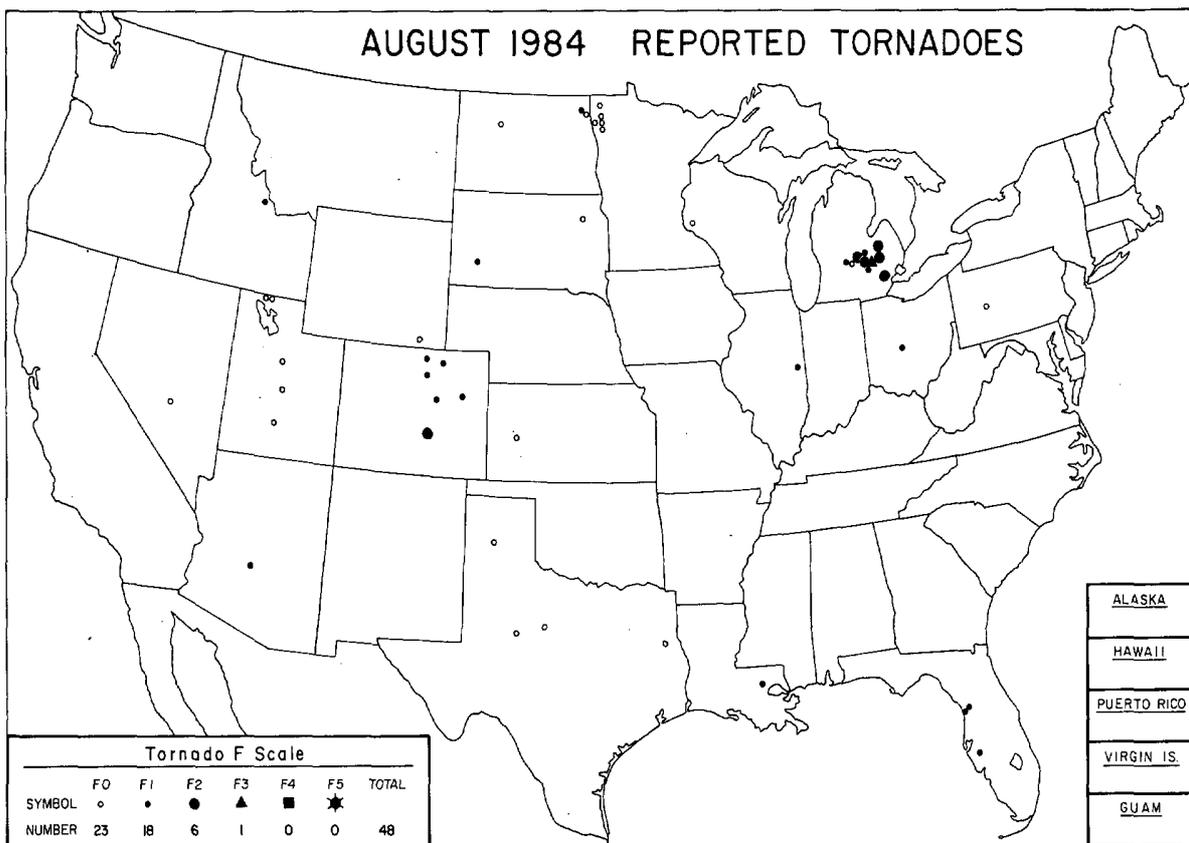
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Cover: An aerial view of the Bull Mountains Forest Fire near Roundup, Montana, the intense heat of which created cumulus clouds with tops up to 30,000 feet. Roundup appears in the foreground. (See FOREST and RANGE FIRES in MONTANA, page 7.) ---Photo by Larry Mayer, The Billings Gazette.

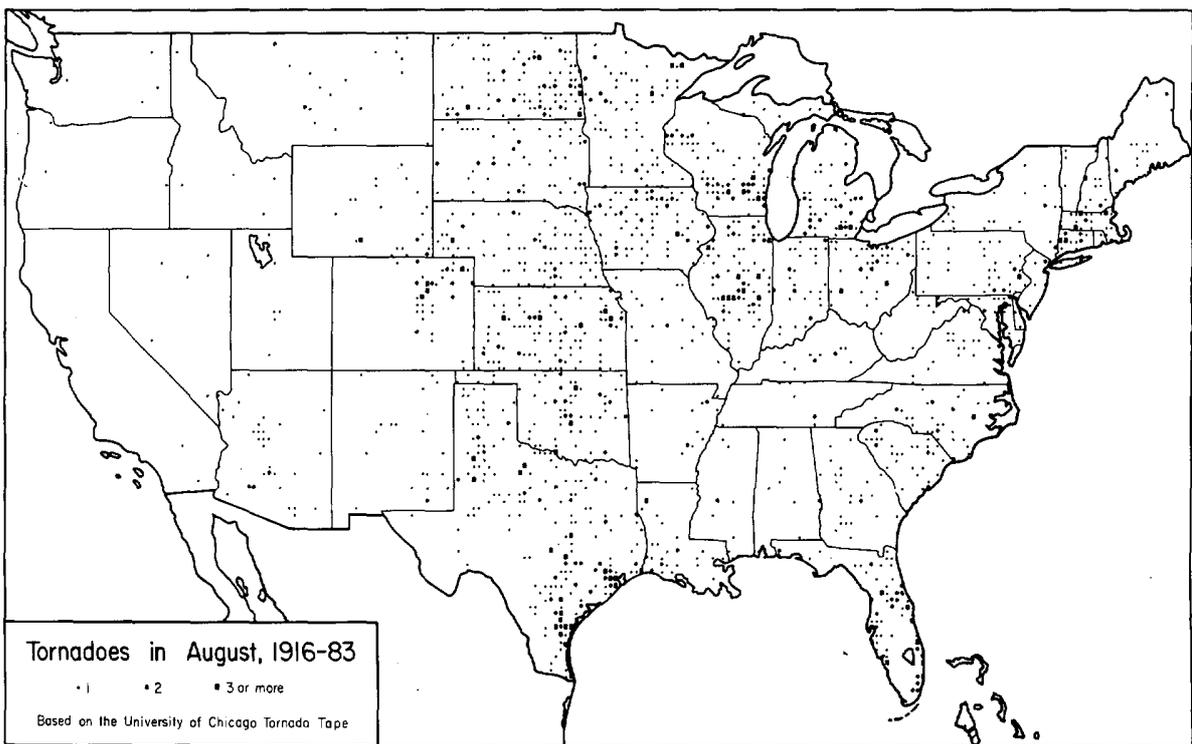
NOTE: The section on Outstanding Storms of the Month is prepared by Professor T. Theodore Fujita, editor, and Duane J. Stiegler, associate editor, University of Chicago. The narrative descriptions of Storms by State and Summaries of Hurricanes and Tropical Storms are prepared by the National Weather Service. The National Climatic Data Center compiles the statistics on deaths, injuries, and damage. This publication contains our best information on Storms, but, due to the difficulties inherent in collection of this type of data, it is not all-inclusive. Late reports and corrections will be carried quarterly.

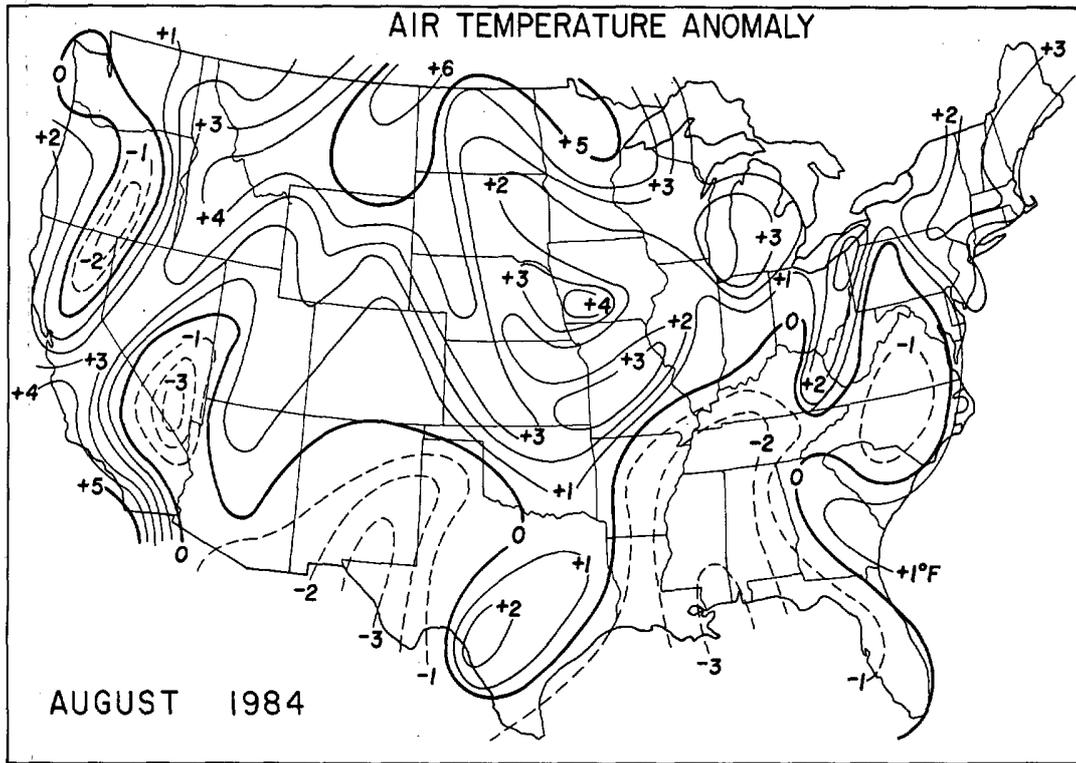
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# OUTSTANDING STORMS OF THE MONTH



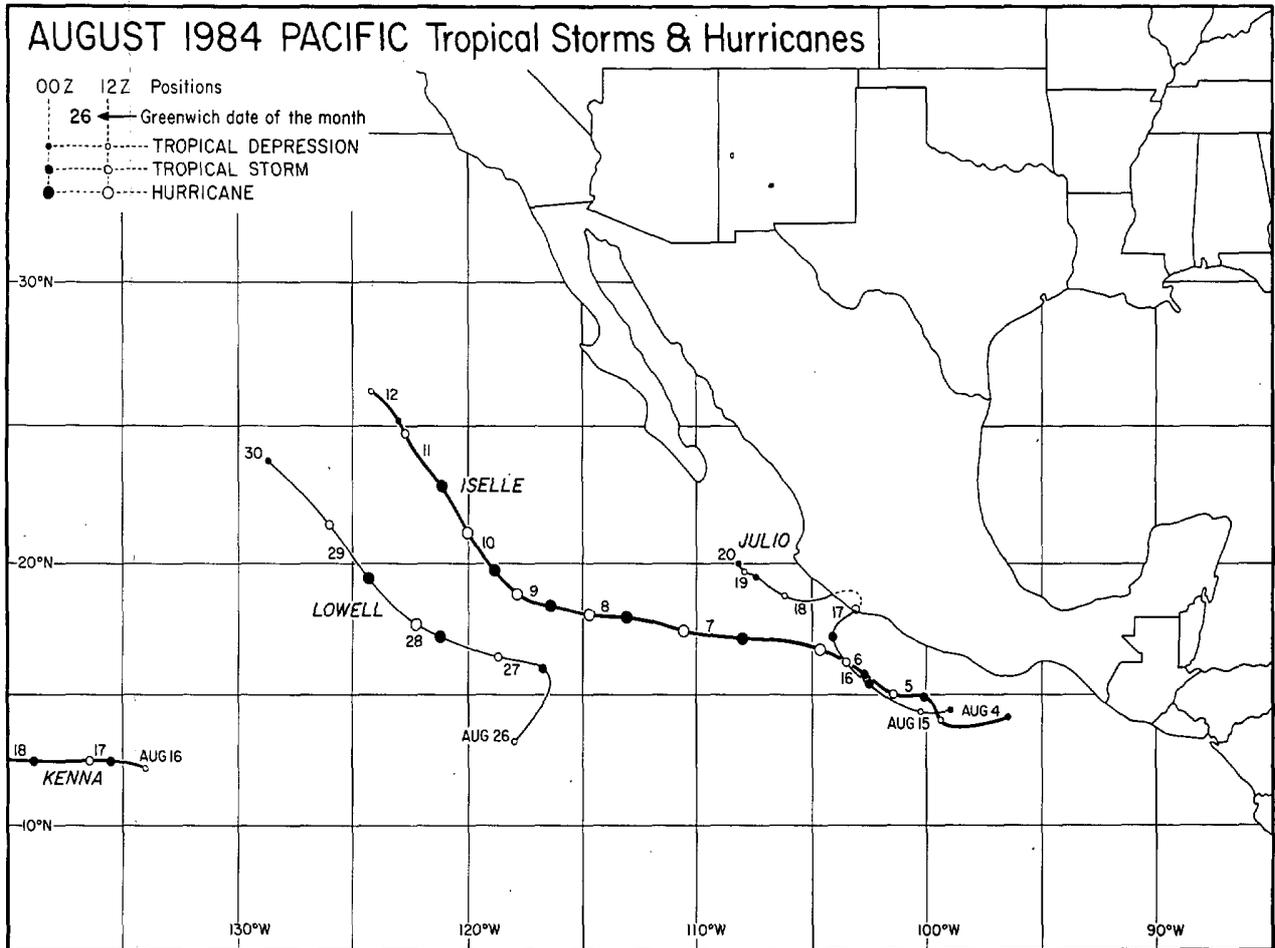
<ul style="list-style-type: none"> <li>● COMPLETE REPORT RECEIVED</li> <li>◐ PRELIMINARY REPORT RECEIVED</li> <li>○ REPORT NOT RECEIVED</li> </ul> <p>(N) northern (W) western (S) southern (C) central (E) eastern (O) coastal (SE) southeastern</p>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td>● 1AL</td> <td>○ 7DE</td> <td>● 14KS</td> <td>● 21MN</td> <td>● 28NJ</td> <td>● 33OH</td> <td>● 39SD</td> <td>● 44VA</td> <td>● 49AK (SE)</td> </tr> <tr> <td>● 2AZ</td> <td>● 8FL</td> <td>● 15KY</td> <td>● 22MS</td> <td>● 29NM</td> <td>● 34OK</td> <td>● 40TN</td> <td>● 45WA</td> <td>● 50HI</td> </tr> <tr> <td>● 3AR</td> <td>● 9GA</td> <td>● 16LA</td> <td>● 23MO</td> <td>● 30NY (O)</td> <td>● 35OR</td> <td>● 41TX (N)</td> <td>● 46WV</td> <td>● 51PR</td> </tr> <tr> <td>● 4CA (N)</td> <td>● 10ID</td> <td>● 17ME</td> <td>● 24MT</td> <td>● 30NY (C)</td> <td>● 36PA (E)</td> <td>● 41TX (S)</td> <td>● 47WI</td> <td>● 52VI</td> </tr> <tr> <td>● 4CA (S)</td> <td>● 11IL</td> <td>● 18MD</td> <td>● 25NE</td> <td>● 30NY (W)</td> <td>● 36PA (W)</td> <td>● 41TX (W)</td> <td>● 48WY</td> <td>● 53PC</td> </tr> <tr> <td>● 5CO</td> <td>● 12IN</td> <td>● 19MA</td> <td>● 26NV</td> <td>● 31NC</td> <td>● 37RI</td> <td>● 42UT</td> <td>● 49AK (N)</td> <td></td> </tr> <tr> <td>● 6CT</td> <td>● 13IA*</td> <td>● 20MI</td> <td>● 27NH</td> <td>● 32ND</td> <td>● 38SC</td> <td>● 43VT</td> <td>○ 49AK (S)</td> <td></td> </tr> </table>	● 1AL	○ 7DE	● 14KS	● 21MN	● 28NJ	● 33OH	● 39SD	● 44VA	● 49AK (SE)	● 2AZ	● 8FL	● 15KY	● 22MS	● 29NM	● 34OK	● 40TN	● 45WA	● 50HI	● 3AR	● 9GA	● 16LA	● 23MO	● 30NY (O)	● 35OR	● 41TX (N)	● 46WV	● 51PR	● 4CA (N)	● 10ID	● 17ME	● 24MT	● 30NY (C)	● 36PA (E)	● 41TX (S)	● 47WI	● 52VI	● 4CA (S)	● 11IL	● 18MD	● 25NE	● 30NY (W)	● 36PA (W)	● 41TX (W)	● 48WY	● 53PC	● 5CO	● 12IN	● 19MA	● 26NV	● 31NC	● 37RI	● 42UT	● 49AK (N)		● 6CT	● 13IA*	● 20MI	● 27NH	● 32ND	● 38SC	● 43VT	○ 49AK (S)	
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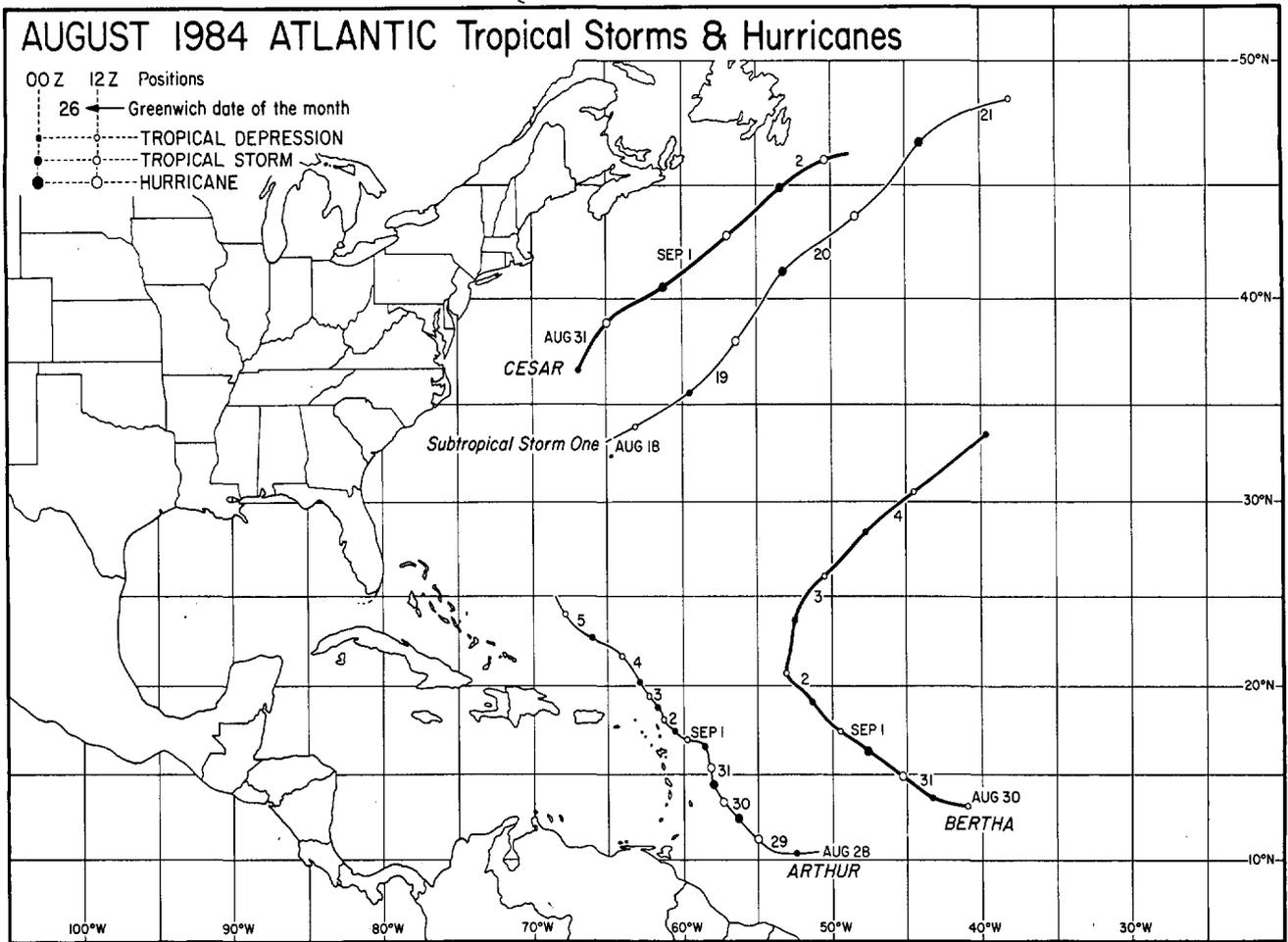
---Data base from NOAA/USDA Joint Agricultural Weather Facility.

### TROPICAL STORMS AND HURRICANES

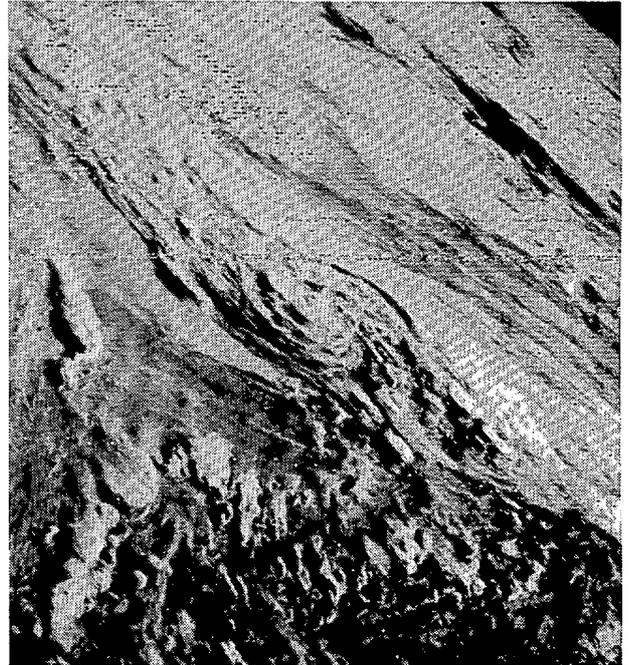
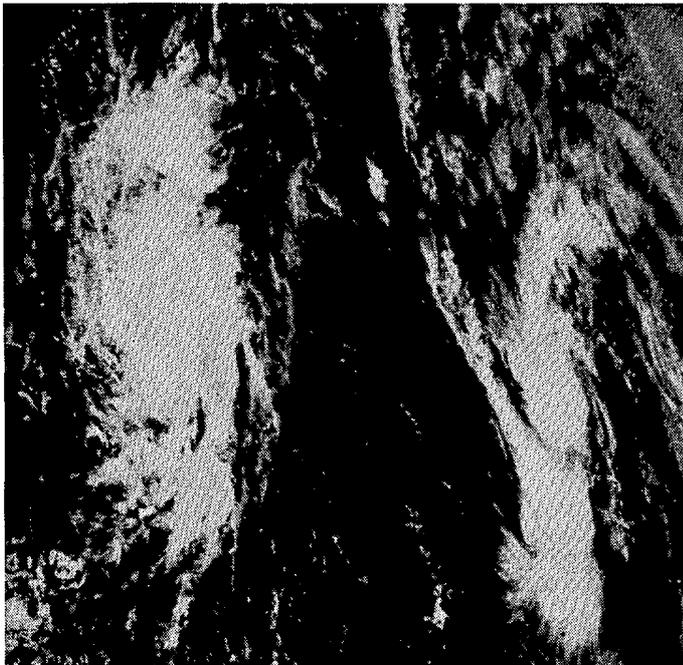


---Best track data from NWSFO San Francisco, California.

