

SEPTEMBER 1992

VOLUME 34

NUMBER 9

# STORM DATA

Lihue

**AND UNUSUAL WEATHER PHENOMENA  
WITH LATE REPORTS AND CORRECTIONS**



**noaa**

NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

/ NATIONAL ENVIRONMENTAL SATELLITE,  
DATA, AND INFORMATION SERVICE

/ NATIONAL CLIMATIC DATA CENTER  
ASHEVILLE, N.C.

Cover: Hurricane Iniki struck Kauai on September 11 with estimated maximum sustained (one minute average) surface wind speeds of 140 mph, gusts to 175 mph, and a central pressure of 945 millibars (27.91 inches). Pictured is an AVHRR (Advanced Very High Resolution Radiometer) composite satellite image of Iniki at 3:00 p.m. HST on September 11, 1992. The National Weather Service Office for the island of Kauai is located at Lihue. (Photo courtesy: Ralph E. Meiggs)

## CONTENTS

|   | Page |
|---|------|
| Climatic Data of the Month . . . . .                | 4    |
| Outstanding Storms of the Month . . . . .           | 8    |
| Damage Survey by Ted Fujita . . . . .               | 15   |
| Et Cetera (Typhoon Omar) . . . . .                  | 31   |
| Storm Data and Unusual Weather Phenomena . . . . .  | 34   |
| Reference Notes and "F" Scale Definitions . . . . . | 127  |
| Storm Summary . . . . .                             | 128  |

### **STORM DATA**

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National Climatic Data Center

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

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

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

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

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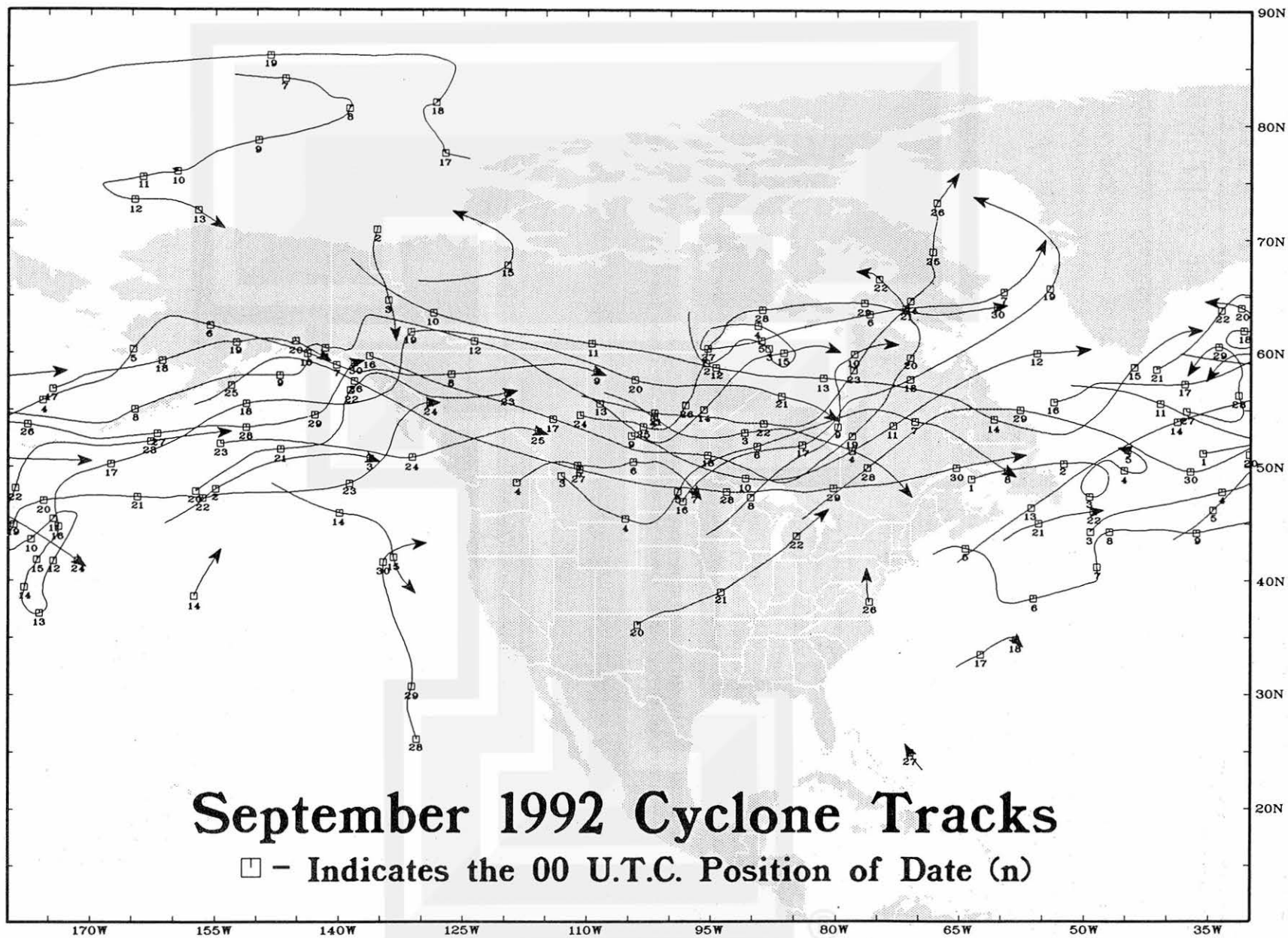
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Director,  
National Climatic Data Center