TROPICAL STORMS and HURRICANES ---- continued



---Best track data from the National Hurricane Center, Miami, Florida.

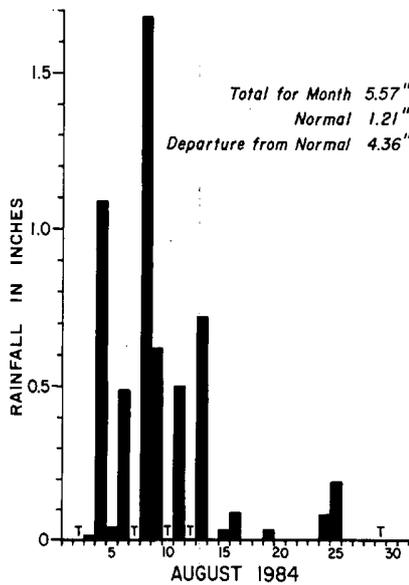


Tropical Storm ARTHUR (left) and Tropical Storm BERTHA (right), the later in tropical depression stage, are shown simultaneously in a visible, GOES satellite image taken at 1430 GMT on August 30th.

A visible, GOES satellite image of Tropical Storm CESAR taken at 1130 GMT on September 1st.  
 ---Both photos supplied by AOML, Hurricane Research Division.

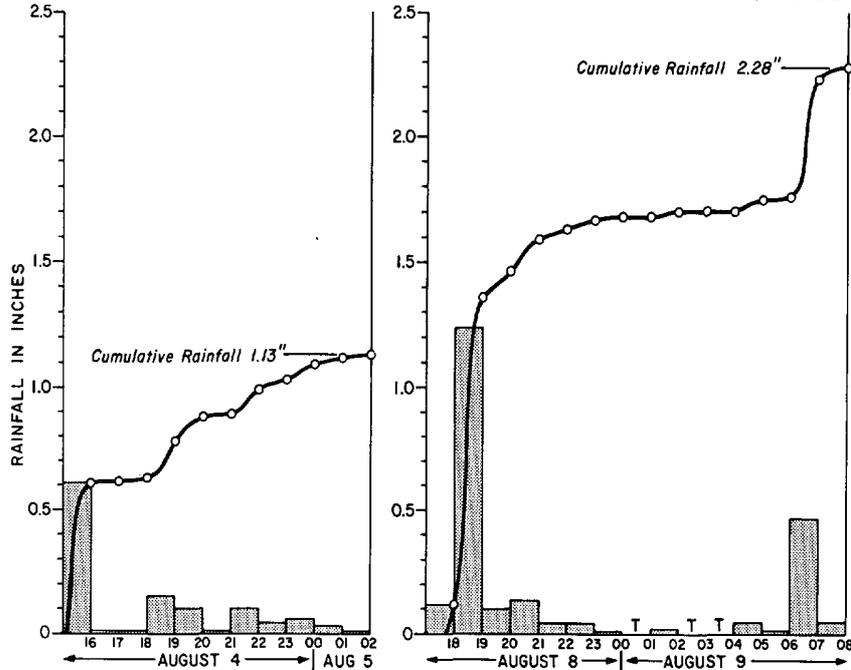
# 1. HEAVY RAIN and FLASH FLOODING in EL PASO, TEXAS during August, 1984

The El Paso, Texas area was plagued by heavy rains and some flash flooding during August, 1984. A total of 5.57 inches of rain fell at the El Paso International Airport during the month, a departure of 4.36 inches above the normal of only 1.21 inches. Most of the rain fell in two episodes on August 4th and 5th, and the 8th and 9th, each resulting in flash floods within the city and in some of the surrounding areas. An equivalent rainfall amount to the August normal fell in less than 45 minutes on August 8th (see bottom graph).



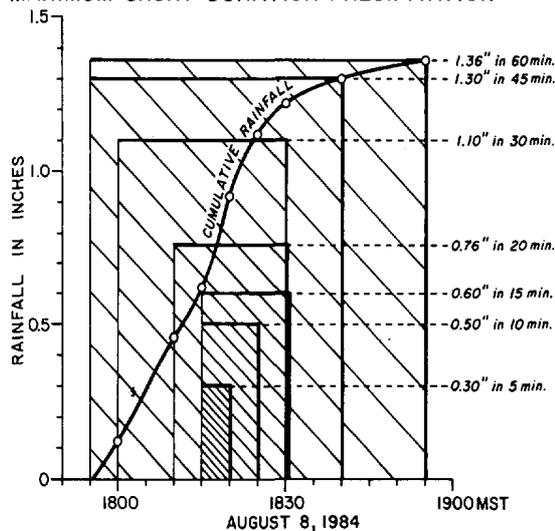
Daily precipitation amounts for August, 1984 at El Paso International Airport.

## HOURLY PRECIPITATION FOR TWO EPISODES THAT CAUSED FLASH FLOODS



Hourly and cumulative rainfall distributions for two episodes accountable for the majority of the month's total precipitation.

## MAXIMUM SHORT DURATION PRECIPITATION



A graphical depiction of the month's maximum short duration precipitation, representative of the maximum rainfall rates.

---All data from NWSO at El Paso, Texas; supplied by NCDC.

## 2. FOREST and RANGE FIRES in MONTANA during August, 1984

During the later half of August, lightning strikes, aided by generally dry conditions, ignited numerous forest and range fires in Montana, as well as many other areas of the mountain and plain states. One of the largest fires, featured below and on the cover, occurred in the Bull Mountains of Musselshell and Yellowstone Counties, south of Roundup, Montana. Nearly 100,000 acres of timber and grassland were burned.



A volunteer firefighter flees from the intense heat of advancing flames.



Resting firefighters watch helplessly, as trees burn in the Bull Mountains.



A badly burned horse stands in the charred remains of a forest in the Bull Mountains.

---All photos by Larry Mayer, The Billings Gazette.

### 3. FLASH FLOODING in SOUTHWESTERN PENNSYLVANIA on August 13, 1984

Heavy rains of up to 4 inches in 2 hours fell over the Wills Creek area of southwestern Pennsylvania on the afternoon of August 13th, causing flash floods that did extensive damage in the towns of Glencoe and Fairhope in Somerset County, and Hyndman in Bedford County. Water on the creek rose to 4 to 7 feet above normal in a short period, necessitating the evacuation of more than 1,000 people from their homes. 5 people died as a result of being swept away by the fast-flowing floodwater. More than 400 buildings were damaged or destroyed, and at least 60 vehicles were destroyed.

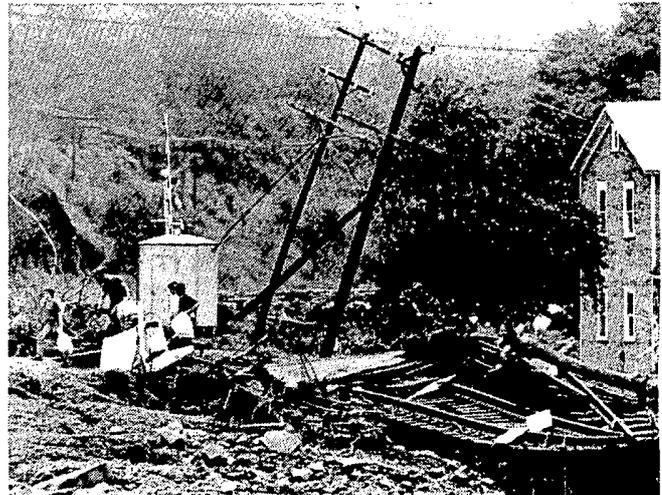
---All photos by Kieth Boyer (KB) and Sally Fike (SF), both from the Daily American, Somerset, Pennsylvania.



Receding floodwater flows over a road near Fairhope. ---(KB)



Receding floodwater, flowing over a road in Glencoe, is traversed by two men on a tractor and a dog. ---(KB)

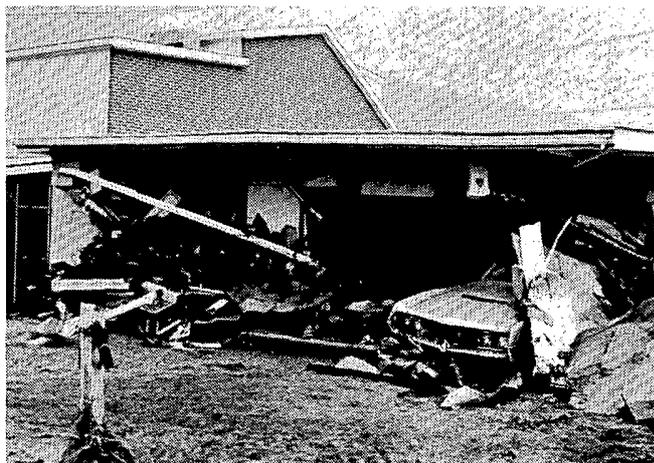


Damage to property of the Chessie System Railroad in Glencoe. ---(KB)

FLASH FLOODING in SOUTHWESTERN PENNSYLVANIA ---- continued



Twisted mainline of the Chessie System Railroad in Glencoe. The flood-water eroded ballast from the roadbed and washed the ties and rails away from their original resting place. ---(KB)



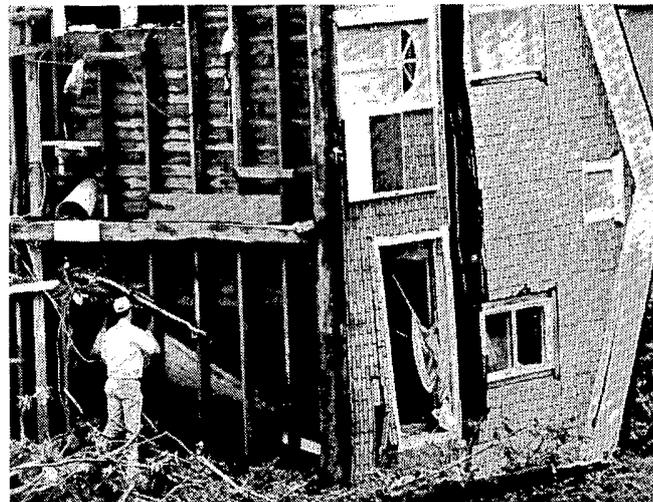
Flood damage to a gift shop in Hyndman. ---(SF)



A collapsed barn in Hyndman. ---(SF)



A mobile home in Hyndman that pinned an auto as it was halted by a tree. ---(SF)



An overturned house in Glencoe. ---(KB)

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS				ESTIMATED DAMAGE	CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS		
<b>1 ALABAMA</b>										
Gantt area, Covington County	01	1440CST			0	0	4	0	0	Wind
Thunderstorm winds downed trees and blew over two mobile homes. One truck was damaged by a falling tree.										
Bessemer area, Jefferson County	04	1615CST								Funnel Cloud
An off duty NWS meteorologist reported that a funnel cloud was briefly visible about 3 miles east of Bessemer.										
Hollywood, Jackson County	04	2000CST			0	0	3	0	0	Wind
Thunderstorm winds downed several trees including two large pecan trees said to be 70 years old. Some power lines were also downed.										
Mobile, Mobile County	06	1555CST								Funnel Cloud
Mobile police reported a funnel cloud just north of Mobile moving east.										
Fort Rucker, Dale County	11	1101CST			0	0	?	?	?	Wind
Winds gusted to 63 mph at the Air Field during a thunderstorm.										
Montgomery, Montgomery County	19	1720CST			0	0	?	?	?	Wind
Thunderstorm winds damaged some roofs, trees and storage sheds in east Montgomery.										
Clarke County	20	Evening			0	0	4	0	0	Lightning
Lightning struck the chimney to the boiler at Clarke County High School. Flying bricks broke windows in the Cafeteria and a classroom, and damaged the roof. The boiler was also damaged and the tall brick chimney was damaged beyond repair.										
<b>2 ARIZONA</b>										
Greater Phoenix Area, Maricopa County	8	1945-2300MST			0	0	5	4	0	Wind, Lightning
A series of thunderstorms with winds up to 62 MPH and lightning strikes swept through the area. There was scattered damage to power lines, homes, trees and signs. A large section of a roof collapsed on a commercial building. A bolt of lightning set fire to a 400-ton stack of baled hay.										
Douglas, Cochise County	9	1422MST			0	0	0	0	0	Funnel Cloud
A funnel cloud was observed by the Douglas Flight Service Station about 7 miles to the north.										
Greater Phoenix Area, Maricopa County	9	1930-2100MST			0	0	5	0	0	Wind, Lightning, Flash Flooding
A large severe thunderstorm with winds up to 63 MPH and lightning strikes, together with locally heavy rain and flash flooding, moved across the area. The hardest hit was the northern half. Several mobile homes and travel trailers were blown over with scattered damage to houses, power lines, trees and signs. A large section of a supermarket roof collapsed. Several motorists were temporarily trapped when live power lines were blown onto their cars. More than two dozen lightning strikes occurred, but with no serious fires. Local flash flooding closed sections of some streets and highways.										
Phoenix, Maricopa County	9	2000MST	0.5	30	0	0	0	5	0	Tornado (F1)
A small tornado touched down just northeast of Interstate 17 and Bell Road and moved to the southwest, then veered to the northwest for a total distance of about one-half mile. Several houses were damaged.										
Greater Phoenix Area, Maricopa County	9	2000MST			0	0	0	0	0	Funnel Cloud
Luke Air Force Base radar picked up an echo indicating either a tornado or funnel cloud to the southeast. There was no visual contact and no evidence that it touched the ground.										
Douglas, Cochise County	10	1616-1640MST			0	0	0	0	0	Funnel Cloud
A funnel cloud was observed by the Douglas Flight Service Station about 15 miles to the west.										
Greater Phoenix Area, Maricopa County	14	0100-0400MST			0	0	5	0	0	Flash Flooding, Lightning, Wind
A vicious thunderstorm with continuous lightning lashed the area, especially the northwest section, where strong winds damaged roofs, trees and signs. Heavy rain of 1 to 2 inches caused flooding of four underpasses on I-17 with up to four feet of water. Lightning strikes caused a few major power outages and set fire to a storage building to the extent of \$75,000.										
<b>ARIZONA</b>										
Cocconino County	14	Morning			0	0	4	0	0	Flash Flooding
Very heavy rain washed out a 250 ft. section of State Route 64 between Williams and Valle.										
Prescott, Yavapai County	15	1040-1050MST			0	0	0	0	0	Funnel Clouds
A funnel cloud was observed by the Prescott Flight Service Station to the north. A second funnel appeared very briefly shortly after the first one dissipated.										
Mesa, Maricopa County	15	1445MST			0	0	0	0	0	Funnel Cloud
A funnel cloud was reported by the public over the southeastern section for a few minutes.										
Greater Tucson Area, Pima County	17	2000-2100MST			0	0	4	0	0	Funnel Clouds, Hail, Heavy Rain
A severe thunderstorm moved across the area from east to west with very spectacular lightning, areas of very heavy rain and up to one-inch size hail. Three funnel clouds to the southeast of the airport were reported by a pilot.										
Greater Tucson Area, Pima County	22	1610MST			0	0	0	0	0	Hail
During a severe thunderstorm, hail up to one inch in diameter fell in parts of the area.										
<b>3 ARKANSAS</b>										
Benton County	01	about 1500CST			0	0	3	-	-	Lightning
Six cows and one calf were killed after lightning struck the tree where they were taking shelter from the storm, in Rogers. Also, a Bentonville barn full of hay was struck by lightning and caught on fire, burning completely.										
Dallas County	01	1630CST			0	0	?	-	-	Hail
Golfball size hail covered the ground just outside Fordyce city limits, along Highway 8 and Bunn Road. Roof damage was reported in the area.										
Perry County	02	1055-1120CST			0	0	?	-	-	Hail
Hail up to "quarter" size at Lake Nimrod Dam.										
Perry County	02	1220-1235CST			0	0	?	-	-	Severe thunderstorm/Funnel Cloud
A funnel cloud was spotted along Highway 60 near Aplin. The same storm produced golfball size hail and strong winds which blew down some trees near the intersection of Highways 60 and 7.										
Pulaski County	02	1248CST			0	0	?	-	-	Hail
Golfball size hail at the western edge of Lake Maumelle.										
Pulaski County	02	1302CST			0	0	-	-	-	Funnel Cloud
Pulaski County Sheriff's deputies spotted a funnel cloud near Lake Maumelle.										
Howard County	02	about 1400CST			0	0	-	-	-	Hail
One inch hail was reported at Umpire.										
Saline County	02	about 1400CST			0	0	-	-	-	Hail
A cooperative observer reported pea to golfball size hail near Lake Winona.										
Garland County	02	1459CST			0	0	-	-	-	Funnel Cloud
A funnel cloud was reported between one and two miles southwest of Hot Springs.										
Garland County	02	1719CST			0	0	3	-	-	Lightning
Lightning started a fire at a home in Hot Springs Village. Minor damage was done to the attic during the short lived fire.										
Pulaski County	02	1745CST			0	0	-	-	-	Flash Flooding
Heavy rains produced urban flooding across the Little Rock Metropolitan Area after a 2-inch rain, according to unofficial rain gauges.										
Phillips County	03	1340CST			0	0	-	-	-	Funnel Cloud
The Helena Police Department reported that one of its officers saw a funnel cloud.										
Dallas County	05	0405CST			0	0	-	-	-	Funnel Cloud
A funnel cloud and loud roar were reported two or three miles east of Fordyce, in the extreme southeast corner of the county. The weather radar indicated a very intense storm showing signs of a circulation over the area in question.										

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>— ARKANSAS</b>									
Ashley County	07	1320CST			0	0	4	-	Lightning
Two bedrooms of a Crossett home were badly damaged by fire that resulted from a lightning strike.									
Benton County	08	about 1730CST			0	0	4	-	Wind
A large tree was blown onto the roof of a Siloam Springs home by gusts from a thunderstorm. Damage consisted of a rather large hole over the kitchen area.									
Johnson County	08	2115CST			0	0	-	-	Hail
Golfball size hail was reported in Clarksville by the Johnson County Sheriff's Department.									
Sevier County	09	0133CST			0	0	5	-	Lightning
A DeQueen residence caught on fire and burned to the ground after lightning struck it.									
Phillips County	09	0900CST			1	0	-	-	Lightning
A teen-aged girl from Mervell was struck and killed by lightning as she picked peas from her home's garden.									
Craighead County	09	afternoon			0	2	-	-	Heat
Two Jonesboro Municipal employees collapsed from heat exhaustion while trying to remove hazardous chemical drums from the City's landfill. Both were treated and released.									
Crittenden County	09	about 1400CST			0	0	4	-	Wind
A thunderstorm gust blew down the frame of a church, which was under construction in West Memphis.									
Poinsett County	10	about 1330CST			0	1	-	-	Lightning
A brick layer was injured slightly by lightning in Marked Tree. Singed hair and numb fingers resulted after the scaffolding got struck.									
Craighead County	11	1530CST			0	0	-	-	Funnel Cloud
An Arkansas State Police Trooper spotted a funnel cloud around Valley View.									
Lonoke County	12	about 1700CST			0	0	4	-	Heavy Rain
A two-inch rain fell over England, where water accumulated on a commercial building's roof top. The roof collapsed from the weight of the water, damaging the building's contents.									
Desha County	13	1400 - 1730CST			0	0	5	-	Severe Thunderstorm
Urban flooding resulted in Dumas after 3.74 inches of rain. Strong winds knocked down power lines. Lightning struck and set on fire a major electrical transformer.									
Ashley County	13	1630CST			0	0	6	-	Wind
A sudden, thunderstorm gust demolished a large hangar at the Crossett Airport. Eight aircraft within the hangar were totally destroyed or heavily damaged.									
Columbia County	13	1730CST			0	0	4	-	Lightning
The roof of a local government building caught on fire after having been struck by lightning.									
Lawrence County	13	about 1830CST			0	0	5	-	Lightning
A large commercial building in Walnut Ridge was set on fire by lightning. Extensive damage was done to the building and contents.									
Hot Spring County	15	0645CST			0	0	3	-	Lightning
Lightning struck a Malvern home, short circuiting an organ and wall sockets. There was some damage to the fireplace bricks.									
Howard County	23	0000CST			0	0	5	-	Lightning
Lightning struck a home in Nashville, starting a fire. Most of the house was consumed by the fire, including a car parked at the home.									
Baxter County	29	1545CST			0	0	?	-	Hail/Lightning
Lightning started a forest and brush fire near Mountain Home, just north of Pidgeon Creek. The fire consumed three acres of pine and brush before being controlled. One inch diameter hail fell at the Curly Point Community, on the Baxter-Fulton County line.									
<b>— ARKANSAS</b>									
Fulton County	29	1545 - 1600 CST			0	0	?	-	Hail/Wind
One inch diameter hail fell at Curly Point Community on the Fulton-Baxter County line. Also dime-size hail fell in Glencoe. Strong winds accompanying the thunderstorm damaged the roof of a vacant factory in Salem. Unspecified wind damage occurred over the eastern section of the county.									
Pulaski County	29	1926 - 2015CST			0	0	5	-	Wind/Hail
A thunderstorm moved through the Little Rock Metropolitan area, knocking down trees and power lines. One tree crushed two cars. Some airplanes had wind damage at Adams Field in Little Rock. Also, the door of one hangar was torn down. Hail ranged in size from pea to dime. The Little Rock Air Force Base had wind damage. The framework for a restaurant under construction was blown down. Winds were measured at 49 MPH at the National Weather Service Forecast and at 53 MPH at the Little Rock Air Force Base.									
Monroe County	29	about 2130CST			0	0	4	-	Severe thunderstorm
Unspecified hail damage was reported at Holly Grove. Trees and tree limbs were blown down at Brinkley, Clarendon, and Holly Grove. Lightning started a fire at a Clarendon residence, causing extensive damage.									
Clark County	29	2235CST			0	0	4	-	Wind/Hail
Winds from a thunderstorm knocked down many tree limbs, trees, and power lines in Arkadelphia. Donaldson also reported golfball size hail. Some homes experienced roof damage from falling tree limbs or trees.									
Hempstead County	29	2300CST			0	0	4	-	Wind
Thunderstorms moved through Hope, producing high winds which knocked down power lines, tree limbs, and trees.									
Little River County	30	about 0100CST			0	0	?	-	Wind
Strong winds associated with thunderstorms blew down trees at the Ashdown City Park and at numerous other locations around the county.									
<b>4 CALIFORNIA, Northern</b>									
Sand Canyon Kern County	10	1810PST			0	0	4	0	Flash Flood
Flooding was reported in Sand Canyon, with 2 feet of water over the road. Some mudslides resulted from a heavy thundershower.									
Larson Tract, Kern County	15	0630PST			0	1	4	4	Flash Flood
Heavy rain (1.10 inches reported in 55 minutes) flooded highway 178 with over a foot of water. Bodfish Creek flooded over its banks. One house was partially destroyed.									
Onyx, Kern County	20	1655PST			0	0	5	0	Flash Flood
Sodie Creek overflowed its banks, flooding the town of Onyx. Four homes were damaged by mud and water; one home was washed away. A heavy thundershower dropped .66 of an inch of rain in 40 minutes.									
Lake of the Woods, Kern County	22	1630PST			0	5	4	3	Flash Flood, Hail
A heavy thunderstorm developed over Lake of the Woods Recreational Area, flooding local creeks and dropping 1.75 inches of rain in 40 minutes. Hail the size of marbles covered the ground. Three homes were damaged from mud and water.									
Sierra Nevada	26	0500-1900PST			0	1	4	4	High Winds
The combination of a strong high pressure off the California coast and a deep low over Nevada produced 40 to 50 mph winds over the higher mountains. Gusts of up to 90 mph were recorded over some mountain passes. Wind blew down trees and power lines, and took a microwave relay station out of service for most of the day.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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