# CLIMATIC DATA OF THE MONTH

## PRECIPITATION AND TEMPERATURE ANOMALIES - SEPTEMBER 1992

Table 1 lists the 98-year temperature and precipitation rankings for the nine climatically homogeneous regions in the United States outlined below in Figure 1.

Areally averaged mean monthly temperatures across the nation ranked September 1992 as the 48th warmest September since 1895. Above normal mean monthly temperature departures occurred from the Central Plains to the West Coast and along portions of the East Coast. The departures topped +4°F in parts of California, Arizona, Nevada, and Texas. However, a large segment of the eastern half of the country experienced subnormal monthly averages. Departures of -5°F were found in portions of Missouri. Monthly mean temperatures in Hawaii were abnormally warm with departures reaching +3°F. Conversely, Alaska was unseasonably cold with some stations reporting a monthly departure of -15°F!

The series of fronts that brought cool air to the eastern half of the country were accompanied by severe weather and copious amounts of rain in the eastern Plains and the Corn Belt. Areas from northeast Texas to Wisconsin and Indiana reported monthly rainfall totals of eight to 15 inches. By contrast, the West was drier than normal. The West and Southwest Regions respectively recorded their 8th and 5th driest September on record. Nationally, September 1992 was the 27th driest September since 1895. Hurricane Iniki brought excessive rainfall to the Hawaiian Islands. In parts of the state, monthly rainfall totals were more than 300% of normal. Central and southern Alaska were wetter than normal, while northern sections experienced drier than normal conditions.

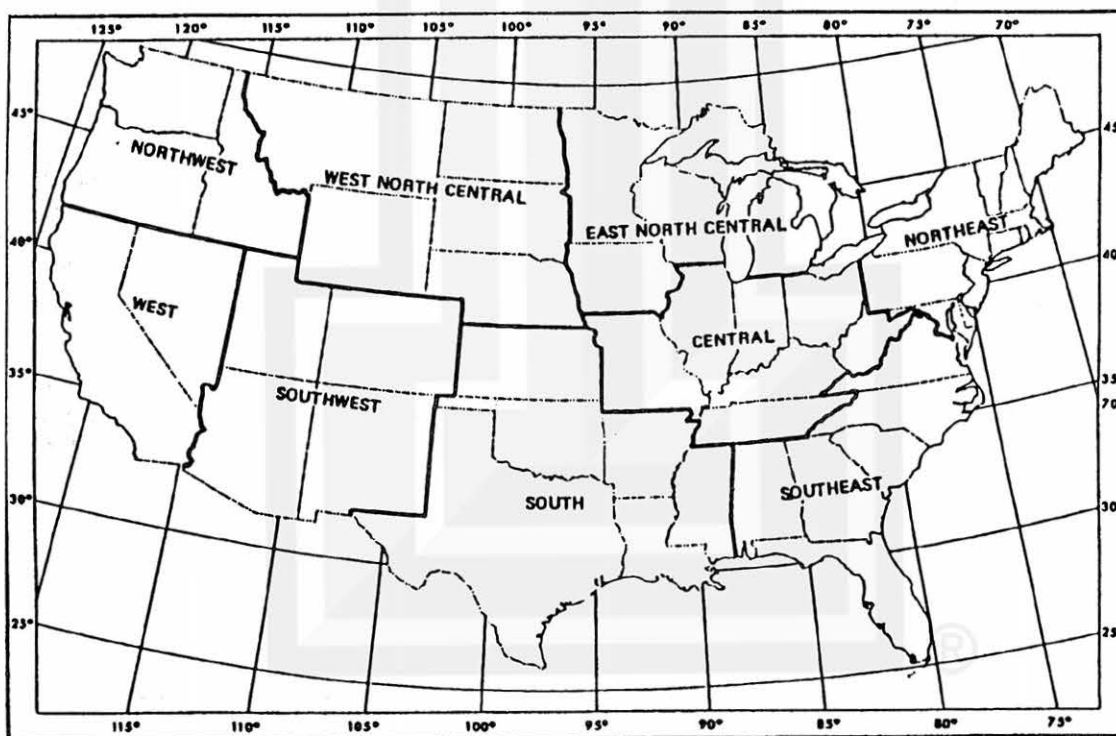
TABLE 1. TEMPERATURE AND PRECIPITATION RANKINGS FOR SEPTEMBER 1992, BASED ON THE PERIOD 1895-1992.

1 = DRIEST, 98 = WETTEST; 1 = COLDEST, 98 = HOTTEST.

| REGION             | PRECIPITATION | TEMPERATURE |
|--------------------|---------------|-------------|
| Northeast          | 63            | 36          |
| East North Central | 80            | 24          |
| Central            | 70            | 22          |
| Southeast          | 44            | 45          |
| West North Central | 26            | 50          |
| South              | 33            | 48          |
| Southwest          | 5             | 76          |
| Northwest          | 30            | 38          |
| West               | 8             | 78          |
| National           | 27            | 51          |

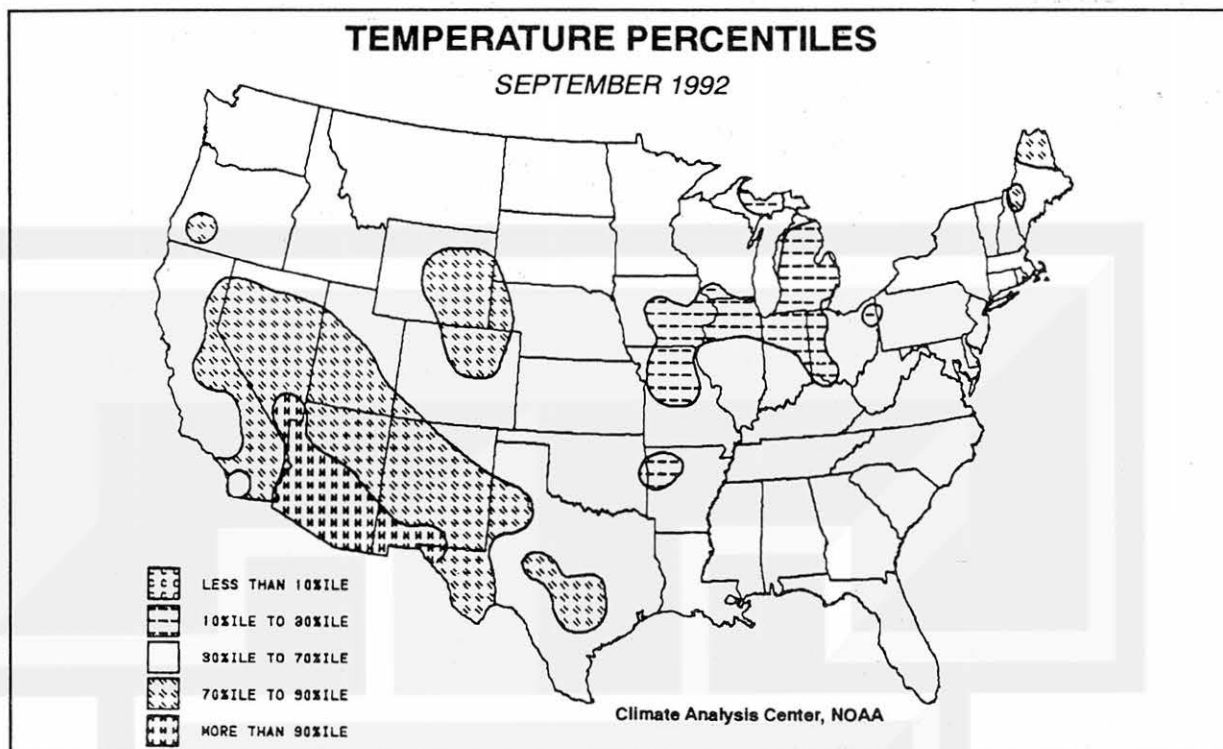
From National Climatic Data Center

Fig. 1



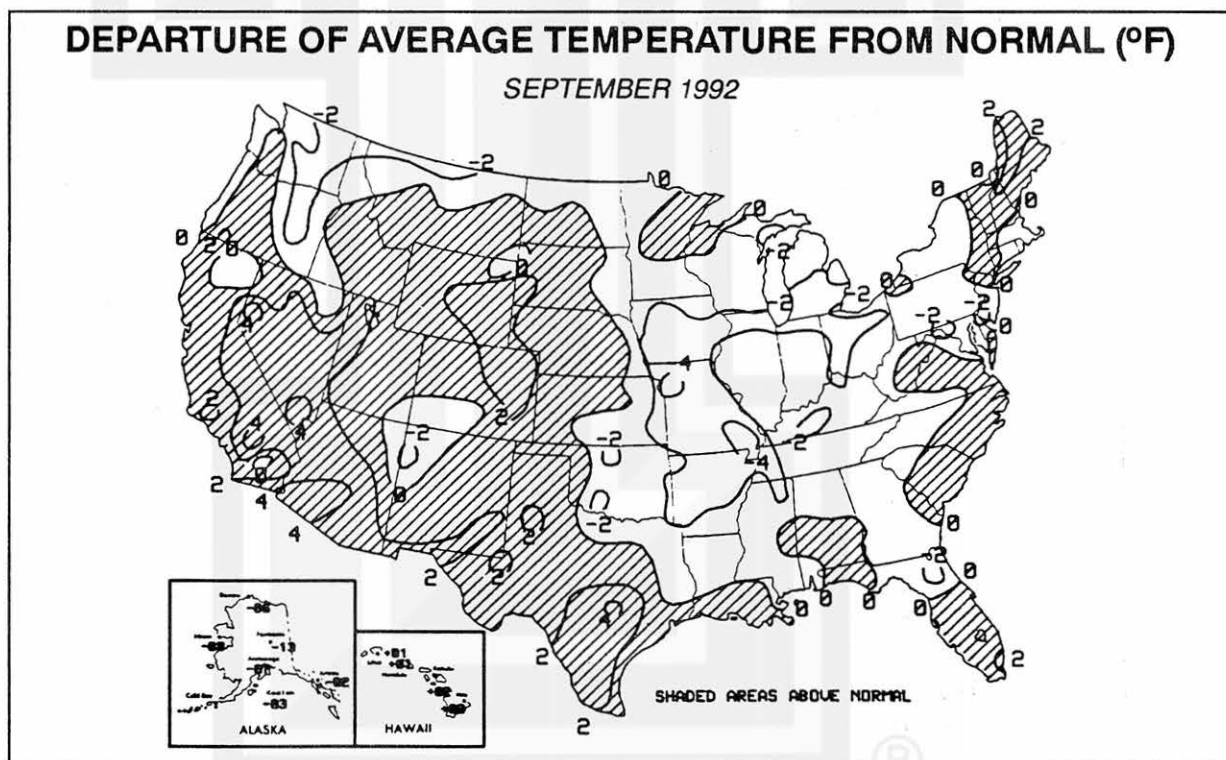
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Fig. 2



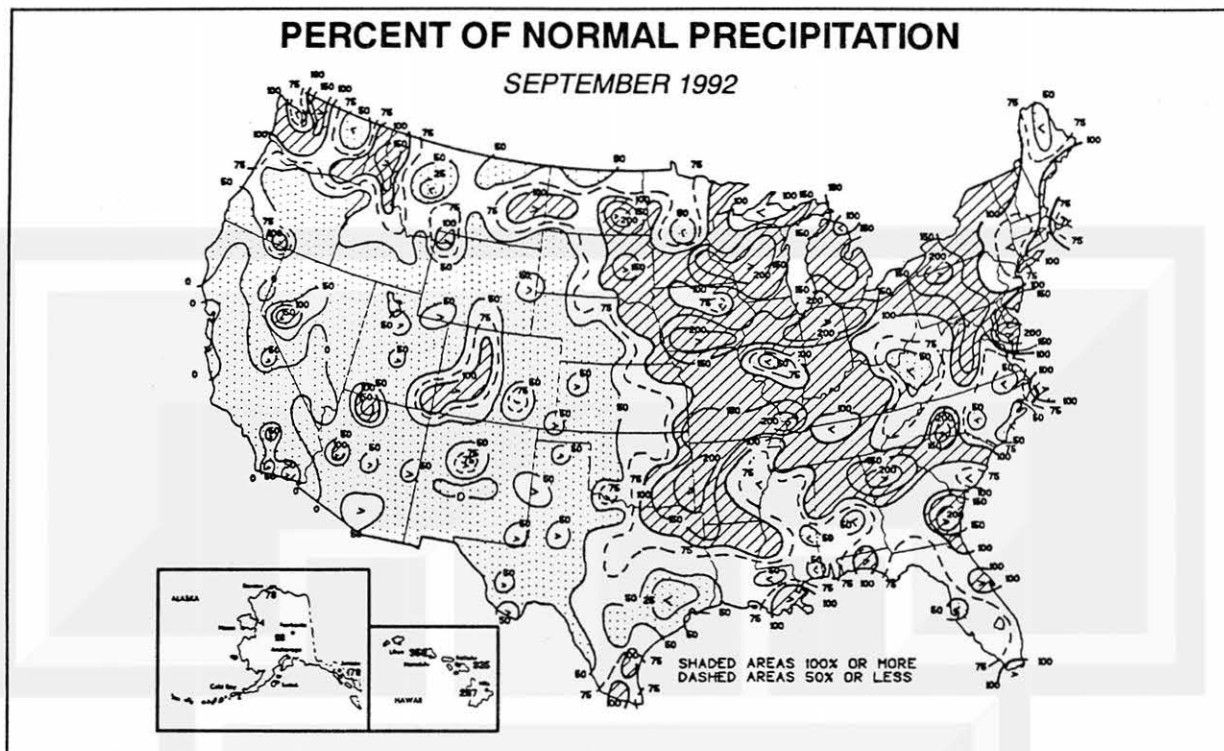
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Fig. 3