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

## 4 CALIFORNIA, Southern

Apple Valley, San Bernardino County	17	1430PST			0	0	4	0	High Wind
Winds of up to 100 miles per hour destroyed four private airplanes in Apple Valley. The winds accompanied heavy rain in the area and lasted about 30 minutes.									
Death Valley, Inyo County	19	?			0	0	?	0	Flash Flood
Several roads and state highways were closed due to washouts and mudslides from thunderstorms. Several areas had power outages. The temperatures soared into the hundreds and were accompanied by high relative humidities.									
Independence, Inyo County	21	?			0	0	?	0	Flash Flood
Oak Creek campground, near Independence, was overrun by a wall of mud, causing some damage to the Forest Service facility.									
Keeler, Inyo County	22	?			0	0	2	0	Flash Floods
Flash floods left about five to six feet of mud in some areas of Keeler. Several streets and local highways were closed due to structural damage.									

## 5 COLORADO

Elbert County	1	1353MST	1/4	50	0	0	0	0	Tornado (F1) A tornado touched down briefly 5 miles north of Kiowa. FPP101
Larimer County	1	1600-1610MST			0	0	0	0	Hail 3/4 inch hail fell 5 miles north of Fort Collins; walnut size stones were reported in the city.
Weld County	1	1615MST	1/2	50	0	0	0	0	Tornado (F1) A tornado was sighted 5 miles west of Nunn. FPP101
Boulder, Weld Cys.	1	1700-1800MST			0	0	3	4	Thunderstorms Heavy thunderstorms hit both counties. 2.7 inches of rain fell at La Salle in just 20 minutes; 2.3 inches drenched Kersey. There was crop damage in Western and Southern Weld County. In Boulder County, 3.25 inches of rain fell at Longmont in just 1 1/4 hours, causing downtown street flooding. Basement flooding occurred in Weld County at La Salle and Windsor.
Weld County	1	1705MST	1/2	50	0	0	3	0	Tornado (F1) A tornado associated with the heavy thunderstorms mentioned above unroofed a warehouse in La Salle. The flying roof hit some nearby power lines. Total damage was estimated at 3 to 4 thousand dollars. FPP101
Adams County	4	1634MST			0	1	0	0	Lightning A state trooper was struck and injured by lightning in Northglenn.
Arapahoe County	5	1530-1630MST			0	0	4	0	Thunderstorm A heavy thunderstorm drenched Littleton with up to 2.35 inches of rain in an hour, along with small hail that piled up two inches deep in one spot. Floodwaters were up to 4 feet deep in parts of town, and many basements were flooded. There were some power outages caused by lightning.
Pueblo County	7	1835MST			0	0	0	0	High wind A gust of 59 mph was recorded at the Pueblo airport.
Douglas, Arapahoe Counties	12	1500-1700MST			0	0	3	0	Thunderstorms Heavy thunderstorms hit the southern Front Range, causing minor road washouts in Douglas County. 3/4 inch hail fell in southeast Aurora at 1505 MST; at 1640, 1 inch hail was reported just east-southeast of Parker. An inch of rain fell at Denver's Stapleton Airport.
Washington County	13	1615-1700MST			0	0	3	0	Thunderstorm About 3 inches of rain deluged the small town of Elba in just 45 minutes. A fence was knocked down, and water flooded 200 feet of a nearby road.
Front Range, Central Mountains	17	1800-2000MST			0	0	5	0	Heavy rain Scattered slow-moving thunderstorms dumped heavy rain in many areas, causing road washouts in Jefferson, Chaffee, Park, and Douglas Counties. A bridge was also washed out in Douglas County. 3 inches of rain fell in just an hour at Castle Rock in Douglas County, causing heavy silt damage to a home and to nearby drainage ditches.
El Paso County	18	1800-1930MST			0	0	4	0	Lightning A strong thunderstorm was accompanied by intense lightning, which caused eight power outages in Colorado Springs. 17,500 residents were left without power, and about an inch of rain fell in the area.
Weld County	19	1700-1710 MST	1	40	0	0	3	0	Tornado (F1) A tornado touched down 10 miles east-southeast of Briggsdale. The twister hit a farm, destroying a windmill and a chicken house. Total damage was 2 thousand dollars. FPP111

## COLORADO

Washington County	19	1738MST	1/2	50	0	0	0	0	Tornado (F1) A pilot reported a tornado 5 miles southeast of Anton. FPP101
Mesa County	19	1751MST			0	0	0	0	High Wind A thunderstorm produced a wind gust of 74 mph at the Grand Junction airport.
Western Colorado	20	aftn.			0	0	5	0	Heavy rain Thunderstorm downpours caused damage in two locations. At Dove Creek in Dolores County, heavy rains created floodwaters that destroyed two houses and damaged several others, and also some roads in the area. At Rifle in Garfield County, heavy rain flooded basements and ruined carpets; thunderstorm wind gusts ripped the door off a garage.
Denver area	20	1500-1600MST			0	0	0	0	Heavy rain Slow-moving thunderstorms dumped 1 1/2 inches of rain in Evergreen, causing street flooding. A half inch fell in just 18 minutes in Southeast Denver. Littleton and Boulder were also drenched with about an inch of rain.
Teller County	20	2000MST			1	0	0	0	Lightning A man was struck and killed by lightning while riding a motorcycle near Victor.
Pueblo County	21	1600-1730MST			0	9	7	6	Hail A violent hailstorm hit Pueblo, virtually closing the state fair for the day. Stones up to golfball size broke many windows and damaged hundreds of cars and roofs of homes. At the fair, 500 light bulbs were broken on one carnival ride alone, and nine people were injured by the falling stones; one person was knocked unconscious. Outside town, hail and heavy rain caused severe damage to hay, onions, melons, and corn; the damage extended eastward into the Rocky Ford area in Otero County. Total damage from the storm was estimated at 40 million dollars.
Pueblo County	21	1700MST	1	50	0	0	3	0	Tornado (F2) The thunderstorm that spawned the large hail that hit Pueblo also produced a tornado just south of town that destroyed power lines and poles; some of the poles were snapped in two. FPP201
Weld, Adams Counties	22	1700-1900MST			0	0	?	?	Heavy rain A thunderstorm dumped 4 inches of rain on Brighton in 1 1/2 hours, causing extensive street flooding in the downtown area. 1.60 inches fell 10 miles east-southeast of Briggsdale.
Eastern Colorado	24	1400-1700MST			0	0	0	0	Heavy rain Heavy rain hit the south Denver area. Over an inch fell in less than an hour in Douglas County at both Castle Rock and Sedalia, and street flooding occurred in southeast Denver. Farther east, Akron, in Washington County, had 1.63 inches in 1 1/2 hours.
El Paso County	25	aftn.			0	0	0	0	Heavy rain Two inches of rain fell in just 45 minutes 15 miles northwest of Colorado Springs.

## 6 CONNECTICUT

North Central and Northeast Portion	07	1500-1700EST			0	0	4	0	Thunderstorm Winds, Lightning, Local Flooding A fast-moving series of thunderstorms moved across the area with winds gusting to at least 50 mph, felling tree limbs and wires. More than one inch of rain fell during a 15 minute period in Enfield as local flooding occurred throughout the area. Up to 6,000 electric customers lost power. Hail was reported in Enfield and Windsor.
Northwest and Central Portion	16	Early Evening			0	0	4	0	Thunderstorm Winds, Lightning, Local Flooding Severe thunderstorms hit the area, with up to 5,000 power outages reported in the northwest corner of the state. In Winsted, a bolt of lightning blew a hole in a roof, and another bolt set fire to a barn in Norfolk, which was then destroyed by the fire. Wind gusts reached 65 mph during the storm in the Torrington area. Heavy street flooding occurred in Bristol.
Fairfield, Bridgeport, Trumbull and Milford area	31	Early Morning 0130-0430EST			0	0	5	0	Thunderstorm, Downburst Wind, Lightning Up to 13,000 electric customers lost service as hurricane-force winds from a thunderstorm downburst knocked down numerous trees. The storm cut a path from the Greenfield Hills section of Fairfield across Bridgeport, Trumbull, Stratford and Milford. A number of large trees fell on houses and autos. Many streets were blocked by fallen trees.

## 7 DELAWARE ————— NO REPORT RECEIVED

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>8 FLORIDA</b>									
Pensacola, Escambia Co.	02	0745EST			0	0	3	-	Thunderstorm wind
									The roof of a commercial building was damaged.
St. Petersburg, Pinellas Co.	03	1515EST			0	0	UNK	-	Thunderstorm wind
									A wind of 52 knots was reported.
St. Petersburg, Pinellas Co.	06	1200EST			0	0	4	-	Thunderstorm wind
									High wind destroyed the roofs of several mobile homes.
Jacksonville, Duval Co.	06	1330EST			0	1	0	0	Lightning
									A man was struck by lightning while working atop a three story building.
rural Clay Co.	06	1500EST			0	0	4	-	Lightning
									Lightning started a fire which destroyed a barn.
Leesburg, Lake Co.	07	1415EST			0	0	3	-	Lightning
									A tree was struck by lightning and fell onto a mobile home, causing damage to the roof and a wall.
Pensacola, Escambia Co.	10	1500EST			0	0	0	0	Thunderstorm wind
									Wind gusts to 60 MPH were reported from the Navy base.
Lake Placid, Highlands Co.	11	1430EST			0	0	3	0	Thunderstorm wind
									Several trees were uprooted, a carport was destroyed, and two storage sheds were damaged by high wind.
Okeechobee, Okeechobee Co.	11	1500EST			0	0	4	0	Thunderstorm wind
									A large tree was uprooted and blown onto a mobile home by high wind. Several signs were destroyed.
Miami, Dade Co.	11	1500EST			0	0	3	0	Thunderstorm wind
									A screen enclosure was destroyed by high wind.
Daytona Beach, Volusia Co.	12	1330EST			0	0	1	-	Thunderstorm wind
									Wind to 60 MPH observed by NWS.
Lakeland, Polk Co.	12	1430EST			0	0	3	-	Thunderstorm wind
									The roof of a mobile home was destroyed by high wind.
Palm Beach, Palm Beach Co.	12	UNK			0	0	5	-	Thunderstorm wind
									High wind destroyed a small airplane and damaged another. A tree was blown down and struck and killed a cow at a local zoo.
Bayonet Point, Pasco Co.	14	1400EST			0	0	4	-	Lightning
									Lightning struck a radio tower and started a fire which destroyed a building and its contents.
Groveland, Lake Co.	14	1600EST			0	0	5	-	Lightning
									Lightning started a fire which destroyed a building.
Anthony, Marion Co.	15	1620EST			2	0	-	-	Lightning
									Lightning struck and killed a husband and wife in their backyard. They were not near a tree or metallic pole. There was no rain at the time.
Mayo, Lafayette Co.	15	1900EST			0	0	4	-	Lightning
									Lightning started a fire which destroyed two barns.
Hernando, Citrus Co.	16	1245EST	0.5	30	0	0	5	-	Tornado (F1)
									Twelve mobile homes suffered major damage.
Crystal River, Citrus Co.	16	1330EST	0.5	30	0	0	5	0	Tornado (F1)
									A tornado destroyed a large flea market.
St. Petersburg, Pinellas Co.	16	1445EST			1	0	0	0	Lightning
									A man spraying a house with insecticide was struck and killed by lightning. There were several nearby strikes beforehand.
<b>— FLORIDA</b>									
Jacksonville, Duval Co.	18	1515EST			0	0	UNK	0	Lightning
									A storage tank of 1.4 million gallons of premium unleaded gasoline caught fire after being struck by lightning.
Riviera Beach, Palm Beach Co.	19	1300EST			0	1	-	-	Lightning
									A man was struck by lightning and seriously injured.
Ft. Lauderdale Beach, Broward Co.	19	UNK			0	1	-	-	Lightning
									A man was struck by lightning and seriously injured. The man was snorkeling in the ocean.
Port Salerno, Martin Co.	20	2138EST			0	0	5	-	Lightning
									Lightning started a fire which destroyed a frame house.
Madison, Madison Co.	20	UNK			0	0	3	-	Thunderstorm wind
									High wind downed several trees which damaged several cars.
Hudson, Pasco Co.	21	1030EST			0	0	4	0	Thunderstorm wind
									High wind damaged and destroyed several mobile homes.
central Manatee Co.	23	1433EST	0.5	30	0	0	4	-	Tornado (F1)
									A mobile home was destroyed.
Palm City, Martin Co.	24	1345EST			0	0	4	-	Lightning
									Lightning started a fire which damaged a frame house.
Cocoa Beach, Brevard Co.	25	1415EST			1	0	-	-	Lightning
									A girl was struck and killed by lightning as she walked on the beach. It had been raining and lightning before she was struck.
St. Petersburg, Pinellas Co.	26	1645EST			0	1	-	-	Lightning
									A woman lying on the beach was struck and injured by lightning.
<b>9 GEORGIA</b>									
Columbia County	08	Evening Hours			0	0	4	0	Lightning
									A lightning strike caused a fire that destroyed part of a County Forestry Unit building.
<b>10 IDAHO</b>									
Bull's Fork, Tex Creek, Bonneville County	1	Afternoon					4	0	Flash flood
									Very heavy rain estimated at 2½ inches in one hour created a flash flood. The water of little Bull's Fork became 20 feet deep and 40 feet wide in a channel designed by nature to hold 4 feet by 2 feet at the maximum. It peeled the earth to bare rock 15 feet below the old stream bed. <u>No significant private property was damaged.</u>
Boise	5	1500MST					0	0	Hail
									A small area of Boise was pounded by 3/4" soft hail for a short period. <u>No damage reported.</u>
Northern, Central Idaho	5	1800-2000 MST					5	3	Thunderstorms, high winds, hail
									A strong cold front passed through northern and central Idaho during the afternoon. Winds estimated at 50 to 60 mph downed many trees. Hail up to 1½ inches in diameter near Salmon, cut a 17 mile swath which cut gardens to shreds. Hail from marble to near golf ball size, in the Orofino area, stripped the paint off a new pickup and took the paint off the west side of a few buildings. <u>No major private property damage occurred.</u>
1 mile south of Tendoy, Lemhi County	24	Afternoon	0.1	65	0	0	3	0	Tornado (F1)
									A tornado uprooted trees, some with trunks four or five feet in diameter, and did some minor damage to one home. <u>No significant property damage occurred.</u>
McKim and Poison Creek area between Salmon and Challis	24	1215 - 1315 MST					3	0	Thunderstorms, hail
									Golf ball sized hail broke the windshield of an automobile. <u>No extensive damage was reported.</u>

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## 11 ILLINOIS

Burbank, Cook county	03	1231CST			0	0			Thunderstorm wind
A severe thunderstorm produced wind gusts to 60mph and 1/2 inch hail at 131pm CDT at Burbank.									
Collinsville, Madison county	08	1345CST			0	0			Hail
One and three quarter inch hail fell at Collinsville at 245pm CDT.									
Altamont, Effingham county	08	1425CST			0	0	4		Thunderstorm wind
A severe thunderstorm passed through Altamont at 345pm CDT uprooting many trees. One tree fell on a house causing considerable damage.									
Aviston, Clinton county	08	1500CST			0	0	5		Thunderstorm wind
Thunderstorm winds up to 60mph downed trees and limbs causing considerable damage to houses, fences, antennas and power lines in Aviston at 400pm CDT. The most severe damage was at the Aviston village hall where the winds blew off a portion of the roof.									
Kane, DuPage, Cook counties	09	1500-1800CST			0	1	5		Thunderstorm winds, hail, lightning
Thunderstorms moved across the northeast portion of Illinois during the late afternoon causing some scattered damage in Kane, DuPage and Cook counties. At 425pm CDT 3/4 inch hail was reported near Hampshire in Kane county. That report was followed only minutes later (428pm CDT) by another report of 3/4 inch hail at DuPage County Airport near West Chicago. Strong thunderstorm winds at 514pm CDT at both Elgin, Kane county, and Lombard, DuPage county, caused some tree and roof damages. Similar damage was noted in Darien, DuPage county, at 635pm CDT and in LaGrange and River Forest, Cook county about the same time.									
A man was struck by lightning in Geneva, Kane county, about 530pm CDT while standing in his yard.									
nr Murphysboro, Jackson county	10	1514-1525CST							Thunderstorm wind, hail
A thunderstorm moving across Jackson county dropped 1 inch hail 1 mile north of Murphysboro at 414pm CDT. At 425pm CDT 3/4 inch hail, tree damage and some damage to sheds were reported at DeSoto.									
Homer, Champaign county	28	1809CST	1	?	0	0	5	0	Tornado (F1)
A tornado touched down in Homer at 709pm CDT and moved through an eight block section of the village. Although no injuries were reported, the tornado damaged at least 20 buildings and tossed a mobile home onto its side. It moved one house four inches off its foundation, ripped off porches and chimneys, broke windows and sent trees through roofs.									
Stonington, Christian county	28	2135CST							Hail
At 1035pm CDT, golf ball size hail was reported at Stonington in Christian county.									
SW Shelbyville, Shelby county	28	2329CST							Hail
At 1229am CDT on the 29th 3/4 to 1 inch hail fell 5 miles west of Shelbyville.									
nr Keensburg, Wabash county	29	1745CST							Hail
Three-quarter inch hail fell near Keensburg at 645pm CDT.									
Apple River, Jo Daviess county	29	2235CST							Hail
At 1135pm CDT golf ball size hail fell at Apple River.									

## 12 INDIANA

South Bend, St. Joseph County	06	1400EST			0	0	2	0	Lightning
Some small trees were downed, and scattered power outages occurred due to lightning strikes. Most of the damage occurred in the Knollwood section near the northern edge of Saint Joseph County.									
Hartford City, Blackford County	08	1548EST			0	0	1	0	Hail
One inch diameter hail was reported. Several windows were broken within the city.									
3N Kempton, Tipton County	10	1530EST			0	0	0	0	Hail
Hail, 3/4 inch to 1 1/2 inch in diameter, was reported.									

## INDIANA

Sheridan, Hamilton County	10	1620EST			0	0	2	0	Thunderstorm Winds
Strong thunderstorm winds downed several trees and power lines.									
3W Sheridan, Boone County	10	1625EST			0	0	2	0	Thunderstorm Winds
Strong thunderstorm winds uprooted a few trees.									
1S Big Springs, Boone County	10	1640EST			0	0	2	0	Thunderstorm Winds
A few trees were uprooted and power lines were downed by strong thunderstorm winds.									
Jolietville, Hamilton County	10	1700EST			0	0	2	0	Thunderstorm Winds
A few trees were uprooted by strong thunderstorm winds.									
2S Fincastle, Noble County	10	1730EST			0	0	0	0	Hail
Hail, 3/4 inch in diameter, was reported.									
Mooresville, Morgan County	10	1748EST			0	0	0	0	Hail
3/4 inch diameter hail was reported.									
Mount Comfort, Hancock County	10	1750EST			0	0	2	0	Thunderstorm Winds
Several trees were uprooted by strong thunderstorm winds near the Mount Comfort Airport.									
Indianapolis, Marion County	10	1805EST			0	0	0	0	Hail
Hail, 3/4 inch in diameter, was reported on the far southeast side of the city.									
Staunton, Clay County	10	1835EST			0	0	4	0	Thunderstorm Winds
Strong thunderstorm winds caused major damage to the roof of one house and uprooted several trees. Some small hail was also reported with this storm.									
Westville, La Porte County	10	1900EST			0	0	5	0	Lightning
Lightning set fire to a home, causing an estimated \$50,000 damage.									
Bedford, Lawrence County	10	2115EST			0	0	2	0	Thunderstorm Winds
Strong thunderstorm winds blew out some windows and uprooted a few trees in the Bedford area.									
Cynthiana, Posey County	29	1830EST			0	0	0	0	Hail
3/4 inch diameter hail was reported.									