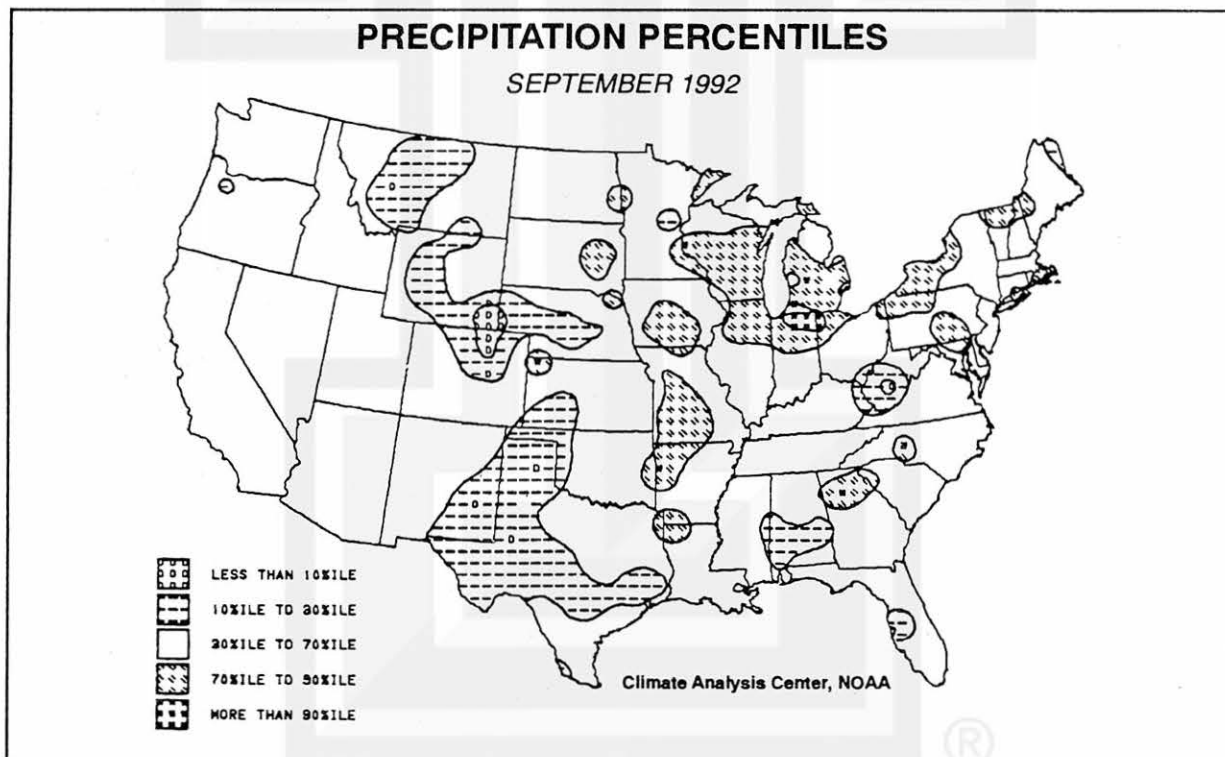
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Fig. 4