## 13 IOWA

Northwest Iowa	07	1250-1600 CST			0	0	5	6	Thunderstorms with Hail and Wind
Thunderstorms moved into Northwest Iowa and rapidly developed into severe storms. The greatest devastation seen in these storms was in Sioux and O'Brien Counties, where 40,000 acres of crops were damaged by hail. Damage to the cars, trucks, and outbuildings, as well as to the roofs, sides and windows of houses, was observed over a large area. The largest hailstone discovered was bigger than a baseball. At least 15 farms suffered total destruction of the corn, bean and oat crop. Heavy rain accompanied some of the storms - 2.6 inches fell in a half hour at Germantown in O'Brien County. High winds also struck, damaging barns, sheds and other outbuildings in many areas. Trees and power lines also fell, producing some power outages.									
Linn County	07	2100-2130 CST			0	0	5	0	Thunderstorm with Wind
A strong thunderstorm struck at Cedar Rapids - winds were clocked at 67 MPH in a gust at a radio station in the Northeast part of town. Roof damage to a house was reported, and power lines came down in this short-lived but intense storm.									

## 14 KANSAS

Wakeeney, Trego County	04	1345CST			0	0	5	4	Hail, Wind
A thunderstorm with large hail and damaging winds hit Wakeeney. The hail damaged a number of cars and knocked windshields out of a few. Widespread roof, tree and power line damage also resulted.									
Dodge City, Ford County	04	1800CST			0	1	0	0	Lightning
An 11 year old girl was struck by lightning and severely burned while riding in the back of a pickup truck 5 miles north of Dodge City.									

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					KILLED	INJURED	PROPERTY	CROPS	

## KANSAS

Scott City, Scott County	05 1540CST	Short Narrow	0	0	0	0	0	0	0	Tornado (F0) A small tornado touched ground briefly 5 miles east of Scott City. No damage resulted.
Independence, Montgomery County	06 1340CST		0	0	4	0				Wind Thunderstorm winds estimated at 70 mph caused roof and tree damage in downtown Independence.
Wichita, Sedgwick County	06 1705CST		0	0	4	0				Wind A strong thunderstorm developed over northeast Wichita and produced a 70 to 80 mph downburst wind that damaged roofs, power lines and trees.
Coffey County	06 2215CST		0	3	4	0				Wind Thunderstorm winds uprooted trees and blew windows out of homes in New Strawn. Three people suffered cuts and bruises when their mobile home overturned. The Corps of Engineers at John Redmond Reservoir measured a peak wind gust of 93 mph. Winds estimated at 70 mph also caused minor damage to trees and outbuildings in Burlington.
Larned, Pawnee County	07 1615-1700CST		0	3	5	3				Wind, Rain Thunderstorm winds uprooted trees, downed power lines, blew out windows and damaged roofs in Larned. Three people were treated for minor cuts and bruises. The winds caused considerable roof damage at the VFW Building and at a shopping mall. About 100 homes were left without power. The storm also dropped nearly 4 inches of rain and streets were flooded for a time.
Gorham, Russell County	09 1750-1850CST		0	0	3	0				Wind A severe thunderstorm moved across the southwest part of Russell County. A wind gust estimated at 60 mph hit Gorham at 1804CST. Minor damage resulted.
Gen, Thomas County	20 1900CST		0	0	5	0				Lightning A fire, set by lightning, destroyed the Post Office at Gen.
Arkansas City, Cowley County	21 1938CST		0	0	3	0				Wind Thunderstorm winds estimated at 60 to 70 mph caused roof, power line and tree damage in the south part of downtown Arkansas City.

## 15 KENTUCKY

Leitchfield, Grayson County	10 1300CST		0	0	4	0	0	0	0	Lightning Lightning hit St. Anthony Church and caused considerable damage.
Paris, Bourbon County	15 UNK		0	0	4	0				Thunderstorm, Wind The roof of the Paris Senior High School sustained extensive damage during a thunderstorm.
Vanceburg, Lewis County	18 EARLY MRNG		0	0	4	0				Lightning A house was totally destroyed and a convalescent center damaged by lightning.
McLean County	28 0900CST		0	0	4	0				Flash Flooding From 3 to over 5 inches of rain fell across the county. Hardest hit was Calhoun where a school and nearby apartments were flooded as well as several vehicles parked nearby.
Thompkinsville, Monroe County	30 1100CST		0	0	3	0				Lightning Lightning struck an antenna causing a television to explode. The resulting fire damage was limited to a bedroom, however the rest of the house received heavy smoke damage.

## 16 LOUISIANA

Cameron Parish	01 1315CST		0	0	0	0	0	0	0	Funnel Clouds Two funnel clouds were sighted over Grand Chenier.
Caddo Parish	02 ?		2							Lightning Lightning struck an oil rig, injuring 3 persons.
St. Mary and LaFourche Parishes	02 Night				6					Flooding A storm system produced rains of 10-12 inches during the early morning hours over an area extending from Golden Meadow in LaFourche Parish to Franklin in St. Mary Parish. Widespread flooding resulted, closing highways and flooding at least 100 homes. No deaths or injuries reported.

## LOUISIANA

Ouachita Parish	02 Early Mrgng		0	0	0	0	0	0	4	Flooding Rains of 6-7 inches fell overnight, causing flooding of roadways. No significant damage was reported.
Morehouse Parish	02 1500CST				?					High Wind A severe thunderstorm caused widespread damage to trees in the Bastrop area.
Livingston Parish	07 1900CST	? ?							5	Tornado (F1) A short-lived tornado touched down near the town of Albany. Two mobile homes were totally destroyed. High winds also caused damage to trees and power lines.
Vermillion Parish	09 1305CST									Funnel Cloud A funnel cloud was sighted near South Fork Island.
Jeff Davis Parish	09 1415CST									Funnel Cloud A funnel cloud was sighted 5 miles south of Ronake.
Plaquemines Parish	17 1530CST		1	1						Lightning One man was killed and another injured when lightning struck their boat.
Vernon Parish	30 1640CST								?	SVR TSTM A severe thunderstorm accompanied by hail and high winds damaged barns and outbuildings near Rosephine.
Sabine and DeSoto Parishes	30 1550CST								?	SVR TSTM One inch diameter hail was reported near Stanley in Desoto Parish and near Converse in Sabine Parish.
Beauregard Parish	30 1720CST								?	SVR TSTM A severe thunderstorm damaged trees and power lines at Longville.

17 MAINE ————— NONE REPORTED

## 18 MARYLAND and D.C.

Baltimore, Baltimore county	10 Midnight		0	0	4	0	0	0	0	Flash flood A thunderstorm moved over South Central Baltimore county and the Northwest section of the city producing nearly 3 inches of rain within an hour. Numerous streams overflowed their banks and as much as 5 feet of water flowed across some roads in the Pikesville and Brooklandville areas. An asphalt parking lot was undermined and a van swept away.
Allegany county	10 1400 EST		0	1	5	0				Flash flood Between 5 and 6 inches of rain fell within an hour at Ellerslie, sending Wills Creek out of its banks. Many main roads including Route 35 were covered with 2 feet of water and some debris and rocks until later in the evening. Railroad tracks were covered with water and an estimated 35 basements flooded as high as the ceiling. Dry Run Creek overflowed in the Bowman's Addition area, washing out a bridge along Valley Road. A 5 year-old boy was rescued after being swept away by the creek in Cumberland.
Carroll county	10 1915 EST		0	0	3	0				Thunderstorm winds A thunderstorm sheared off the tops of trees, uprooted another which crushed a porch, shattered a glass door and 2 windows and blew away half of a barn.
Central and Western Maryland including... Allegany county Washington county Frederick county Carroll county Baltimore county Harford county Howard county Montgomery county and Baltimore city	13 All Day		0	1	7	0				Flash flood Slow-moving heavy thunderstorms struck random locations in central and western Maryland, including... a 10 to 15 mile wide path from Harford county to Frederick county, a portion of Montgomery county and much of western Maryland. Rainfalls of 5 to 7 inches fell in a few hours. In Washington county, flood waters closed several roads, washed out a bridge near Boonsboro and caused a mudslide along the Washington-Frederick county line around 4 AM. A morning downpour swamped southwest Baltimore and western and northern portions of Baltimore county, sending Gwynns Falls over its banks. Flood waters stranded motorists along 22 city streets and routed some residents of an apartment building. A 14 year-old Pikesville boy was swept off a bridge at 830 AM, then rescued 3 hours later from Silver Creek. Two others were rescued in the city when their boat overturned. Two to three hundred basements were flooded mostly in the Cantonsville, Randallstown and Pikesville areas. Maiden Choice Run produced extensive property damage in Cantonsville and the Beechfield community of Baltimore city.  Early morning rains flooded streets and basements in Montgomery county. The northbound lanes of I-270 were briefly closed between Georgetown and Montrose roads. Rain slick streets caused numerous accidents. Heavy rains falling upstream in Bedford and Somerset counties of Pennsylvania sent Wills Creek out of its banks in Allegany county--led by a 5 foot wall of water. Low-lying areas were flooded near Wills Creek to just outside Cumberland. Four hundred people were evacuated in Locust Grove and Ellerslie between 5 and 7 PM--some by boat or helicopter. State Route 36 was closed northeast of Cumberland as well as a section of Route 40 which was giving way. The Potomac River rose from 5 feet in the morning to near the flood stage of 17 feet at Cumberland Monday night due to the local runoff. A 20 mile stretch of the Chesapeake's main line sustained heavy damage.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS				ESTIMATED <sup>1</sup> DAMAGE	CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS		

## — MARYLAND and D.C. —

Chesapeake Bay 19 1800 EST short 0 0 0 0 Waterspout  
USCG boat returning to Thomas Point reported seeing a waterspout that lasted a few seconds in the middle of the Chesapeake Bay to the east of Annapolis.

## 19 MASSACHUSETTS

Western and Central Massachusetts and Northern Bristol and Western Norfolk Counties 07 Afternoon 0 0 6 0 Thunderstorm winds  
Lightning, Local Flooding  
Severe thunderstorms moved eastward across the area, causing numerous lightning strikes, street flooding and damaging thunderstorm winds. In Holliston, lightning struck the State Lumber Co., setting fire to an 80,000 square foot warehouse with the fire spreading throughout a block long area and causing damage in the millions of dollars. It was the town's worst fire in thirty years. A church was struck and damaged by lightning in North Brookfield. The foundation of a building was damaged by flooding rain run-off in Spencer. Lightning caused \$4,000 damage to a house in Palmer. Gusty winds downed some large trees in Longmeadow. Scattered power outages were reported throughout the area.

Northern Berkshire County 30 2045-2130EST 0 0 3 0 Lightning and Thunderstorm Winds  
Gusty winds knocked down a number of trees and the combination of the thunderstorm winds and lightning strikes caused power failures in scattered locations.

## 20 MICHIGAN

Vassar, Tuscola County 07 1010EST 0.4 40 0 0 5 Tornado (F2)  
Two garages and a business building were destroyed. Several other buildings were damaged. Large trees were uprooted. Witnesses described a "tail hanging from the cloud" and heard a screaming noise.

Flint, Genesee County 07 1628EST 4 Thunderstorm  
A wind gust of 72 mph was reported. Several small aircraft were flipped over and damaged at Bishop Airport.

Eastern Monroe County 07 1930-2030EST 4 Thunderstorm  
A barn was downed, and farm machinery was destroyed. Trees were also downed. Widespread roof damage from wind and hail occurred, and power outages were common.

Area bounded by Saginaw-Adrian-Warren-Saginaw 08 1430-1800EST Thunderstorms  
Events occurred by time and county as follows:  
1430-1500 Saginaw - Minor power outages occurred.  
1430-1700 Genesee - (See tornadoes and funnel clouds listed below) Widespread tree and power line damage occurred. 23,000 electric customers lost power. Three buildings were set afire in Fenton.  
1430-1530 Shiawassee - (See funnel cloud and lightning below)  
1615-1700 Lapeer - (See funnel cloud listed below) A minor power outage occurred.  
1615-1730 Livingston - (See funnel clouds and lightning below)  
1615-1730 Washtenaw - A minor power outage and local flooding occurred.  
1615-1800 Lenawee - (See lightning below) 7200 electric customers lost power.  
1700-1800 Oakland - (See funnel clouds listed below) Widespread tree and power line damage occurred, and 20,000 electric customers lost power. A small area of very heavy, localized damage occurred in Holly. Several minor house fires started due to lightning. An airport building was damaged at Wixom.  
1710-1745 Monroe - (See funnel cloud below) 5000 electric customers lost power.  
1710-1745 Wayne - A minor power outage occurred. A house in Dearborn was damaged by lightning.  
1715-1800 Macomb - (See lightning below) A minor power outage occurred.

Area bounded by Saginaw-Adrian-Warren-Saginaw 08 1430-1736EST Funnel Clouds  
Funnel clouds occurred by time and location as follows:  
1430 3NW Lennon, Shiawassee County  
1434 4SW Lennon, Shiawassee County  
1605 2E Davison, Genesee County (6 funnels)  
1633 3S Lapeer, Lapeer County (several)  
1645 Argentine, Genesee County (time estimated)  
1650 2N Linden, Genesee County (time estimated)  
1651 3W Davisburg, Oakland County  
1654 Bishop Airport, Genesee County

## — MICHIGAN —

1710 1W Milan, Monroe County  
1718 2E Davisburg, Oakland County  
1730 5SW Rochester, Oakland County (time estimated)  
1735 1E Rochester, Oakland County (time estimated)  
1736 NE part of Troy, Oakland County

4.5 mi. WSW to 3 mi. SSW of Flint, Genesee County 08 1508EST 3 60 0 0 6 Tornado (F2)

A tornado touched down at the Genesee Valley Shopping Center. It flipped over a car, and shattered the windows of 15 others. It also damaged a theater and destroyed a sign. The tornado lifted temporarily as it passed over I-69, and touched down again in a mobile home park. One mobile home was destroyed, and several trees and outbuildings were flattened. After temporarily lifting again, this time over I-75, it again touched down, causing damage to an auto factory. It tore two 10-foot holes in the roof, and damaged the windows of 100 new cars parked outside. The tornado was clearly visible from the National Weather Service Office, located 0.5 mile to the south.

2 mi. SSW to 2.5 mi. S of Flint, Genesee County 08 1515EST 0.8 65 0 0 5 Tornado (F3)

This tornado formed before the previously listed tornado lifted. The tornadoes were simultaneously visible from the Weather Service office, and they were estimated to be 1.5 to 2 miles apart. This second tornado touched down in the Southgate Subdivision, destroyed one house, and damaged 15 others. It apparently lifted, and then was seen to touch down again on a parking lot of the South Flint Plaza. A wall was blown out of one store, and windows were blown out of several others.

4.5 mi. SW of Flint, Genesee County 08 1520EST 0.5 40 0 0 4 Tornado (F1)

A tornado was reported on the runway of Bishop Airport by the tower controller. Several tied-down aircraft were damaged. The tornado formed just after the previous two tornadoes, visible to the north, had lifted.

3 mi. E of Onsted, Lenawee County 08 1640EST 0 1 3 Lightning

A house was struck and damaged by lightning. A man on the porch of the house received burns.

2 mi. NW of Brighton, Livingston County 08 1650EST 2 0 0 Lightning

Two men on a golf course were killed by lightning.

Warren, Macomb County 08 1720EST 1 0 Lightning

A man closing the door on a metal shed was injured when the shed was struck by lightning.

4 mi. NNW of Portland, Ionia County 09 2045EST 0.1 10 0 0 1 Tornado (F1)

A tornado cut a very narrow path of heavy damage that ended at the Grand River. 5 trees were twisted off, and 2 were uprooted.

Eaton, Clinton, and Shiawassee Counties 09 2105-2230EST Funnel Clouds

Funnel clouds occurred by time and location as follows:

2105 Grand Ledge, Eaton County  
2125 1.5NE Maucosta, Clinton County  
2149 E Maucosta, Clinton County  
2155 5NE Dewitt, Clinton County (two funnels)  
2201 3S Bath, Clinton County  
2210 2E St. Johns, Clinton County  
2230 4W Lennon, Shiawassee County (time estimated)

5 mi. S St. Johns, Clinton County 09 2145EST 0.1 10 0 0 0 Tornado (F0)

One of several funnel clouds in the vicinity momentarily touched down as a tornado. Several trees were downed.

Lenawee and Monroe Counties 13 1740-1810EST Funnel Clouds

Two funnel clouds were sighted several times each. One moved from near Springfield to near Milan; the other moved from east of Adrian to near Dundee. A reported touchdown just west of Dundee could not be confirmed.

Over Lake Superior (47.9°N, 87.7°W) 17 1820EST Thunderstorm

Wind gusting to 97 mph was reported from a ship.

5 mi. S Escanaba on Green Bay 22 1400-1500EST Waterspout

A waterspout was seen by several persons and photographed. It persisted for an hour and slowly moved southward.

10 W Houghton Lake, Missaukee County 28 1955EST Hail

1 3/4 inch diameter hailstones fell.

Goodrich, Genesee County 29 0230EST Hail

1 3/4 inch diameter hailstones fell.

Near Grayling, Crawford County 29 2230EST Hail

3/4 inch diameter hailstones fell.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	PROPERTY	CROPS	
<b>— MICHIGAN</b>											
Lower Peninsula (areawide)	29-30	2200-0700EST						3			Thunderstorms
	Events occurred by time and county as follows:										
	2200-2245	Manistee -									2300 electric customers lost power.
	2215-2300	Mason -									2200 electric customers lost power. A narrow path of severe damage occurred at Hamlin Lake. One barn was blown down, and another was struck and burned by lightning. The Ludington Coast Guard measured a wind gust up to 51 mph. A boat sank in the harbor.
	2330-0200	Newaygo -						7			4000 electric customers lost power. 7 minor lightning fires were started. Lightning caused a power outage.
	0000-0100	Oceana - Roscommon -									A lightning fire destroyed a large oil tank.
	0000-0100	Presque Isle -									A minor power outage occurred.
	0000-0045	Montmorency -									A minor power outage occurred.
	0030-0330	Muskegon -									Trees and power lines were downed. A man in a camp was injured by lightning.
	0030-0115	Oscoda -									A minor power outage occurred.
	0030-0130	Alpena -									Lightning fires destroyed a barn and damaged a house. Trees and power lines were downed. Vehicles were damaged.
	0045-0200	Alcona -									A minor power outage occurred.
	0100-0200	Gladwin -									2000 electric customers lost power.
	0115-0230	Iosco -									A minor power outage occurred.
	0145-0245	Midland -									9000 electric customers lost power.
	0145-0300	Montcalm -									Trees were downed.
	0200-0330	Kent -									Wind gusts of up to 68 mph at a TV station and 61 mph at the airport were measured. Small aircraft were flipped over, and an apartment building was unroofed. A driver was injured when his semi-trailer truck was blown over.
	0200-0300	Ottawa -									1 inch diameter hail fell at Grand Haven. 2 buildings were set afire by lightning.
	?	Allegan -									A woman was killed after losing control of her car on a flooded road. 3000 electric customers lost power.
	0245-0400	Saginaw -									2700 electric customers lost power.
	0300-0345	Barry -									A minor power outage occurred.
	?	Van Buren -									2000 electric customers lost power.
	0315-0415	Clinton -									2 houses were unroofed at South Haven. (See tornado below)
	0330-0430	Tuscola -									A house was damaged by a falling tree at Vassar.
	0330-0430	Kalamazoo -									Lightning struck and seriously injured a girl sleeping in a second floor bedroom. A minor power outage occurred.
	0345-0445	Shiawassee -									(See tornado below)
	0400-0430	St. Joseph -									A minor power outage occurred.
	0400-0445	Calhoun -									A power outage and minor wind damage occurred.
	0400-0445	Ingham -									Minor wind damage occurred.
	0415-0500	Genesee -									(See tornado below) Widespread, lesser wind damage occurred.
	0420-0500	Branch -									Lightning caused power outages and started a barn on fire.
	0430-0515	Jackson -									2800 electric customers lost power. A small area of heavy wind damage occurred north of Parma.
	0430-0515	Livingston -									A minor power outage occurred.
	0430-0530	Lapeer -									A mobile home was lifted and moved 30 feet near Inlay City. A power outage also occurred.
	0430-0530	Hillsdale -									6000 electric customers lost power due to lightning.
	0430-0545	Sanilac -									3 buildings were set afire by lightning. Wind damage was widespread. A small area of heavy damage occurred near Chelsea.
	?	Washtenaw -									8600 electric customers lost power. A building was set afire by lightning. Flooded roads caused a major traffic jam during the morning rush hour.
	0445-0545	Oakland -									3000 electric customers lost power. A barn was destroyed by lightning near Onsted.
	0500-0600	Lenawee -									(See tornado below) Lesser wind damage was widespread.
	0530-0615	Wayne -									35,000 electric customers lost power during a major outage. Minor wind damage was widespread.
	0530-0630	St. Clair -									4500 electric customers lost power. A house was set afire by lightning in Warren. Streets were flooded.
	0530-0630	Macomb -									5000 electric customers lost power.
	0545-0630	Monroe -									
4 mi. NNE to 6 mi. NE of St. Johns, Clinton County	30	0348EST	2.5	25	0	0	0	5	0	0	Tornado (F2)
	A tornado touched down 3 times, the first and last in cornfields. The tornado crossed a road and slightly damaged one house during the middle touchdown. A second house was unroofed, torn off its foundation, and rotated 20° counterclockwise, moving 5 feet.										
<b>— MICHIGAN</b>											
2 mi. SE Henderson, Shiawassee County	30	0410EST	0.5	50	0	0	0	3			Tornado (F1)
	Large trees were twisted and broken off above the ground. 4 persons heard a loud roar for 15 to 20 seconds.										
Flint (east side), Genesee County	30	0420EST	2.0	150	0	0	0	5			Tornado (F2)
	A tornado touched down at Longway Blvd. and I-475. A car was picked up and swirled westward over a freeway divider. A path of heavy damage occurred across a cemetery and about one block into a densely built-up, residential neighborhood. The tornado's funnel was seen at this location. Lighter damage occurred for about one mile, then heavy damage occurred on both sides of Longway Blvd., from Vernon Ave. to 1/4 mile east of Dort Highway. 5 houses and several commercial buildings were damaged. Merchandise was sucked out of a store.										
Livonia (Stark & Industrial) to Detroit (I-96 & Evergreen), Wayne County	30	0540-0551EST	5.6'	150	0	4	6				Tornado (F2)
	A tornado touched down twice, both times along a railroad right-of-way. At the first touchdown, several industrial buildings lost roofs or portions of walls. Debris was spread in a rotary pattern. 2 persons were blown around a room and injured when an exterior door was opened just as the storm struck. Several motorists reported that their moving cars were lifted slightly off the ground. At the second touchdown location, a large apartment building was unroofed. Two women were cut by flying glass. The final portion of the track was through a heavily built-up, residential area. Damage was confined mostly to tree tops, but several streets were blocked by debris.										
<b>21 MINNESOTA</b>											
Kittson County	5	evening			0	0	?	?			Hail
	Thunderstorms produced hail up to 1½ inches in diameter over the northern half of Kittson County.										
Lancaster (Kittson County)	5	2000CST	1	50	0	0	0	0	0	0	Tornado (F0)
	A tornado touched down and moved east through a small section of Granville township near Lancaster.										
Hennepin, Western Carver and Dakota Counties	7	0000-0300CST			0	0	0	0	0	0	Wind, lightning, heavy rain, hail
	Thunderstorms produced hail as large as golfballs and winds from 60 to 70 miles per hour from western Hennepin and western Carver Counties, across central and southern Hennepin County into Dakota County. Winds overturned tent trailers and caused several minor injuries in the Baker Park Reserve. Construction material was blown around downtown Minneapolis. Winds downed trees, knocked out power and caused roof damage. A nine square block area of Chaska received \$200,000 of wind damage. Lightning hit at numerous locations and caused several house fires. Three to 4.3 inches of rain fell across southern Hennepin County into Dakota County flooding roads and low lying areas.										
Litchfield (Meeker County)	7	0100CST			0	0	4	0	0	0	Wind
	Thunderstorm winds caused extensive tree damage to a one square mile area between Litchfield and Lake Ridley. Winds tore a portion of a roof off a commercial building in the southern section of Litchfield.										
Holdingford (Stearns County)	7	0640CST			0	0	0	0	0	0	Hail
	Hail 1 inch in diameter was reported at Holdingford.										
Lakeville (Dakota County)	7	0910CST			0	0	0	0	0	0	Funnel
	Funnel sited northeast of Lakeville.										
Euclid (Polk County)	7	1118CST			0	0	0	0	0	0	Funnel
	Funnel sited 1½ miles south of Euclid.										
Northwest	8	1400-1645CST			0	0	0	0	6	0	Hail, wind
	Thunderstorms with strong wind and hail up to 1½ inch in diameter occurred across southern Kittson, Marshall, northwestern Polk and Pennington Counties. Golfball size hail covered 50 to 70 percent of the ground around Argyle.										
Aurora (St. Louis County)	8	1430CST			0	0	0	0	0	0	Hail
	Golfball size hail reported at Aurora.										

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

## MINNESOTA

Babbitt (St. Louis County)	8	1500CST			0	0	4	0	Wind, hail
Thunderstorm winds caused considerable damage to the Reserve Mining Plant in Babbitt. The winds picked up a 4x4 foot steel sump cover, tore off an 8x12 foot section of a steel roof and knocked over antennas. Hail 1/4 inch in diameter was blown into drifts 1/2 feet high.									
Donaldson (Kittson County)	8	1512CST			0	0	0	0	Funnels
Several funnels sited near Donaldson.									
Argyle (Marshall County)	8	1512CST	short narrow		0	0	0	0	Tornado (F0)
Tornado touched down briefly east of Argyle in a field.									
Angus (Polk County)	8	1515CST	1/2	50	0	0	0	0	Tornado (F0)
One of four funnels touched down in an open field near Angus in Angus township.									
Thief River Falls (Pennington County)	8	1521CST			0	0	0	0	Funnel
Funnel sited west of Thief River Falls.									
Marshall County	8	1522CST			0	0	0	0	Funnel
Funnel sited 15 miles northwest of Thief River Falls.									
Alvarado (Marshall County)	8	1524CST	short narrow		0	0	0	0	Tornado (F0)
Tornado touched down briefly one mile northeast of Alvarado.									
Kennedy (Kittson County)	8	1531CST			0	0	0	0	Funnel
Pennington County	8	1545CST			0	0	0	0	Funnel
Funnel sited 15 miles west of Thief River Falls.									
Polk County	8	1548CST			0	0	0	0	Funnel
Funnel sited 7 miles southeast of Alvarado.									
Warren (Marshall County)	8	1548CST	short narrow		0	0	0	0	Tornado (F0)
Tornado touched down briefly near Warren in a field.									
Brooklyn Center (Hennepin County)	26	1520CST			0	0	0	0	Hail
Golfball size hail reported in Brooklyn Center.									
Oak Park Heights (Washington County)	26	afternoon			0	1	0	0	Lightning
Lightning knocked a boater unconscious at the Sunnyside Marina.									
Falcon Heights (Ransey County)	26	1600CST			0	4	0	0	Lightning
Lightning injured four people on the Minnesota State Fair Grounds.									
West Central	26	1700-2000CST			0	0	0	6	Wind, hail
Thunderstorms with strong winds and hail occurred from Traverse and Wilkin Counties as far east as Morrison and Stearns Counties. Light to moderate crop damage was reported with these thunderstorms. The heaviest crop damage occurred in the southwest corner of Traverse County. Winds 75 miles per hour were reported from Campbell in Wilkin County at 1705CST. Hail 3/4 to 1 inch in diameter and winds from 80 to 90 miles per hour hit Stalker Lake 10 miles southeast of Fergus Falls at 1745CST. Golfball size hail was also reported at Chokio.									
Brainerd (Crow Wing County)	26	2000CST			0	0	0	0	Funnel
Funnel sited 15 miles south of Brainerd.									

## 22 MISSISSIPPI

Warren County	3	1540CST			0	0	4	0	Flash Flood
About five inches of rain fell over southern Warren County near Hatcher Bayou causing flash flooding along Halls Ferry Road. Three houses were flooded and Fisher Ferry Road was closed.									
Biloxi, Harrison County	4	1808CST			0	0	0	0	Funnel Cloud
Two Biloxi Police Officers reported seeing two funnel clouds just offshore from the Broadwater Marina.									
Biloxi, Harrison County	11	1412CST			0	0	4	0	High Winds
Severe thunderstorms damaged roofs and blew out windows in a three block area of the Ancient Oak subdivision.									
Holly Springs, Marshall County	29	?			0	1	0	0	Lightning
A Holly Springs man was hospitalized with broken ribs and internal burns after being struck by lightning while opening the door of a large metal building.									

## 23 MISSOURI

Dallas	7	2250CST			0	0	4	0	Damaging Wind
Strong thunderstorm winds damaged several outbuildings and a few trees in Long Lane which is in the eastern portion of the County.									
Jasper	9	1555CST			0	0	2	0	Damaging Wind
Wind gusts to 62 mph produced some damage at the Joplin Airport.									
Perry	12	2200CST (approx)			0	0	4	0	Damaging Wind and lightning
A severe thunderstorm produced numerous reports of lightning and some wind damage in Perryville. Some power lines were damaged and some water damage was reported at the Junior High School.									

## 24 MONTANA

Lincoln, Flathead, Glacier, Hill, Lewis and Clark, Musselshell, Yellowstone, Big Horn, and Custer Counties	19-31				1	?	7	?	Lightning induced, Forest and Range Fires
The first of several major lightning-induced fires ignited in Glacier County near Lower St. Marys Lake (the Napi Peak fire) and in Hill County south of Havre in the Bears Paw Mountains on the 19th. These two fires were contained until the 24th when strong, hot, dry winds re-ignited each, increasing their size from a few hundred acres to thousands of acres. On the 25th and 26th more major fires broke out in timber and grass lands and were pushed by the strong winds for the next two days. The fires were brought under control on the 31st. The largest of all the fires was in Musselshell and Yellowstone Counties where nearly 100,000 acres were burned. Other major fires occurred in Lewis and Clark County on North Hill near Helena, in the Pine Hills near Miles City, and in Lincoln County near Libby. The Hawk Creek fire in Musselshell County destroyed at least 30 homes. One fire fighter died of burns received while fighting the fire. The total dollar loss from these fires has been estimated at \$14 million.									

## 25 NEBRASKA

Antelope County	04	0100CST			0	0	5	0	Lightning
Fire started by lightning severely damaged a home in Neligh. Lightning also damaged another home roof.									
Cass County	07	1640CST			0	0	5	0	Damaging Winds
Thunderstorm winds snapped hundreds of tree limbs and damaged power lines at Plattsmouth. A number of the tree limbs damaged structures and vehicles when they fell.									
Cherry County	14	1745CST			0	0	0	3	Hail
Hail and wind gusts to 52 m.p.h. damaged gardens and some crops in and around Valentine.									
Keith County	31	1530CST -01 -0330CST			0	0	3	5	Lightning
Six lightning related range fires were reported in a band 12 to 18 miles north of Highway 30 from north of Brule to north of Paxton. A larger fire destroyed 600 acres north of Paxton. A second larger fire at 9:30 PM CST spread over several miles near the Lakeview Camp on the south shore of Lake McConaughy.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS		
<b>26 NEVADA</b>										
Lake Mead, Clark County	13	1830PST			0	0	0	0	Thunderstorm Winds	
			Winds gusting to 64 mph were observed at the lake.							
Clark County	14	0725-1700PST			0	0	5	0	Flash Flood	
			Numerous thunderstorms moved through Clark County during the day, with rainfall amounts ranging from 1/2 inch to 5.6 inches at Boulder City. There were numerous reports of flooded streets with 3-4 feet of water on roadways and at intersections during the day.							
Clark County	18	1430PST			0	0	?	0	Flash Flood	
			In Kyle Canyon on Mt. Charleston, two inches of rain in less than 1 hour resulted in a flash flood.							
Las Vegas, Clark County	18	1600PST			0	0	0	0	Funnel Cloud	
			A funnel cloud was reported by the Metro Police, southwest of the city.							
Nye County	19	1000-1200PST			0	0	5	0	Flash Flood	
			State Route #160 near Pahrump and Beatty was washed out during heavy thunderstorm rains.							
Clark County	19	1217PST			0	0	?	0	Flash Flood	
			Flash flooding occurred throughout most of Henderson during a heavy thunderstorm.							
Nye County	20	1705PST	?	?	0	0	0	0	Tornado (FO)	
			A tornado was reported 41 miles East of Tonopah with no "apparent movement". The tornado was reported from aircraft and confirmed by Nellis Air Force Base Range Control.							
Nye County	22	1500PST			1	2	5	0	Flash Flood	
			Heavy rains resulted in washed out roads and mudslides on highways #359, #376, and #6, between Tonopah and Hawthorne. A pickup truck slid off a highway, causing 1 death and 2 injuries.							
Henderson, Clark County	25	1400PST			0	0	?	?	Hail	
			Three quarter inch hail was reported in Henderson during a thunderstorm.							
Clark County	25	1500PST			0	0	4	0	Flash Flood	
			Localized heavy rain resulted in water 2 feet deep over roads in Henderson and parts of Las Vegas.							
<b>27 NEW HAMPSHIRE</b> ————— NONE REPORTED										
<b>28 NEW JERSEY</b> ————— NONE REPORTED										
<b>29 NEW MEXICO</b>										
Alamo, Guadalupe County	5	Afternoon				1			Lightning	
			A woman was struck and killed by lightning near Alamo.							
Southern Half of New Mexico	8-14	All Day				6	6		Flash Flood	
			Heavy rains of 4 to 6 inches began falling on August 8 and continued through the 14th. These heavy rains caused flash flooding on a day-to-day basis. The normally dry or very low-flow water courses rose rapidly as the rains decreased and increased throughout the period. Damages have been estimated at near two million dollars.							
Chimayo, Sant Fe County	12	Afternoon					4		Flash Flood	
			Heavy rains caused flash flooding in the area around Chimayo causing twenty to thirty thousand dollars in damage.							
Nambe, Santa Fe County	19	Afternoon					3		Lightning	
			Three men were injured near Nambe when lightning struck a utility pole near a house where they were working.							
Toadlena, San Juan County	20	Afternoon					5		Flash Flood	
			Five people were killed near Toadlena when their stalled car was swept away by rushing water.							
Albuquerque, Bernalillo County	22	Afternoon					1		Flash Flood	
			Heavy rains in the foothills near Albuquerque caused drainage ditches to swell. An eight-year-old boy was swept away and drowned.							
Alamogordo, Otero County	23	Night					4		Flash Flood	
			Heavy rains caused flash flooding, washing out bridge and causing light to moderate damage.							
<b>30 NEW YORK, Coastal</b>										
Extreme SE, Nassau Co., Suffolk Co., New York City, Westchester and Staten Island	7	1720-1800EST				1	0	0	0	Thunderstorm
			A thunderstorm with a combination of wind and rain knocked out electricity to thousands of Long Island residents. The wind was gusting at 34 miles per hour in some areas. A boy was killed by a bolt of lightning while playing shortstop for his high school baseball team at Patchogue Medford High School.							
<b>30 NEW YORK, Central</b>										
ELIZABETHTOWN, ESSEX COUNTY	03	1630EST				0	0	2	0	Thunderstorm
			A thunderstorm moved through Essex County dropping heavy rain and pea-size hail. High winds blew down trees in an area 500 yards wide by about three miles in length. All trees were laid down in the same direction.							
WASHINGTON, ALBANY & RENSSELAER COUNTIES	07	1330EST				0	0	1	0	Lightning
			Lightning struck two trees in Salew, Washington County dropping them on power lines. Winds in Ravens, Albany County hit 35 mph at 1330 EST. In Buskirk, Rensselaer County, winds hit 42 mph with one-half inch of rain at 1630 EST.							
DUTCHESS COUNTY	07	1450EST				0	0	4	0	Thunderstorm
			Strong, gusty winds followed a line of thunderstorms across Dutchess County. The winds caused scattered power outages. Lightning struck a fire siren in Dover. One and a half inches of rain fell at Clinton Corners in 30 minutes.							
ROUSES POINT, CLINTON COUNTY	11	PM				0	0	5	0	Rain/Flood
			Severe thunderstorms ripped across Clinton County Friday Night. A major Department Store roof drain could not handle the rainfall and broke, sending tons of water into the store, almost trapping one shopper. A fast rising creek swept a car into a ditch. The driver was trapped for a few moments as water rose to four feet in a matter of minutes.							
WARREN, WASHINGTON COUNTY	16	1350EST				0	0	5	0	Thunderstorm
			Thunder, lightning and heavy rain pounded the area, causing fires and power outages. Two homes in Warren County were destroyed when lightning started them on fire. Winds at Warren County Airport gusted to 46 mph. 700 to 800 homes were without power during the storm. At Lake George winds overturned a 24-foot sailboat, which had a 30-foot mast. Sailors reported visibility down to 100 feet.							
COLUMBIA & DUTCHESS COUNTIES	16	1600EST				0	2	5	0	Thunderstorm
			Thunder and lightning were blamed for snapping tree limbs, knocking out power to 7,000 homes and starting a home on fire. The hardest hit area was Western Columbia County.							
BINGHAMTON, BROOME COUNTY	16	1600EST				0	1	?	0	Lightning
			A 26-year old female United Postal Service employee was struck by lightning as she was driving a delivery truck. She was later released from the hospital. Injuries were minor. The storm was also responsible for downed power lines and some urban flooding.							
VALATIE, COLUMBIA COUNTY	16	1630EST				0	0	0	0	Hail
			Half inch hail fell on Valatie.							
RHINEBECK, DUTCHESS COUNTY	16	1745EST				0	2	?	0	Lightning
			Two men were knocked unconscious when lightning hit a tree which they were standing near.							
WARWICK, ORANGE COUNTY	19	2114EST				0	0	4	0	Lightning
			Lightning hit a power line causing 6,000 to 7,000 homes to lose power.							
W. WINFIELD, ONIEDA COUNTY & HERKIMER COUNTY	26	0300EST				0	0	6	0	Lightning
			An early morning thunderstorm was blamed for a barn fire in Onieda County. Elsewhere in Onieda County, power was interrupted by lightning strikes. In Lee Center, two other homes were hit by lightning. In the Riverside Section of Utica, rain washed away part of the road.							

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

## NEW YORK, Central

BARNEVELD, ONIEDA COUNTY	29	1400EST			0	0	5	0	Lightning
Twenty-two holstein cows were killed by lightning. They were huddled under a large tree.									
SCHENECTADY & RENSSELAER COUNTIES	30	1045EST			0	0	7	C	Thunderstorms
Thunderstorms rolled through Schenectady and Rensselaer Counties about Noon time. Pea-size hail was reported in the City of Schenectady. More than 25,000 homes were without power. Lightning blew up a chimney and struck an old firehouse in the City of Schenectady.									
FRANKLIN COUNTY	30	1545EST			0	0	4	0	Thunderstorms
Strong, gusty winds took down tree limbs and power lines as the storm system moved through Franklin County.									
ONIEDA & HERKIMER COUNTIES	30	1630EST			0	0	5	0	Thunderstorms
Thunderstorms rumbled into Onieda and Herkimer Counties, causing extensive power outages. Lightning struck a mobile home which was being used as an illegal drug factory, nearly destroying the home.									
SARATOGA, WASHINGTON, MONTGOMERY, WARREN, RENSSELAER & SCHENECTADY COUNTIES	30	1800EST			0	0	6	0	Thunderstorms
Powerful thunderstorms ripped across the Capital District. In Harmony Corners, Saratoga County, winds blew down a working barn, killing three cows. A few miles down the road in Greenfield, lightning struck a home, causing extensive fire damage. Power outages affected Washington, Warren, Rensselaer, Saratoga, Montgomery and Schenectady Counties. Lightning knocked radio stations WWTI and WQBK off the air for a few hours. Mechanicsville fire and police, as well as Clifton Park and Stillwater fire and rescue squads' emergency radios were hit by lightning, knocking them off the air. Saratoga County Dispatching Center was on emergency power for more than three hours. In Schaghticoke, power went off at the Rensselaer County Fair for about one hour. In Fonda, Montgomery County, their county fair also suffered from local power outages. Rte. 30A in Montgomery County was so littered with downed trees the County had to close the road for twelve hours. Again Montgomery County lost all emergency communications with County fire, police and emergency medical services for more than twelve hours.									

## 30 NEW YORK, Western

Parts of Chautauqua County	02	1300EST			-	-	4	-	Wind & Rain
A heavy thunderstorm passed across Jamestown and neighboring communities. Two inches or more of rain fell in a few hours. The first floors of two Jamestown hospitals were covered with 2 feet deep water. Between 200 to 300 cellars in Jamestown were flooded. Utility lines in Jamestown, as well as in the towns of Frewsburg, Gerry, and Kiantone, were severed by strong winds. Power outages lasted up to 3 hours. Some Jamestown streets were inundated with knee-deep water and were closed to traffic.									
Parts of Onondaga County	03	0700EST			-	-	5	-	Wind & Rain
Powerful winds and heavy rains devastated a community near Otisco Lake. Trees were uprooted. Power lines were broken. Boats moored in the lake sank. Homes were damaged. A few roads were covered with water and were closed to traffic. Debris from fallen trees was strewn along Route 174 near the lake.									
Olean, Cattaraugus County	03	1415EST			-	-	4	-	Lightning
A lightning bolt struck a home and started a fire.									
Batavia, Genesee County	04	1400EST			-	-	5	-	Rain
A heavy thunderstorm produced up to 3 inches of rain in a few hours. The runoff caused sewer pipes to overflow. Segments of Routes 5 and 63 in Batavia were inundated and closed to traffic. A few basements were flooded.									
Part of Oswego and Onondaga Counties	06	Evening			-	-	5	-	Wind
Strong winds damaged more than 30 homes in the town of Cleveland, Oswego County. Power lines were broken; sidings of homes torn off; windows smashed; and trees uprooted. A few homes were damaged by fallen trees.									
In Onondaga County, severed electric lines were scattered like spaghetti over many roadways.									
More than 8000 homes suffered power outages of up to 5 hours.									