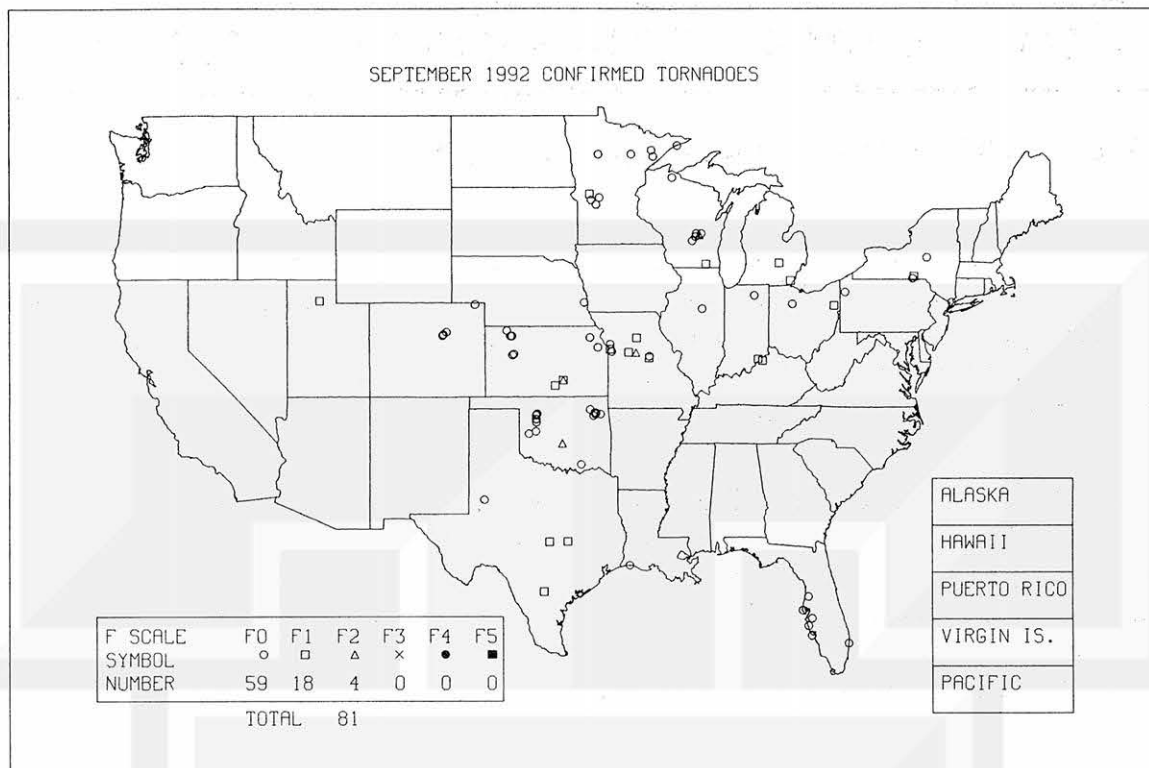
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Fig. 5