## NEW YORK, Western

Parts of Chautauqua, Erie, and other parts of Western New York	09	Morning			-	-	4	-	Wind
Thunderstorms crackled and boomed their way across Western New York. They brought heavy rains which resulted in minor flooding. Trees were downed. Utility lines were broken. There was a power outage to more than 4500 homes, for up to 6 hours, mostly in the Dunkirk and Fredonia area.									
Parts of Allegany, Steuben, Cattaraugus Counties, and other parts of Western New York	12-14				-	-	6	-	Rain
A low pressure area stalled over Central New York and produced from 3.5 to 7 inches of rain in 3 days. About half of this rainfall fell on the 13th-14th. A dozen residents of Bishopville in Eastern Allegany County and five persons in Steuben County were evacuated from ravaging floodwaters. A bridge across the Canacadea Creek in the Town of Almond, Allegany County was undermined. A few small streams overflowed their banks.									
Quite a few streets were inundated, some eroded, and many were closed to traffic.									
In Wellsville, Allegany County, segments of Route 24B were covered with deep water. Firemen spent the best part of the day pumping out water from flooded basements.									
In Jamestown, Cattaraugus County, a few roads were impassable due to deep floodwaters.									
Parts of Livingston, Monroe, Ontario, Orleans, Cayuga, Schuyler, & other Western & Central New York Counties	16	Afternoon			-	2	6	-	Lightning, Wind and Rain
Lightning, wind and heavy rain ravaged many places in Western and Central New York. Many trees and power lines were downed. Lightning struck a few homes and injured two persons in Monroe County.									
Heavy rains caused much basement and road flooding in many places, particularly Rochester, Canadigua and Auburn.									
In Seneca County, a lightning bolt started a fire which completely consumed a barn. Elsewhere in Central New York, lightning tripped numerous fire alarms. Firemen were sent to the field.									
A huge tree, fallen across a street in Elmira, blocked traffic for many hours.									
Rochester, Monroe County	28	Evening			-	-	4	-	Lightning
A lightning bolt ignited the roof of the Garland Methodist Church. The fire gutted most of the roof.									
Lightning also shorted electric lines to 700 homes in Rochester. The power outage lasted one and a half hours.									
Parts of Chautauqua, Erie, Onondaga, and other parts of Western New York	30	Morning			-	-	5	-	Wind & Lightning
Strong thunderstorm winds uprooted a tree which fell onto a house in Dunkirk, Chautauqua County. In Point Breeze, Erie County, a mobile home was blown apart. A boat and trailer were also destroyed.									
In Syracuse, a lightning bolt produced a jolt that opened two 12-foot cracks in the steeple of the First Baptist Church.									
Parts of Jefferson, Lewis, and Onondaga Counties	30	Afternoon			-	-	5	-	Wind & Lightning
Damaging winds raked the Eastern Lake Ontario Counties. Many trees in Phoenix, Oswego County were downed. Utility lines snapped. Power outages lasted up to 16 hours.									

## 31 NORTH CAROLINA

Western Pitt County	09	1535EST			0	2	4	0	Thunderstorm Winds Lightning
A severe thunderstorm struck Mathews Trailer Park between Farmville and Greenville destroying one mobile home and blowing four or five others off their foundations. One man was slightly injured when he was trapped under a trailer. A twenty-four year old pregnant woman was critically injured when struck by lightning.									
East Rocky Mount Edgecombe County	09	1610EST			0	0	?	0	Thunderstorm Winds
Trees were blown down by a severe thunderstorm in the eastern edge of Rocky Mount.									
Farmville Pitt County	09	1615EST			0	0	3	0	Thunderstorm Winds
A second severe thunderstorm moved through the Farmville area toppling trees, the roof of one home was damaged.									

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AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>— NORTH CAROLINA</b>									
Eden Rockingham County	12	2015EST		1	0	0	0	0	Urban Flooding
									A sixty-nine year old woman died while attempting to cross a rain swollen street. After stepping off the curb she apparently was swept underneath a parked car where she lodged and drowned.
Cookeville Catawba County	13	Early AM		0	0	6	0		Lightning
									The Cookeville Hoisery Mill burned after being struck by lightning. No exact damage figures are available, but the 10,000 square foot plant was termed a total loss.
Oregon Inlet Dare County	19	2040EST		0	1	4	0		Thunderstorm Winds
									At Oregon Inlet Campground, a woman suffered a broken nose when seven lightweight trailers were overturned by thunderstorm winds estimated (by the National Park Service) at 60-70 MPH.
Lenoir Caldwell County	30	1400EST		0	0	4	?		Thunderstorm Winds Hail
									A slow moving severe thunderstorm pounded the city of Lenoir for about an hour downing trees, dropping golfball size hail, and dumping 2.32 inches of rain. Damage was generally light but fairly widespread—mostly to power lines and roofs. Scattered power outages plagued the area until about 1930EST.
Near Bannertown Surry County	30	1530EST		0	0	?	?		Thunderstorm Winds
									A large number of trees were uprooted and fell across roadways.
Davie County Davidson County	30	1530- 1600EST		0	0	5	?		Thunderstorm Winds Hail
									A violent thunderstorm moved east through the two-county area blowing trees across roads and power lines, damaging mobile homes and houses, and causing widespread power outages. The hardest hit areas in Davie County were the Dulin, Cornetzer, and Advance communities where wind damage was common. In Davidson County, 3/4 inch hail was reported seven miles north of Lexington at 1544 EST and 1-3/4 inch hail fell just north of Lexington at 1600EST.
Oregon Inlet Dare County	30	PM		0	1	0	0		Lightning
									A fisherman was seriously injured by lightning while standing on a catwalk.
<b>32 NORTH DAKOTA</b>									
Watford City (McKenzie County)	05	1440CST		0	0	3	0		Lightning
									Lightning strikes caused several grass fires.
Ross (Mountrail County)	05	1500CST		0	0	4	0		Thunderstorm Winds
									Strong thunderstorm winds blew off half the roof of a pole barn.
Parshall (Mountrail County)	06	2332CST		0	0	3	0		Thunderstorm Winds
									Strong thunderstorm winds of 83mph blew over trees and damaged a house.
Plaza (Mountrail County)	06	2337CST	Short 5-15	0	0	0	0		Tornado (F0)
									A tornado touched down briefly. No damage occurred.
Roseglen (McLean County)	06	2345CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 62mph occurred. No damage was reported.
Beulah (Mercer County)	06	2350CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 65mph occurred. No damage was reported.
Ryder (Ward County)	07	0012CST		0	0	0	0		Thunderstorm Winds
									Winds to 71mph occurred. No damage was reported.
Garrison (McLean County)	07	0015CST		0	0	4	0		Thunderstorm Winds
									Strong thunderstorm winds damaged roofs on several buildings, broke windows, damaged gardens, and moved a boat dock off its moorings.
Underwood (McLean County)	07	0024CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 60 to 70mph occurred. No damage was reported.
<b>— NORTH DAKOTA</b>									
Stanton 20NW (Mercer County)	07	0025CST		0	0	4	0		Thunderstorm Winds
									Strong thunderstorm winds blew sailboats off their trailers, toppled pit toilets and trees, and damaged two trailers.
Hatton (Traill County)	07	1015CST		0	0	4	0		Thunderstorm Winds
									Strong thunderstorm winds toppled down trees onto fences, garages and vehicles.
Thompson (Grand Forks County)	07	1025CST		0	0	3	4		Heavy Rain Thunderstorm Winds
									Strong thunderstorm winds damaged trees and crops and blew antennas off of roofs. Heavy rains washed sugar beets and potatoes out of fields.
Grand Forks (Grand Forks County)	07	1037CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 61mph occurred. No damage was reported.
Crystal 7W (Pembina County)	08	1420CST	Short 20-40	0	0	3	0		Tornado (F1)
									A tornado destroyed a tool shed, downed trees, broke windows, and damaged a porch.
St. Thomas (Pembina County)	08	1452CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of up to 80mph occurred. No damage was reported.
Oakwood (Walsh County)	08	1510CST							Funnel
Grafton 5S (Williams County)	08	1511CST	Short 5-15	0	0	0	0		Tornado (F0)
									A tornado touched down briefly. No damage was reported.
Bismarck (Burleigh County)	13	1508CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 61mph occurred. No damage was reported.
Williston 8W (Williams County)	13	1820CST							Funnel
Williston (Williams County)	13	1830CST		0	0	3	0		Thunderstorm Winds
									Strong thunderstorm winds (59mph at the airport) blew down a partially completed satellite system and tree limbs.
Epping (Williams County)	13	1845CST							Funnel
Tioga (Williams County)	13	1915CST							Funnel
Taylor (Stark County)	19	1613CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 62mph occurred. No damage was reported.
Manning (Dunn County)	19	1614CST		0	0	3	0		Thunderstorm Winds
									Strong thunderstorm winds broke tree branches and damaged buildings.
Parshall (Mountrail County)	19	1641CST		0	0	0	0		Thunderstorm Winds
									Strong thunderstorm winds of 65mph occurred. No damage was reported.
Tolley 12N (Renville County)	19	1800CST		0	1	4	0		Thunderstorm Winds
									Strong thunderstorm winds picked up a garage, destroyed a pole barn, and pulled another barn off of its foundation. One person was injured by flying debris.
Ellendale 5W (Dickey County)	26	1231CST		0	0	0	0		Hail
									Golfball sized hail occurred. No damage was reported.
<b>33 OHIO</b>									
Franklin County	04	1338- 1415EST		0	0	4	0		High Wind
									A thunderstorm moved through the northern part of the county. A gust to 62 knots was recorded at 1338EST at Bolten Field. Wind damage occurred in the county between 1405 and 1415EST.
Paulding County	04	1530EST		0	0	5	0		High Wind
									Thunderstorm winds overturned and severely damaged a mobile home 4 miles southwest of Paulding. Trees were also downed.

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					KILLED	INJURED	PROPERTY	CROPS	

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

**OHIO**

Huron County	04 1630EST				0	2	0	0	Lightning Lightning struck and injured two children at a boat dock in New London.
Butler County	06 1430EST				0	4	0	0	Lightning Lightning struck and seriously injured four golfers in Middletown as they opened umbrellas at a tee.
Holmes County	07 1310EST				0	0	4	0	High Wind A thunderstorm with strong winds downed trees and utility lines along Route 83 north of Millersburg.
Franklin County	07 - 1400EST	1	50		0	0	5	0	Tornado (F1) A mini tornado touched down in the northwest corner of the county. A gas station and some businesses sustained roof and sign damage.
Greene County	07 1603-1645EST				0	0	4	0	High Wind Thunderstorm winds gusted to 62 knots at Wright-Patterson AFB at 1603EST. Wind damage occurred in Bowersville at 1644EST.
Crawford County	07 2130EST				0	0	4	0	High Wind Thunderstorm winds downed trees and utility lines and damaged roofs in Galion.
Wayne County	08 1545EST				0	0	4	0	High Wind Lightning A thunderstorm moved through Wooster. Several lightning strikes started fires while strong winds downed trees and utility lines.
Paulding County	08 1550EST				0	0	4	0	High Wind Thunderstorm winds flipped over a mobile home and downed trees near Paulding.
Putnam County	08 1600EST				0	0	5 <sup>0</sup>	C	High Wind Strong winds during a thunderstorm snapped off utility poles, downed trees and damaged buildings near Ottoville.
Wayne County	08 1600EST				0	0	4	0	High Wind A thunderstorm moved through the county downing trees and utility lines along Route 250 east of Apple Creek.
Holmes County	08 1630EST				0	0	4	0	High Wind Thunderstorm winds damaged farm buildings and downed trees between Mt. Hope and Berlin.
Erie County	08 2045EST				0	0	5	0	High Wind A thunderstorm with strong wind did isolated damage along Route 250 south of Sandusky. A 40' x 80' concrete block building was leveled damaging several pieces of farm equipment. Trees were also downed.
Wayne County	09 1445EST				0	0	4	0	High Wind Thunderstorm winds downed trees and utility lines near Wooster.
Wood County	10 1410EST				0	0	4 <sup>0</sup>	C	Hail A thunderstorm produced one-inch diameter hail in Bradner. The hail damaged crops.
Seneca County	10 1544-1615EST				0	0	5 <sup>0</sup>	C	High Wind, Hail A thunderstorm with strong wind did considerable damage in the Old Fort area. Hail up to one inch in diameter also fell from the storm damaging crops. A corn field was leveled by the wind. One-inch diameter hail fell at Republic at 1600EST.
Huron County	10 1630EST				0	0	4	0	High Wind, Lightning Winds during a thunderstorm downed trees and damaged buildings in Willard. Several lightning strikes started fires.
Putnam County	10 1744EST				0	0	4 <sup>0</sup>	C	Hail A thunderstorm produced 3/4 inch diameter hail in Kalida. Some crop damage occurred in some areas.
Southern Putnam County	10 1830EST				0	0	5 <sup>0</sup>	C	Hail Golf ball sized hail fell as a thunderstorm moved through this area. Corn and tomato crops were damaged.
Franklin County	10 1845-1930EST				0	0	4	0	Hail A severe thunderstorm moved across the county from the northwest and produced large hail. Three-inch diameter hail fell in Dublin at 1845EST and one-inch diameter hail fell in southern Columbus at 1930EST.

**OHIO**

Tuscarawas County	10 1950EST				0	0	4 <sup>0</sup>	C	Hail One-inch diameter hail fell in the Newcomerstown area. Minor crop and structural damage occurred.
Hamilton County	10 2038EST				0	0	4	0	High Wind Thunderstorm winds downed trees and damaged buildings in Cincinnati.
Cuyahoga County	13 0730EST				0	0	5	0	Heavy Rain Heavy thunderstorms were nearly stationary over south Cleveland and the southern suburbs for three hours. The storms dumped up to 3.5 inches of rain. There was considerable urban flooding.
Williams County	16 1630EST				0	0	4	0	High Wind Thunderstorm winds downed trees and damaged buildings in Bryan.
Ashtabula County	30 0815-0845EST				0	0	4	0	High Wind, Lightning A severe thunderstorm moved into the county off Lake Erie. Several lightning strikes started fires and strong winds occurred. A 65 knot gust was measured at 0815EST at the Ashtabula Lighthouse. Trees and utility lines were downed in Andover and Austinburg at 0845EST.
Portage County	30 0855EST				0	0	4 <sup>0</sup>	C	Hail A thunderstorm with two-inch diameter hail moved through the Kent area. The hail damaged cars and crops.
Coshocton County	30 1045EST				0	0	4 <sup>0</sup>	C	Hail, High Wind A thunderstorm with strong winds and large hail moved through the central part of the county. Wind damage occurred in the city of Coshocton. Hail was as large as one-inch diameter.
Guernsey County	30 1135EST				0	0	4 <sup>0</sup>	C	Hail A thunderstorm produced one-inch diameter hail in Cambridge.

**34 OKLAHOMA**

El Reno, Canadian County	04 1330CST				0	0	4	?	Wind Strong winds estimated at 60 mph ripped part of the roof off of a restaurant, destroyed a patio which landed on an auto. Total damage about \$10,000.
Edmond, Oklahoma County	05 0630CST				0	0	5	?	Wind Strong winds which may have been a down burst destroyed a plywood store. Damage was estimated at \$320,000.
Vinita, Craig County	05 1005CST				0	0	2	?	Lightning Lightning caused a fire in attic causing \$300 damage.
Freedom, Woods County	05 1750CST				0	0	?	?	Hail Hail the size of nickles fell 7 1/2 miles east of Freedom.
Alva, Woods County	05 1820CST				0	0	6	?	Hail/Wind Golfball size hail fell. Strong winds tore roofs off of a number of buildings including the MWSU field house, the Vo-tech school and the court house. The wind driven hail broke windows and caused extensive damage to autos. Estimates of damage is \$750,000.
Lambert, Alfalfa County	05 1900CST				0	0	?	?	Hail/Wind 3/4 inch size hail fell and strong winds blew shingles and siding off of a home.
Duncan, Stephens County	07 1430CST				0	0	3	?	Wind Strong winds tore the roof off of a building and blew gravel shattering windows in autos. Damage estimated at \$1,000.
Bristow, Creek County	08 1419CST				0	0	?	?	Hail 3/4 inch size hail fell.
Lindsay, Garvin County	08 1810CST				0	0	3	?	Wind 60 to 70 mph winds downed power lines, and damaged several sheds 7 miles south of Lindsay. Damage was estimated at \$1,000.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
<b>OKLAHOMA</b>									
Durant, Bryan County	09	0240CST			0	0	3	?	Wind
									Strong winds destroyed a patio and uprooted many trees around Durant. Damage set at \$4,000.
Miami, Ottawa County	09	1530CST			0	0	4	?	Wind
									Strong winds ripped the roof off of a cabinet shop and demolished a shed. Damage estimated at \$12,000.
Miami, Ottawa County	09	1530CST			0	0	?	?	Wind
									Strong winds uprooted many trees, with one falling on and damaging a house.
Nowata, Nowata County	10	1430CST			0	0	4	?	Wind
									Strong winds uprooted trees and downed power lines. Damage also occurred to car ports and porches. Damages set at \$10,000.
Talala, Rogers County	10	1520CST			0	0	4	?	Wind
									Strong winds destroyed a mobile home, blew over several out-buildings and damaged several roofs. Damage estimated at \$20,000.
Ingalls, Payne County	10	1730CST			0	1	4	?	Wind
									Strong winds downed several trees and ripped half of the roof off of the community center. A young girl was cut by flying glass. Damage estimated at \$30,000.
Stillwater, Payne County	10	1730CST			0	0	?	?	Wind
									60 mph winds at the municipal airport caused minor damage to several airplanes.
Guthrie, Logan County	11	1800CST			0	0	4	?	Lightning
									Lightning caused a house fire resulting in \$7000 damage.
Cleo Springs, Major County	21	1600CST			0	0	4	?	Wind
									Strong winds destroyed a large barn, and damaged a house and several outbuildings. Damage estimated at \$40,000.
Enid, Garfield County	21	1730CST			0	0	5	?	Wind
									Strong winds which may have been a down-burst caused \$60,000 damage to a large store.
McQueen, Harmon County	24	1913CST			0	0	?	?	Wind
									60 mph winds occurred.
McQueen, Harmon County	24	1920CST			0	0	?	?	Hail
									Golfball size hail fell.
Duke, Jackson County	24	1930CST			0	0	?	?	Hail
									3/4 inch size hail fell.
Snyder, Kiowa County	25	1503CST			0	0	?	?	Hail
									Hail the size of nickles fell along with 4 1/2 inches of rain.
Pocola, LeFlore County	27	1715CST			0	0	?	?	Wind
									Strong winds blew down a wing of a nursing home under construction.
Mutual, Woodward County	29	1715CST			0	0	?	?	Wind/Hail
									3/4 inch size hail fell 6 miles east of Mutual. Strong winds blew down several large trees, destroyed several outbuildings and blew all the windows out of a mobile home.
Gamargo, Dewey County	29	1715CST			0	0	?	?	Winds
									High winds damaged many roofs and blew a mobile home over.
Medford, Grant County	29	1725CST			0	0	?	?	Wind
									70 mph winds occurred.
Cestos, Dewey County	29	1740CST			0	0	?	?	Wind
									50 to 60 mph winds occurred.
<b>OKLAHOMA</b>									
Cestos, Dewey County	29	1750CST			0	0	?	?	Wind
									60 to 70 mph winds occurred.
Taloga, Dewey County	29	1811CST			0	0	?	?	Wind/Hail
									70 mph winds and 3/4 inch size hail fell.
Wakita, Grant County	29	1820CST			0	0	?	?	Hail
									3/4 inch size hail fell.
Cedardale, Woodward County	29	1825CST			0	0	?	?	Hail
									3/4 inch size hail fell.
Ponca City, Kay County	29	1828CST			0	0	?	?	Hail
									Golfball size hail fell.
Leedey, Dewey County	29	1839CST			0	0	?	?	Wind/Hail
									60 mph winds and 3/4 inch size hail occurred.
Moorewood, Roger Mills County	29	1850CST			0	0	?	?	Hail
									Hail the size of quarters fell.
Kremlin, Garfield County	29	1854CST			0	0	?	?	Hail
									3/4 inch size hail fell.
Butler, Custer County	29	1900CST			0	0	?	?	Hail
									3/4 inch size hail fell 10 miles northwest of Butler.
Perry, Noble County	29	1915CST			0	0	?	?	Wind
									60 mph winds occurred.
Garber, Garfield County	29	1930CST			0	0	3	?	Wind
									Strong winds blew the roof off of a warehouse. Damage was estimated at \$1,000.
Strong City, Roger Mills County	29	1934CST			0	0	?	?	Wind
									60 to 70 mph winds occurred just northeast of Strong City,
Orlando, Logan County	29	1955CST			0	0	?	?	Hail/Wind
									3/4 inch size hail fell and 60 to 70 mph winds occurred.
Guthrie, Logan County	29	2000CST			0	0	?	?	Wind
									50 to 60 mph winds occurred.
Ponca City, Kay County	29	2001CST			0	0	?	?	Wind
									60 mph winds occurred.
Coyle, Logan County	29	2012CST			0	0	?	?	Winds
									Strong winds blew down several large trees just northeast of Coyle.
Cashion, Kingfisher County	29	2041CST			0	0	?	?	Wind
									Winds up to 60 mph occurred.
Oklahoma City, Oklahoma County	29	2052CST			0	0	?	?	Hail/Wind
									3/4 inch size hail fell and winds greater than 50 mph occurred.
Yukon, Canadian County	29	2100CST			0	0	?	?	Wind
									50 to 60 mph winds occurred five miles north of Yukon.
Oklahoma City, Oklahoma County	29	2100CST			0	0	5	?	Lightning
									Lightning caused a \$105,000 home to burn.
Piedmont, Canadian County	29	2100CST			0	0	?	?	Wind
									Strong winds blew a barn off of its foundation.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>— OKLAHOMA</b>									
Warr Acres, Oklahoma County	29	2114CST			0	0	?	?	Hail
Union City, Canadian County	29	2115CST			0	0	?	?	Wind/Hail
Yukon, Canadian County	29	2115-2120CST			0	0	?	?	Hail
Norman, Cleveland County	29	2129CST			0	0	?	?	Wind
Del City, Oklahoma County	29	2129CST			0	0	?	?	Wind
Del City, Oklahoma County	29	2130CST			0	0	?	?	Wind
Oklahoma City, Oklahoma County	29	2135CST			0	0	?	?	Wind
Midwest City, Oklahoma County	29	2143CST			0	0	?	?	Wind
Tuttle, Grady County	29	2145CST			0	0	?	?	Hail
Butler, Custer County	29	2200CST			0	0	?	?	Hail
Tuttle, Grady County	29	2215CST			0	0	?	?	Hail
Chickasha, Grady County	29	2230CST			0	0	?	?	Hail
Oklahoma City, Oklahoma County	30	0130CST			0	0	5	?	Lightning
Duke, Jackson County	30	0530CST			0	0	?	?	Wind
<b>35 OREGON</b>									
Baker and Umatilla Counties	01				0	0	4	0	Thunderstorm
Union County	05				0	0	2	4	Hail
Gilliam, Wheeler and Umatilla Counties	9-10				0	0	2	3	Lightning
The Dalles, Wasco County	27				0	0	4	1	Wind
<b>— OREGON</b>									
Jackson and Klamath Counties	29				0	0	4	0	Thunderstorm
Baker County	31				0	0	3	3	Heavy Rain
<b>36 PENNSYLVANIA, Eastern</b>									
Lycoming County	02	1800 EST			0	0	3	0	Flash Flood
York County	06	2000 EST			0	0	4	0	Lightning, Heavy Rain
Fredericksburg, Lebanon County	10	0100 EST			0	0	3	0	Heavy Rain, Flooding
Adams County	10	2200 EST			0	0	5	0	Heavy Rain, Flash Flood
		Rainfall over the county became heavy just before midnight with as much as 7 inches total rainfall in some areas. Runoff from the rainfall closed many roads, caused mudslides, washed out portions of roads, carried away road paving and washed out drainage pipe from under roadways. The fast rising water flooded a campground between Gettysburg and Fairfield. About 1000 campers had to be hastily evacuated through the floodwaters. Tents, campers, trailers, automobiles and trucks were caught in the flood. Some tents and camping equipment were washed away. Tents, camping equipment, campers and other vehicles were damaged or rendered useless.							
Washington and Quincy Townships, Franklin County	13	0100 EST			0	0	4	0	Heavy Rain Flooding
		Heavy rain caused widespread roadway flooding with several feet of water on some roads. Basements, lawns, fields, barns and commercial buildings were flooded. In one spot, the end of a large drainage pipe that ran under a road was lifted into the air by the floodwaters.							