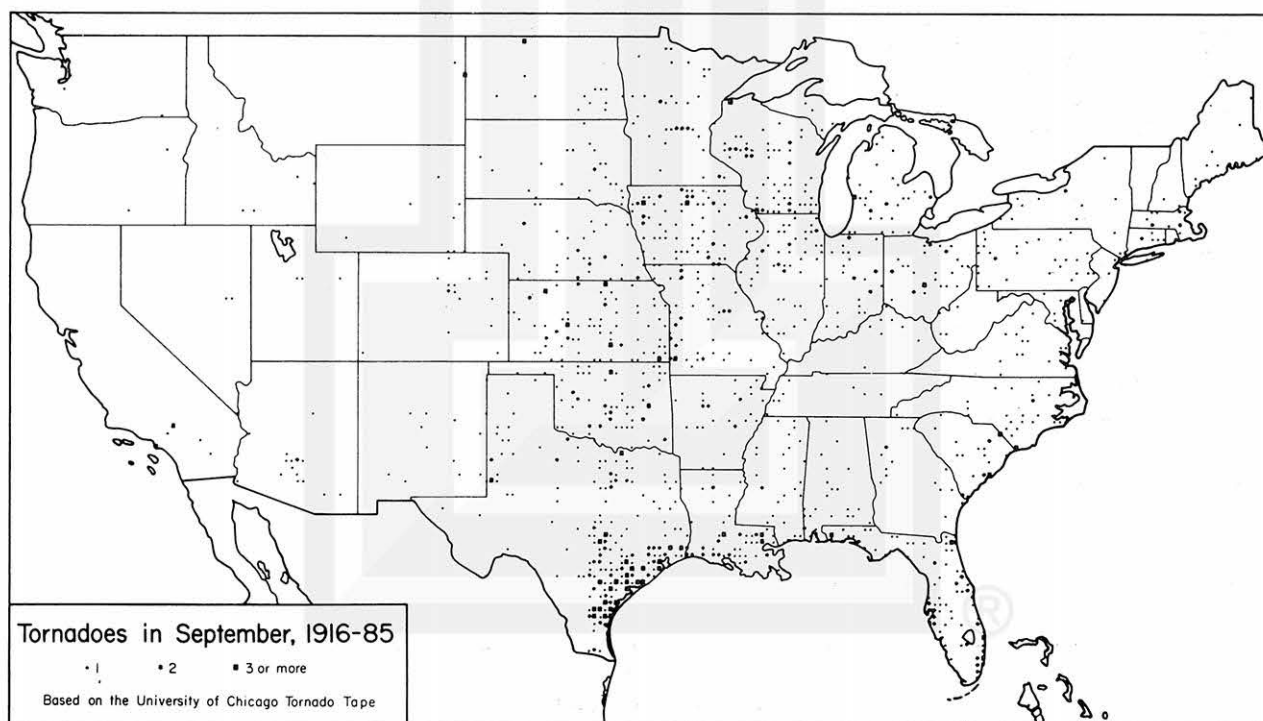


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Eighty-one tornadoes were reported in September 1992. Fifty-nine were rated F0's, as defined by the Fujita Tornado Scale. The strongest tornadoes of the month were four F2's which occurred in Kansas, Missouri, Oklahoma, and Wisconsin. No deaths were attributed to any of the tornadoes, but 14 injuries did result.