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>— PENNSYLVANIA, Eastern</b>									
Adams, York Counties	19	1900 EST 2100 EST			0	0	4	0	Lightning
									Lightning strikes caused at least 6 fires in houses and barns, and also damaged another barn. In Bonneauville, Adams County, lightning burned out control panels and pumping devices on wells that supply water to the borough.
Harrisburg area	30	0230 EST 2300 EST			0	1	3	0	Lightning, Wind
									Lightning and wind caused power outages, affecting about 1700 customers. Wind gusts brought down trees and tree limbs. Lightning struck two houses and one commercial building, causing some minor damage and one small fire. One 16-year old youth was injured when struck by lightning.
<b>36 PENNSYLVANIA, Western</b>									
Indiana County	9	1715EST	?	?	0	0	3	?	Tornado (FO)
									A National Weather Service employee spotted tornado damage 1.5 miles east-southeast of Plumville in northwest Indiana County. Most of the damage was uprooted trees and downed power lines.
Armstrong County	11-12	ngt-mrng					6	?	Flooding
									Up to four inches of rain fell in the Kittanning area with flooding causing extensive damage to homes, business, and public facilities. Local roads were flooded, and 160 residents were asked to evacuate.
Bedford and Somerset Counties	13	aftr			5		7	?	Flooding
									Up to four inches of rain fell in two hours over Wills Creek. This caused flood waters four to seven feet above normal. There was disastrous damage in both Glencoe (Somerset) and Hyndman (Bedford). Five people died as they were swept away. More than 1,000 people were evacuated. Almost all 25 homes in Glencoe were destroyed. Altogether over 400 buildings were damaged or destroyed. At least 60 motor vehicles were destroyed. Roads were washed out, and many bridges damaged or destroyed.
McKean County	13	night					6	?	Flooding
									Heavy rain caused flooding in the Bradford area from the swollen Bolivar Run. A family lost 30 feet of their backyard and their garage. A "six-foot wall of water" damaged another garage and a car. A house had its foundation undermined, and it finally caved in.
Erie County	29	morning					1		Lightning
									A man in New Kensington was struck by lightning, but not severely hurt.
Crawford, Erie, and Jefferson Counties	30	morning			1	5	?	?	Strong Winds and Lightning
									Thunderstorm winds gusted 40 to 50 mph in the tri-county area, and up to 65 mph at the DuBois Airport. There was extensive damage near Edinboro. Also, a mailman was struck by lightning in downtown Erie.
<b>37 RHODE ISLAND</b>									
Northern Portion	07	1500- 1530EST			0	0	0	0	Lightning, Gusty Winds
									A thunderstorm, moving quickly across the area, caused scattered brief power outages.
Narragansett	07	1745- 1800EST			0	0	3	0	Lightning
									Two houses were struck by lightning as a thunderstorm moved through the area. A small section of wall was damaged, some water pipes split, and insulation burned at one of the houses. A small fire started in the other house.
<b>38 SOUTH CAROLINA</b>									
Southern, Central, and Eastern, South Carolina	2	p.m.			0	0	5	0	Lightning, Heavy rain, flash flooding
									Scattered thunderstorms produced heavy rains over portions of Central and Eastern, South Carolina, included:  <u>Aiken, Aiken County, 1600 EST</u> Extensive urban flooding developed over much of the city. Power outages over the northeast quadrant of the city.  <u>Myrtle Beach, Horry County, 1630 EST</u> Flooding damaged several buildings.  <u>Moncks Corner, Berkley County</u> Berkley Electric Cooperatives Sandridge Substation hit 4 times in the past 2 weeks by lightning.
Greenville, Greenville County	9	1500EST			0	0	3	0	Lightning, wind
									Thunderstorms moved through area. Considerable limb breakage caused power-outages to 1,000 or more homes.
Mount Pleasant, Charleston County	11	1900EST			0	0	3	0	Lightning
									Lightning hit SCE&G's substation disrupting power for about one hour to area east of Cooper River.
Macedonia School Moncks Corner, Berkley County	13	1755EST			0	3	0	0	Lightning
									Lightning struck 3 boys during football practice.
Orangeburg, Orangeburg County	19	0200EST			0	0	3	0	Lightning
									Lightning struck chimney of home causing considerable damage.
Coastal Waters, Charleston	24	1729EST			0	0	0	0	Waterspouts
									Several waterspouts reported, Charleston to Keowee. No damage reported.
Holly Springs Spartanburg County	28	1600EST			0	4	0	0	Lightning
									Four men unloading construction material from a truck were struck by lightning. One person was seriously injured.
South Coastal Water, Charleston to Hilton Head	29	1030EST			0	0	0	0	Waterspouts
									<u>Sullivan's Island, 0810EST</u> Several waterspouts reported offshore, no damage reported.  <u>Hilton Head 1039EST</u> Several waterspouts near shore. No damage reported.
<b>39 SOUTH DAKOTA</b>									
Minnehaha County	02	1455 CST			0	0	0	0	Funnel Cloud
									A funnel cloud was reported north of Sherman.
Perkins County	02	2355 CST			0	0	0	0	Heavy Rain
									Rain, ranging from one and one-half to greater than four inches, produced flooded lawns and basements at Lemmon. Some streets had knee to hip-deep water at intersections.
Clark and Codington Counties	03	Morning			0	0	0	3	Flash Flood
									Four to six inches of rain fell from west of Garden City (Clark County) to north of Henry (Codington County). Low-lying areas were flooded and a potato field west of Garden City was washed out.
Fall River County	03	1300 CST			0	0	0	3	Lightning
									Three lightning-related fires burned a total of 680 acres around Hot Springs. In Green Canyon, nine miles south of Hot Springs, more than 670 acres of grassland and timber burned. A second fire in Slaughter House Canyon, two miles south of Hot Springs, burned five acres.
Pennington County	03	1300 CST			0	0	0	0	Lightning
									Two lightning-related fires burned half an acre north and east of Deerfield Reservoir.
Potter County	03	1625- 1655 CST			0	0	3	0	Heavy Rain, Wind
									Two inches of rain fell in thirty minutes southwest of Gettysburg. Strong winds lifted an open machine shed thirty feet over some trees, depositing it 100 feet to the west.

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					KILLED	INJURED	PROPERTY	CROPS	
<b>— SOUTH DAKOTA</b>									
Bon Homme County	03	Evening			0	0	3	0	Wind
									Strong winds blew through southeastern sections of Tyndall, uprooting large trees and causing some property damage. A steel flagpole was bent over and a baseball field lighting fixture was damaged by high winds.
Hughes County	03	1848 CST			0	0	0	0	Wind
									Winds gusted to 80 mph in and around Pierre.
Brule County	03	2036 CST			0	0	0	0	Wind
									Winds gusted to 60 mph at Chamberlain.
Kingsbury County	03	Evening			0	0	0	0	Rain
									Four to six inches of rain fell in an area from DeSmet north to Spirit Lake, producing lowland flooding.
Meade County	05	1410 CST			0	0	?	?	Hail
									One inch diameter hail fell six miles northwest of Rapid City at Piedmont.
Perkins County	05	1721-1730 CST			0	0	0	3	Lightning
									Lightning-related fires burned 185 acres of pasture and 80 acres of grassland 47 miles northwest of Faith.
Harding County	07	Evening			0	0	0	0	Lightning
									A lightning fire was reported on grassland south of Slim Butte, with very little damage reported.
Harding County	08	Afternoon			0	0	0	3	Lightning
									Lightning burned 200 acres near Ladner.
Butte County	13	1630 CST			0	0	?	?	Lightning
									Several lightning-related fires occurred sixteen miles northwest of Mud Butte and along the Moreau River. Lightning struck a tree, a hay bale and burned 500 acres of grassland and an undetermined amount of cropland.
Corson County	14	Morning			0	0	2	3	Lightning
									South of Morrilstown, 100 acres of pasture were burned by lightning and a home was struck by lightning with no major damage occurring.
Beadle County	14	1641 CST			0	0	0	0	Lightning, Wind
									Winds gusted to 63 mph at Huron. Lightning hit utility poles, creating power outages to western sections of Huron and Wolsey.
Meade County	15	Evening			0	0	3	0	Lightning
									Lightning produced several fires around Sturgis and Tilford. A haystack was burned eleven miles east and also six miles east of Sturgis and a minor timber fire occurred one and one-half miles southeast of Tilford.
Pennington County	16	1410 CST			0	0	?	?	Hail
									One inch diameter hail fell at Camp Columbus, northwest of Rapid City.
Meade County	16	1617 CST			0	0	?	?	Wind
									Strong winds damaged property and trees at Piedmont.
Fall River County	16	1940 CST			0	0	4	0	Wind
									Winds of tremendous force swept through two sections of Hot Springs, leaving hundreds of limbs, trees and broken windows in its wake. The roof of an auditorium was stripped off and scattered to the north, damaging seven cars and destroying one. Cars were blown away from curbs by the strength of the wind. Power lines were downed, a 55 foot evergreen felled onto wires, causing a minor residential electrical fire, trees were bent over and several windows were damaged. Phone service was interrupted to several homes and two businesses had exterior sign damage.
Pennington County	19	1930 CST	short narrow		0	0	4	0	Tornado (F1)
									A tornado was reported southwest of Scenic on a farm. Several out-buildings were destroyed and a combine was overturned.
Pennington County	19	1930 CST			0	0	0	0	Lightning
									Lightning started several grass fires around Scenic resulting in small amount of damage.
Fall River County	19	Evening			0	0	2	0	Lightning
									In Edgemont, lightning peeled bark off a tree and struck a sand filter system, disabling it.

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<b>— SOUTH DAKOTA</b>									
Spink County	20	Afternoon			0	0	0	0	Heavy Rain
									Rainfall amounts of nearly four and one-half inches in Mellette producing lowland flooding.
Butte County	20	Evening			0	0	0	0	Lightning
									Lightning caused nine prairie fires around Belle Fourche.
Brown County	26	1430-1620 CST			0	0	?	?	Funnel Clouds Heavy Rain, Hail
									In Frederick, 2.45 inches of rain fell. Heavy rains of 2.3 inches fell in 20 minutes, seven miles northeast of Frederick. Heavy rains, accompanied by half inch diameter hail fell in Hecla, damaging crops and reducing visibility to near zero. Several funnel clouds were sighted by Weather Service personnel five to seven miles north-northeast of Aberdeen. In Columbia, half inch diameter hail, one inch deep, was on the ground.
Brown, Spink and Day Counties	26	1642-1657 CST	short narrow		0	0	0	0	Tornado (F0)
									A tornado was reported three to five miles east of Verdon, moving eastward.
Mellette County	26	1705 CST			0	0	0	0	Lightning
									Lightning caused minor grass fires near White River.
Clark County	26	1750-1800 CST			0	0	0	0	Wind
									Strong winds with gusts to 60 mph downed trees 18 inches in diameter and also two large trees five miles north and two miles east of Clark.
<b>40 TENNESSEE</b>									
Greeneville, Greene County	2	evening			?	?	?	?	Wind
									High wind with a thunderstorm toppled several large trees on the west side of Greeneville. The wind also broke a plate glass window at the COOP store and ripped a large awning off a home.
Milan, Gibson County	6	1430cst			1				Lightning
									A man who had just gotten out of his car was struck by lightning which burned his neck and head and knocked him unconscious. The 64-year-old painter was hit by the lightning which first struck a tree nearby. Quick action on the part of a young man in administering CPR probably saved the victim's life.
Sevier County	10	1730cst			?				Heavy rain
									Heavy rain along the Great Smokey Mountains across the southern side of Sevier County caused two landslides between Gatlinburg and New Found Gap. The landslides trapped about 31 automobiles on US 441 who were stranded for about 5 hours until one slide could be cleared. The heavy rain also swelled streams and creeks in the area. Some evacuations were made in Gatlinburg and Pigeon Forge, however, the water did not come out of the banks and did no serious damage. Remote rain gauges in the area showed rainfall amounts varied between 4 and 6 inches.
Mt. Juliet, Wilson County	28	afn			?	?	?	?	Flash flooding
									An afternoon thunderstorm dumped heavy rain on Mount Juliet in western Wilson County causing some flash flooding. Several businesses sustained minor damage including Mt. Juliet Motors on Highway 70. Flash flooding was also reported in the Cedar Creek area and at places along Nonville Road. A rain gauge at Old Hickory Lake recorded 3.35 inches, much of it falling in 2 hours.
Gallatin, Sumner County	28	afn			?	?	?	?	Flash flooding
									Heavy afternoon thundershowers brought heavy rain and flash flooding to Gallatin but with little serious damage. Rising water from Tom Creek which passes through the downtown area caused problems for motorists. An employee of a small photo store was rescued when water surrounded the building. The roof on York's Foodtown burst allowing rain water to flood into the store damaging the merchandise.
Moscow, Fayette County	28	1540cst			?	?	?	?	Wind, hail
									Strong wind estimated by the Civil Defense Director at 65 miles an hour caused some tree damage in Moscow. Marble size hail was also reported with the thunderstorm. Heavy rains, between 2.5 and 3.0 inches in an hour, caused some minor flash flooding which receded within an hour.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

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					KILLED	INJURED	PROPERTY	CROPS	
<b>41 TEXAS, Northern</b>									
Shelby County	08	1710CST			0	0	?	?	Wind
									Thunderstorm winds downed trees southeast of Center.
Callahan County	11	1630CST	Short	Narrow	0	0	0	0	Tornado F0
									A skywarn spotter observed a tornado on the ground 12 miles south of Clyde. The small tornado touched down several times in an open field before receding into the parent cloud. No damage was reported.
Fannin County	13	2043CST- 2115CST			0	0	?	?	Hail
									Quarter size hail was first reported at Edhube at 2043, with slightly larger hail reported at 2115 between Bonham and Bailey.
Anderson County	14	1430CST			0	0	4	?	Wind
									High thunderstorm winds downed several trees onto three mobile homes 5 miles east of Palestine. Numerous trees and power lines were also reported downed between Palestine and Elkhart, and in the Neches area.
McLennan County	14	1618CST- 1700CST			0	0	5	?	Wind, Hail, Lightning
									Intense thunderstorms moved through the area causing widespread wind damage. The first report came from a Skywarn Spotter just north of McGregor at 1618 who estimated winds of 60 MPH and 3/4 inch hail. At 1620, an NWS employee in Hewitt reported golf ball size hail and high winds which damaged his roof. Several reports of roof damage and downed power lines in Waco were received over the next half hour.
									In addition to reports of 3/4 inch hail, sheet-type hail was reported in the Waco suburb of Woodway.
									Lightning ignited several costly fires in the county, the costliest being a 27,000 barrel tank of crude oil destroyed after being struck by lightning. In two separate incidents at Lorena, a home and a barn containing 2000 bales of hay were destroyed by fire following lightning strikes.
Palo Pinto County	20	1500CST			0	0	3	?	Wind
									Thunderstorm winds estimated at 70 MPH downed trees and power lines in Brazos.
Taylor County	22	1815CST			0	0	?	?	Wind
									Thunderstorm winds were clocked to 58 MPH by television station KTAB in Abilene.
Taylor County	24	1600CST			0	1	4	?	Wind
									A mobile home in Buffalo Gap, about 10 miles southwest of Abilene, was turned over several times by high thunderstorm winds. One person was injured during the incident.
Wilbarger County	30	Early AM			0	0	5	?	Wind
									Thunderstorm winds damaged five airplanes at the Vernon Airport. Estimates were placed at over \$100,000.
Nacogdoches County	30	1445CST	Short	Narrow	0	0	?	?	Tornado F0
									A tornado touched down briefly just north of Nacogdoches in the Old Church Road area.
Collin County	30	1500CST			0	1	4	?	Wind
									Thunderstorm winds toppled a tree onto a mobile home in McKinney, injuring one. Several boats and cars were also damaged by the winds.
Shelby County	30	1520CST- 1540CST			0	0	?	?	Wind, Hail
									An intense thunderstorm downed trees and power lines and produced golf ball size hail near Campiti at 1520. During the next twenty minutes, several reports of high winds and hail were received in the county, including an airplane and a mobile home being destroyed at the Center Airport.
Johnson County	30	1740CST			0	2	4	?	Wind
									Thunderstorm winds destroyed a mobile home between Godley and Cleburne, injuring two. Two barns were also destroyed and a camper damaged.
<b>41 TEXAS, Southern</b>									
Harris County	6	1310CST			0	2	4	0	Lightning and Wind
									Lightning struck a construction employee as he was working on the roof of a two story building. The man sustained burns on his head and foot. The lightning apparently traveled the length of the mans body and exited through the left foot. The same thunderstorm or a nearby thunderstorm produced high winds on the west side of Houston and caused damage to the windows of 18 vehicles on a parking lot of the Harris County Courthouse Annex on Clay Road. The wind also blew off some roofing material off the annex building. A woman in the parking lot was cut by flying glass but left the scene before being treated.
Bee County	8	1330CST			0	0	4	0	Wind
									Thunderstorm winds gusting to an estimated 50 to 70 MPH did damage to power lines and trees in Beeville. A mobile home in tow on the bypass around Beeville was flipped over on its side by the high wind.
Walker County	12	1400CST			0	0	4	0	Wind
									Thunderstorm winds toppled numerous trees on the Country Campus Golf Course. Golf carts were blown around outside of the clubhouse. One boat was blown onto the golf course from a nearby pond.
Hidalgo County	13	1750CST			0	0	4	0	Wind and Hail
									Thunderstorm winds destroyed one business building and lifted the roof off of another. A third building lost portions of its roof. Automobile windshields were broken by the hail. All of the damage was on the south side of McAllen.
Bexar County	15	1450CST			0	0	4	0	Wind
									Thunderstorm winds toppled trees on the north side of San Antonio. Some of the fallen trees did damage to homes and other structures. Half inch hail fell at the International Airport.
Bandera County	15	1500CST			0	0	3	0	Wind
									Thunderstorm winds blew over several trees at a youth camp located 5 miles east of Pipe Creek in eastern Bandera County. The wind also destroyed a mobile home porch. Bandera County Sheriffs Office reported the public sightings of three funnel clouds none of which were confirmed.
<b>41 TEXAS, Western</b>									
Colorado City, Mitchell County	04	1435CST	0.2	20	0	0	2	0	Tornado (F0)
									The small tornado, 6 miles south of Colorado City, caused little damage to a building as it skipped intermittently going south a short distance.
El Paso, El Paso County	04	Evening			0	0	?	?	Flash Flood
									The City of El Paso and surrounding areas were hit hard by flash flooding. There was considerable damage, but the amount will probably never be known.
									As much as 5 feet of water covered some El Paso streets, stranding motorists and leaving some residents without electricity and telephone service. The heaviest rain fell in the upper valley with nearly 2 inches at a fire station. Residents of the upper valley and lower valley called the fire department to pump water from their homes. The blinding rain forced motorists off the roads causing a rash of accidents. Firefighters, police and ambulance personnel were kept busy most of the evening and night.
									Floodwaters rushed down the west side of the Franklin Mountains into a waste water treatment plant in Anthony, Texas, in El Paso County. The floodwaters overloaded the capacity of the treatment plant forcing its aerator pump to shut down, allowing raw sewage to enter the Rio Grande River and causing problems for health officials.
El Paso, El Paso County	08 & 09	Wed. aftn to Thurs. morning			0	0	?	?	Flood and Flash Flood
									The rain that drenched El Paso from Wednesday afternoon through Thursday morning broke the record for maximum rainfall in a 24-hour period in August. The total was 2.29 inches. The average rainfall for August is 1.21 inches.
									The heavy rain caused rocks and debris to clutter the streets, caused water to stand very high in many streets, clogged drains, forced the closing of Trans Mountain Road due to rock slides (The road connects east and west El Paso.), stalled many vehicles due to rapid rising water, kept many important streets closed and flooded homes in Clardy Fox Addition in central El Paso. It cost the City of El Paso a considerable sum of money just to clean the streets. Of course, power was lost (off and on) in many parts of the City. Flooding was not confined to El Paso. Other communities in El Paso County also were hit hard by the heavy rains.
									Many farmers were not too happy. Too much water had ruined their crops.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	

## TEXAS, Western

Canyon, Randall County	23	1715CST	short	?	0	0	4	0	Tornado (FO)
A tornado, 5 miles east of Canyon, touched down briefly tearing the roof off a barn and knocking power lines down.									
Amarillo, Randall County	24	1715CST			0	0	3	0	Wind
Strong wind out of a severe thunderstorm in southern Amarillo damaged a large steel building.									

## 42 UTAH

Tooele and Utah Counties	01	1500MST			0	0	1	0	Severe Thunderstorm
A thunderstorm left 0.95 inches of rain in 30 minutes along with hail and 50 mph winds in Dugway Utah. A short time later winds gusting to 63 mph were reported in Provo. Tooele received 1.38 inches in 30 minutes and Johnson Pass .85 inches in 10 minutes.									
Salt Lake and Summit Counties	04	1945MST			0	0	1	0	Hail
A heavy thunderstorm dropped 1/4 inch diameter hail in Park City and 3/4 inch hail in Kearns.									
Utah County	13	1930MST	unkwn	unkwn	0	0	1	0	Tornado (FO)
A weak tornado touched down briefly at a point about 5 miles south of Provo. Heavy rainfall was reported near this area at about the same time.									
Beaver, Garfield, and Piute Counties	14	1630MST			0	0	2	0	Heavy Rain
Heavy thunderstorms dumped .77 inches in 30 minutes at the Nah Wah ranch in Beaver County, .52 inches in 15 minutes in Antimony in Piute County and more rainfall in Garfield County which caused flooding across Highway 89 near Marysville.									
San Pete County	15	1400MST	unkwn	unkwn	0	0	1	0	Tornado (FO)
A tornado touched down briefly about 5 miles south of Manti in San Pete County. The funnel was reported on the ground for about 5 minutes. No serious damage occurred.									
Beaver County	15	1510MST			0	0	4	0	Flash Flooding
A Utah Power and Light plant in Beaver Canyon east of the town of Beaver reported receiving 2.00 inches of rain in 90 minutes. This caused mudslides which closed the canyon and a flash flood which left several inches of mud on the streets in the little town of Minersville. The water got as high as the steps of the steps to the Minersville High School before receding.									
Juab County	15	1550MST			0	0	3	0	Flash Flooding
Flash flooding washed cars off the road and sent more than a foot of water across Interstate 15 between Nephi and Levan. Numerous reports of more than an inch of rain in less than an hour were received during the afternoon from surrounding areas, but none were received in this particular locale at this time.									
Salt Lake and Utah Counties	15	1730MST			0	0	3	0	Flash Flooding
Heavy thunderstorms dumped large amounts of rainfall along the Wasatch Front area, causing flash flooding over a wide area. Extensive basement and street flooding occurred in Murray, Midvale, Kearns, and South Jordan. Rainfall reports included 1 inch in 30 minutes at Alpine and .49 inches in 10 minutes in South Jordan.									
Box Elder County	16	1625MST	unkwn	unkwn	0	0	1*	0	Tornado (FO)
Two tornadoes were sighted between Tremonton and Snowville near the Idaho border. The second one occurred about 4 minutes after and about 10 miles south of the first one. The report was relayed by the Utah Highway Patrol. *Both tornadoes combined.									
Piute County	19	1500MST	unkwn	unkwn	0	0	0	0	Tornado (FO)
The fifth tornado in a week was sighted in the Otter Creek area of Parker Mountains. The tornado was on the ground for 30 seconds and did no damage.									
Garfield County	19	1700MST			0	0	5	0	Flash Flooding
Flash floods washed out three bridges across the Sevier River north of Panguitch in Garfield County. Reports of heavy rainfall included 1 inch of rain in 30 minutes at Laverkin and .70 inches in 10 minutes at Mona.									
Kane County	20	1600MST			0	0	3	0	Flash Flooding
A thunderstorm left over an inch of rain in half an hour and flooded basements in Kanab. Other reports included 1.85 inches in Zion National Park, and 1.28 inches in 90 minutes at Arches National Park.									

## UTAH

Iron County	21	1800MST			0	0	3	0	Flash Flooding
At least .40 inches of rain in the upper reaches of Coal Creek caused flooding in Cedar City. Volunteers reacted quickly to save a trailer park along Coal Creek with sand bag dikes and avoided much property damage.									
Salt Lake County	23	1730MST			0	3	1	0	Lightning
A baseball coach and two boys were injured when lightning struck the playing field. The coach received a direct hit on the head and the boys, which were standing nearby, received superficial injuries. The man was in full cardiac arrest after the hit, but his pulse was resumed after about 25 minutes of CPR.									
Sevier County	25	1900MST			0	0	0	0	Hail
A thunderstorm dropped hail 6 inches deep in spots along with heavy rain.									
Utah County	31	1245MST			0	0	0	0	Hail
Marble size hail fell in Provo and Orem Utah.									

## 43 VERMONT

CHITTENDEN COUNTY	11	1336EST			0	0	5	0	Thunderstorm
A torrential summer thunderstorm cut through Chittenden County, causing havoc for Vermonters. Rainfall was heavy and caused flooding in and around Burlington. Gaynes Department Store was forced to close due to the flooding. Burlington's main fire house could not drain off the rainfall fast enough, and water backed up into the station, causing considerable damage. Road repairs and blacktop from College St. in Burlington were washed away, which resulted in a large hole where the street had been. This thunderstorm also caused scattered power outages throughout the County.									
Note this storm was the same one which caused damage in Clinton County New York earlier in the day.									

## 44 VIRGINIA

Northern Virginia... Loudoun, Fairfax and Prince William Counties	13	All Day			0	0	5	0	Heavy Rain, Flash Flood
Slow-moving heavy thunderstorms dumped up to 5 inches of rain in isolated locations on previously saturated areas, flooding streets and filling basements with 2 to 4 feet of water, especially in the Leesburg area. A record 9.4 inches of rain was recorded at Dulles Airport as of this date for the month of August.									
Rockbridge County	29	1400-1600EST			0	0	4	0	Heavy Rain
A heavy thunderstorm swept across the county with the area around Kerr's Creek being hit the hardest. Between the area of Kerr's Creek and Whistle Creek, high water made Routes 638, 639 and 632 impassable. One automobile was reported to have been washed down out of a driveway while it's owners were visiting.									
Alleghany Mtns to Southern Blue Ridge into South Central Piedmont... Rockbridge, Bedford Botetourt, Roanoke Franklin, Henry & Patrick Counties	30	1830-2230EST			0	2	5	4	Lightning Heavy Rain Flood, Hail Wind
Very heavy but slow-moving thunderstorms ahead of a cold front moved through this area of Southwest Central Virginia with locally heavy downpours and damaging lightning. Two people were injured when flood waters swept their Volkswagon off of a highway and moved it downstream over one quarter of a mile in Rockbridge County. Rainfall amounts in some locations were as much as 4 to 5 inches. Lightning struck houses and barns in the Roanoke County area, while some areas had flooded basements, resulting in damage to a few businesses. Fourteen cattle were killed when lightning struck a tree they were under in the Rockbridge Bath area. Hail destroyed over 9 acres of tobacco valued at \$20,000 in Franklin County and numerous trees were blown over, blocking highways and causing power outages.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
<b>45 WASHINGTON</b>									
Spokane County	1	2030PST			0	0	5	0	Lightning
									Lightning ignited a fire in a home, destroying it. The home was located in the city of Spokane.
Chelan County	1	Afternoon			0	0	0	5	Hail
									Marble size hailstones caused damage to apple and pear crops in the vicinity of Cashmere. Total damage was estimated at \$450,000.
<b>46 WEST VIRGINIA</b>									
Wood County	07	1700EST			0	0	?	0	Thunderstorm Wind
									Heavy thunderstorms moved across Wood County around 6:00 P.M. The Parkersburg area received 1.25 inches of rain. Small trees were reported knocked down, and an awning was blown from a store in Parkersburg.
Upshur, Barbour, and Harrison Counties	10	1545-1615EST			0	0	?	?	Thunderstorm, Wind, Flooding
									A heavy thunderstorm moved across southern Barbour Co., Upshur Co., and Harrison Co., accompanied by high winds and heavy rain. Rainfall of 1.85 inches at Audra State Park (borders Barbour and Upshur Counties). Flash flooding was reported in Lost Creek, Harrison Co. at 1615EST. Wind damage to utility lines was reported in each county.
Preston County	11	1423-1545EST			0	0	5	0	Flooding
									Heavy rains over the already saturated area produced flooding along Little Sandy Creek in and around the town of Fellowsville. About a dozen homes and trailers were damaged by the flood waters.
Tucker County	12	1840-2100EST			0	0	3	0	Flooding
									Heavy rains resulted in flooding in the Parsons area. Water was reported in streets and Route 7 was blocked.
Southern Preston	12-13	1945-0000EST			0	0	?	0	Flooding
									Small stream flooding was reported in the southern part of the county following heavy rains from thunderstorms.
Randolph County	12-13	2000-0000EST			0	0	?	0	Flooding
									Heavy rains resulted in many small streams in and around Elkins being out of their banks. A small bridge was washed out on Chenoweth Creek. Secondary roads (13) were closed by water in Beverly and Dailey. Several roads were washed out and several homes were damaged.
Mercer County	13	1600EST			0	1	4	0	Flash Flooding
									Heavy rains of nearly 2 inches in an hour and 15 minute period caused flash flooding in Princeton. Major streets were blocked and extensive damage was done to buildings.
Pocahontas County	13	2050-2230EST			0	0	3	0	Flooding
									Heavy rains produced flooding along Knapps Creek. Route 219 was blocked by high water. Railroad tracks were washed out at Statyfork.
Tyler County	30	1230-1445EST			0	0	4	0	Thunderstorm, Wind, Hail
									A strong thunderstorm moved across Tyler County resulting in numerous reports of wind damage. Three mobile homes and two houses were damaged in Sistersville and Middlebourne. Hail 3/4 inches in diameter was reported.
Doddridge, Harrison, Lewis, and Upshur Counties	30	1333-1500EST			0	0	3	?	Thunderstorm, Wind, Hail
									Heavy thunderstorms produced 1 inch hail as they moved across Doddridge County. Hail was reported by WBOY TV at 1333EST. A Harrison County storm spotter reported trees down and large hail at 1400EST. A spotter in Lewis County reported trees down and 1 inch hail in Weston at 1435EST. Wind damage was also reported by the Dept. of Highways, Office of Emergency Services, and spotters in Upshur Co. around 1500EST.
Webster County	30	1825-2000EST			0	0	?	?	Flash Flooding
									Heavy rains of over 3 1/2 inches in a two hour period resulted in flash flooding in and around Webster Springs.
<b>47 WISCONSIN</b>									
Kenosha County	07	0620CST			0	0	3	0	Thunderstorm Winds
									Thunderstorm winds gusting to 74 mph slightly damaged 3 small planes at the Kenosha Airport.
Vernon County	07	0630CST			0	0	4	4	Thunderstorm Winds
									60 mph thunderstorm winds leveled a tobacco shed damaging a tractor and car inside at West Prairie. Several tobacco fields were also flattened.
Racine County	07	1130CST			0	0	0	0	Thunderstorm Winds
									Thunderstorm winds were recorded up to 70 mph at the Racine Airport and caused power outages to 6,000 Wisconsin Electric customers.
St. Croix County	07	1830CST	0.1	25	0	0	0	0	Tornado FO
									A small tornado touched down briefly in an open field 1S of Baldwin.
Waukesha County	07	2350CST			0	0	5	0	Electrical
									Lightning caused a fire and \$75,000 damage to a New Berlin home. The lightning came down the TV antenna setting fire to the TV set.
Jefferson County	08	0350CST			0	0	5	4	Electrical
									Lightning struck a 34X64 foot barn 1SE of Jefferson. The resulting fire destroyed the barn, 2 sheds and 7,000 bales of hay.
Milwaukee County	09	1340CST			0	0	0	0	Hail
									1 1/2 inch hail fell from a thunderstorm over the northwest portions of Milwaukee.
Racine County	09	1530CST			0	0	0	0	Hail
									A thunderstorm dropped hail up to 1 inch in diameter 8W of Racine.
Southern and Eastern Wisconsin Counties									29th Afternoon and Evening Hours
									A small but intense meso-scale system developed ahead of a cold front during the afternoon. Severe thunderstorms triggered by the system produced strong gusty winds and hail over East Central Wisconsin. By evening a line of severe thunderstorms formed along the cold front with numerous reports of hail up to baseball size. Extensive crop damage as well as dented vehicles and metal buildings occurred over Southern and Eastern Wisconsin.
Juneau County	29	1518-1525CST			0	0	3	3	Thunderstorm Winds, Hail
									Strong thunderstorm winds downed trees and caused damage to 3 homes in Necedah. 1 1/2 inch hail fell at New Miner.
Adams County	29	1529CST			0	0	0	0	Hail
									1 1/2 inch hail was reported at Monroe Center.
Waushara County	29	1600-1640CST			0	0	3	3	Thunderstorm Winds, Hail
									Severe thunderstorms dropped golf ball size hail at West Bloomfield and Spring Lake. Gusty winds toppled trees damaging a few homes in Wautoma.
Winnebago County	29	1640-1720CST			0	0	5	4	Thunderstorm Winds, Hail
									Hail up to baseball size fell from an intense thunderstorm on the east shore of Lake Poygan denting many cars as well as metal buildings. Winds gusting to 65 mph knocked tree limbs onto power lines causing extensive power outages in Oshkosh, Menasha, Neenah, Winchester and Larson.
Outagamie County	29	1650-1720CST			0	1	5	4	Thunderstorm Winds
									Thunderstorm downburst winds gusting to 86 mph caused \$475,000 damage in the Appleton/Kaukauna area. One person was injured when cut by flying glass after a window was blown out in her room. The winds uprooted over 200 trees, downed power lines and flattened a mobile home in Greenville. At the Outagamie Airport, a control tower under construction was destroyed, 2 small planes were flipped over and the roof ripped away from the crash-fire-rescue building.
Menominee County	29	1708CST			0	0	0	0	Hail
									Golf ball size hail was reported at Gresham.
Fond du Lac County	29	1710CST			0	0	0	0	Thunderstorm Winds
									Strong thunderstorm winds gusting to 60 mph 10SW of Fond du Lac.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1984

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
<b>WISCONSIN</b>									
Juneau County	29	1713CST			0	0	3	3	Hail
									Hail up to 2½ inches fell from a thunderstorm at Lyndon Station.
Marquette County	29	1740CST			0	0	0	?	Hail
									A thunderstorm dumped golf ball size hail at Briggsville.
Columbia & Dodge Counties	29	1759-1855CST			0	0	4	5	Hail
									Hail, up to 2½ inches in diameter, fell from a cluster of severe thunderstorms along a 25 mile path from Portage to Pardeville to Cambria in Columbia county to Randolph in Dodge county. Extensive crop damage occurred as well as dented vehicles and metal buildings.
Winnebago County	29	1812CST			0	0	0	?	Hail
									Hail up to baseball size pelted Winchester.
Marquette County	29	1838CST			0	0	0	?	Hail
									Golf ball size hail was reported 3N of Westfield.
Dodge County	29	2040CST			0	0	0	?	Hail
									Golf ball size hail fell at Mayville and Kekoshkee.
Sauk County	29	2130CST			0	0	0	?	Hail
									A strong thunderstorm dumped golf ball size hail at Spring Green.
Sheboygan County	29	2215CST			0	0	0	?	Hail
									3/4 inch hail was reported in Sheboygan.
Iowa County	29	2230CST			0	0	0	?	Hail
									Golf ball hail was deposited by a thunderstorm at Mineral Point.
Rock County	29	2330-2340CST			0	0	0	?	Hail
									An intense thunderstorm produced hail up to 2 inches in diameter from Beloit to Clinton.
Maukesha County	29	2350CST			0	0	4	0	Electrical
									Lightning struck a house in Brookfield and caused \$25,000 damage.
<b>48 WYOMING</b>									
Glenrock, Converse County	1	1500MST			0	0	3	0	Flood
									Thunderstorm dumped two inches of rain in 30 minutes, or 3.2 inches total from 1-1/2 hour deluge at Glenrock in Converse County. Rain flooded basements of several houses, a car and several businesses. Other minor damage due to flooding and lightning strikes.
Cottonwood Bench, Fremont County	1	1830MST	1.5 mi		0	0	3	5	Hail
									Thunderstorm moved through Cottonwood Bench area, 30 miles north of Riverton, in Fremont County. Storm piled hail up to two feet deep and dumped two inches of rain in 30-minute period. Considerable hail damage to crops. Gale-force winds and heavy rain did some damage to property and roads.
Laramie, Albany County	15	Unknown			0	0	4	0	Flood
									Thunderstorm dumped up to 1.67 inches of rain in an hour-long deluge across Laramie in Albany County. Damage to basements of houses, cars, and a just-completed flood channel.
Cheyenne, Laramie County	17	1625MST			0	0	?	?	Tornado (FD)
									Tornado (FD) was reported by public 15 miles west of Cheyenne in Laramie County. A trucker reported the tornado kicking up dust and debris.
<b>49 ALASKA, Northern</b>									
Kobuk and Koyukuk Valleys	1-5				0	0	4	0	Flash Flooding and River Flooding
									A long, fast-moving airstream at cloud level, originating in the subtropics and ending over northwest Alaska, became established Aug. 1 after a strong southwesterly frontal passage on July 31. This feature remained in place until the night of Aug. 3-4. During its residence, this airstream produced heavy rainfall over the northwest interior of Alaska - from 1.5 to as much as 4 inches - August 1-3. Based on the synoptic situation, available data, and hydrologic relationships, it is concluded that flash flooding occurred on small streams in the area Aug. 1-3, and subsequent river flooding occurred on larger watercourses Aug. 3-5. At Moorvik, in the lower Kobuk Valley, there was so much water that all construction was halted until freezeup.
Kobuk and Koyukuk Valleys	17-18				1	0	?	0	Flash Flooding
									A strong cold front moved through western Alaska on Aug. 17, producing widespread rain. The heaviest rainfall was in northwest Alaska, where storm totals (for approximately 30 hours) in the Kobuk and western Koyukuk Valleys were near 1.5". Based on available data and known hydrologic relationships, it is assumed the flash flooding occurred on some streams and smaller tributaries in the Kobuk and Koyukuk valleys on Aug. 17-18. A 36-year old man on a camping trip in the area contracted hypothermia in the heavy rain, while crossing several swollen streams. He was picked up Aug. 18, and died in an Anchorage hospital Aug. 21.
Tanana Valley	26-27				0	0	?	0	Heavy Snow
									A strong low pressure system moved from Bristol Bay, across the southern interior of Alaska, and into northwest Canada on the morning of Aug. 26. Strong northwest flow in the wake of the low brought a strong Arctic front eastward through the Tanana Valley on the evening of Aug. 26. Locally heavy snow fell on the north slopes of the Alaska Range and in the upper Tanana Valley on the night of Aug. 26-27 and on the morning of Aug. 27. At Denali National Park, over 3 inches fell at the Headquarters, and there were 4 foot drifts at Eielson Visitors Center; the road into the park was closed. 12 inches fell at Trimms Camp, in the Alaska Range south of Big Delta.
<b>49 ALASKA, Southern</b> ————— NO REPORT RECEIVED									
<b>49 ALASKA, Southeastern</b>									
Juneau	25	0600PST						4	Flooding
									Heavy rains and a clogged filter in the water system on Gold Creek combined to cause minor flooding in one section of downtown Juneau.
<b>50 HAWAII</b> ————— NONE REPORTED									
<b>51 PUERTO RICO</b> ————— NONE REPORTED									
<b>52 VIRGIN ISLANDS</b> ————— NONE REPORTED									
<b>53 PACIFIC</b> ————— NONE REPORTED									

# STORM SUMMARY

AUGUST 1984

STATE	TORNADOES					HAILSTORMS			WINDSTORMS				LIGHTNING				FLOODING				HEAVY SNOWSTORMS AND BLIZZARDS				# ICE STORMS				ALL OTHER			
	NUMBER	DAYS	DEATHS	INJURIES	DAMAGE	DEATHS	DAMAGE		DEATHS	INJURIES	DAMAGE		DEATHS	INJURIES	DAMAGE		DEATHS	INJURIES	DAMAGE		DEATHS	INJURIES	DAMAGE		DEATHS	INJURIES	DAMAGE					
							PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS			PROP. ERTY	CROPS				
Alabama																																
Arizona	1	1			5		4			5		?			4																	
Arkansas							?	?		5	?		1	1	5												2					
California							4	3		4																						
Colorado	6	3			4	9	7	6		3			1	1	4			6			5											
Connecticut										5					4																	
Delaware																																
Florida	3	2			5					5			4	4	5																	
Georgia															4																	
Idaho	1	1			3		4	3		5											4											
Illinois	1	1			5					6			1																			
Indiana							1			4					5																	
Iowa							5	6		5					3																	
Kansas	1	1					5	4		6	5		1	5							3			3								
Kentucky										4					5						4											
Louisiana	1	1			5		4			4		1	3							6												
Maine																																
Maryland & DC										3										2		7										
Massachusetts										3																						
Michigan	10	4		4	6					?	?	2	5	?													4					
Minnesota	5	2						6		5			5	3																		
Mississippi										4			1							4												
Missouri										4					4																	
Montana															7	6																
Nebraska								3		5					5	5																
Nevada	1	1					?	?		?							1	2	6	?												
New Hampshire																																
New Jersey																																
New Mexico																	6			6		6										
New York									2	7	C	1	3	5	6				6		6											
North Carolina							?	?	2	5	?	2	6					1														
North Dakota	3	2			3				1	5	4				3																	
Ohio	1	1			5		6	5		5			6	5							5											
Oklahoma							?	?	1	6	?				5	?																
Oregon							2	4		4	1				5	3					3			3								
Pennsylvania	1	1			3					5	?		3	5			5				7		?									
Rhode Island															3																	
South Carolina										3					7	5					3											
South Dakota	2	2			4		?	?		4					?	?							3									
Tennessee										?	?		1								?	?										
Texas	4	4			4		?	?	5	5	?		1	5									?									
Utah	5	4			1					1			3										5									
Vermont																							5									
Virginia										4					4						2		5									
Washington										5					5																	
West Virginia							?	?		5	?																					
Wisconsin	1	1					4	5	1	6	5			5	4						1		5									
Wyoming	1	1			?		3	5															4									
Alaska																																
Hawaii																																
Pacific																																
Puerto Rico																																
Virgin Islands																																

## REFERENCE NOTES

Storm damage categories are from 1 to 9 as follows:

- 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

- \* Miles instead of yards
- \*\* Yards instead of miles
- @ Includes heavy sleet storm
- # Freezing drizzle and freezing rain, commonly known as glaze
- ≠ Not received or incomplete
- o/c Under Estimated Damage, Property/Crops, indicates crop damage amount is included in the figure given

## 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.

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

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



USCOMM-NOAA-ASHEVILLE, NC 1984-2500

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