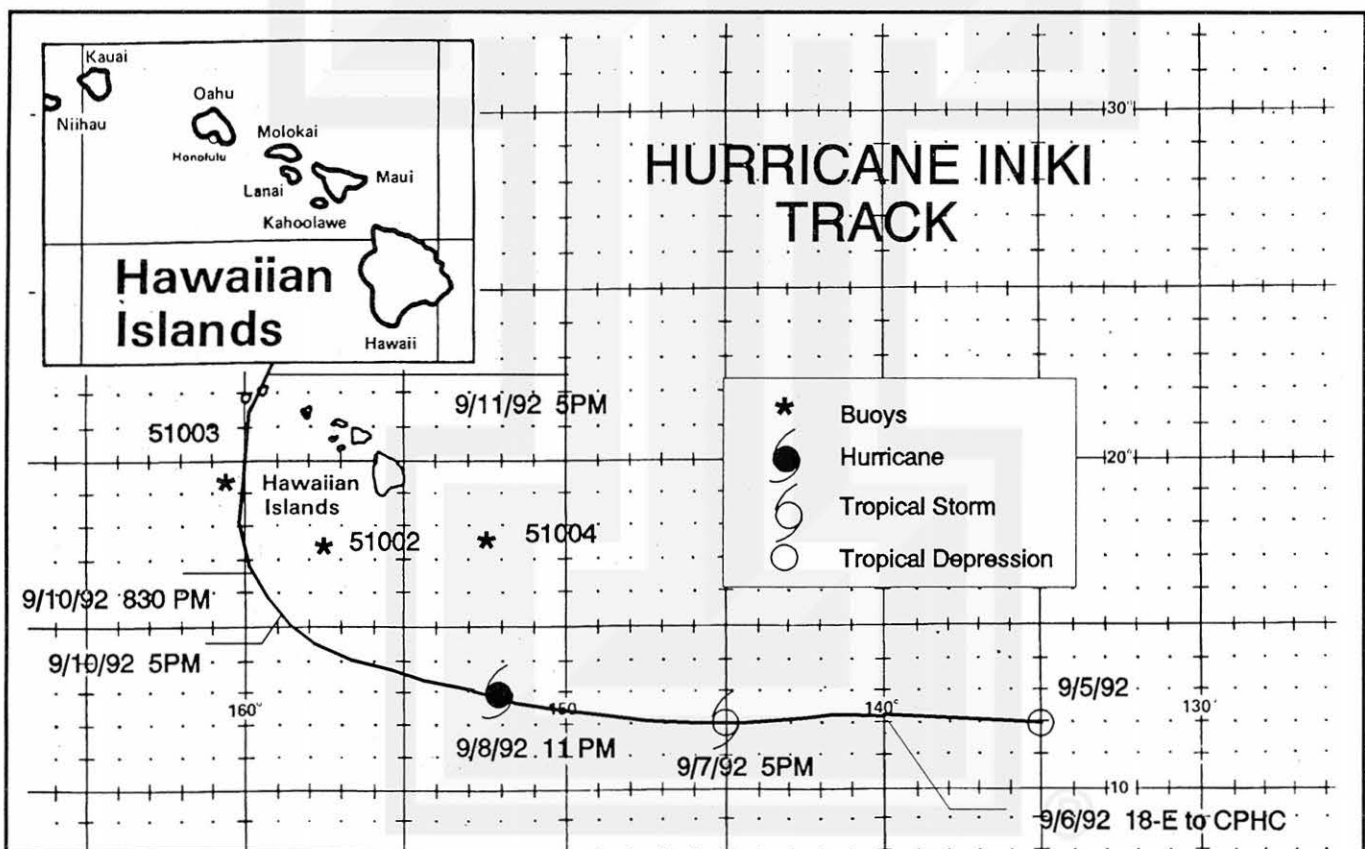


# OUTSTANDING STORMS OF THE MONTH

## 1. HURRICANE INIKI STRIKES HAWAII

The most powerful Hawaiian hurricane in recent history moved over the Hawaiian Islands during the afternoon hours of September 11. Iniki moved across Kauai in a south-southwest to north-northeast direction. The eye crossed the coast in the Waimea area about 3:30 p.m. HST and departed over Haena about 40 minutes later. Estimated maximum sustained winds were 140 mph with gusts to 175 mph (a category 4 hurricane on the Saffir/Simpson Scale which is not considered valid for the Pacific Islands).

Iniki caused \$1.8 billion in damage. Even though the hurricane force winds were confined to the island of Kauai, all the other islands in the state experienced some damage from strong winds and heavy (4 - 6 foot) surf. The Red Cross reported 1,421 homes were destroyed on Kauai with 5,152 homes receiving major damage and 7,178 homes receiving minor damage. Sixty-three homes were destroyed by wave and storm surge on the south coast of Kauai. Damaged crops included: sugarcane, papayas, and other assorted plants, fruits and tropical nuts. Iniki killed 3 people and injured 100.



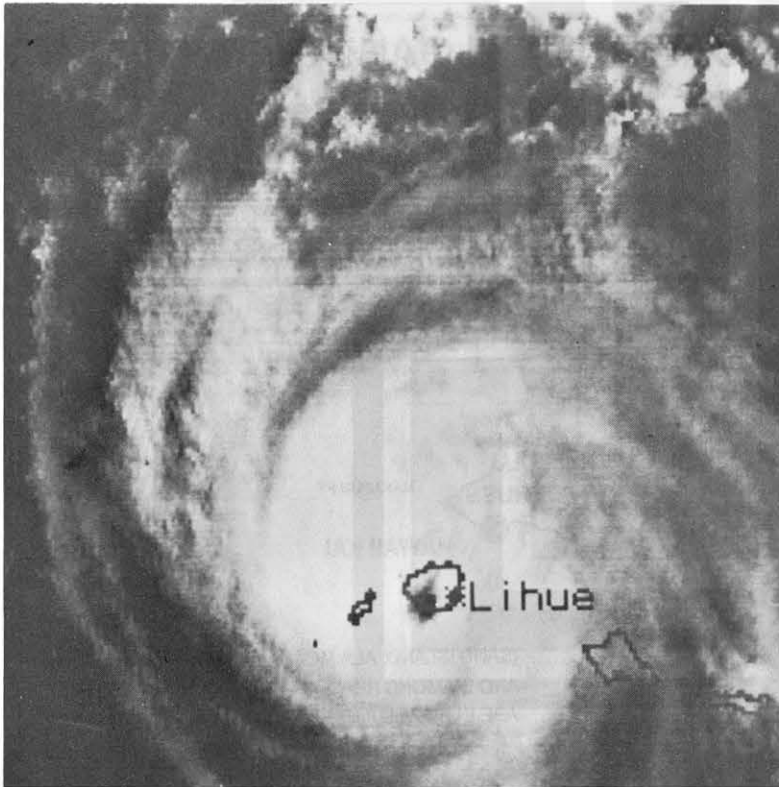
Track of Hurricane Iniki.

# HISTORY OF HURRICANE INIKI

Hurricane Iniki formed from Tropical Depression Eighteen-E on September 5, 1992. On that date, the depression was situated near 12°N 135°W, or about 1600 miles southwest of Baja California. It is possible that this depression originated from a tropical wave that moved off the western coast of Africa on August 18. The National Hurricane Center tracked the movement of the wave for the next week as it moved across the Atlantic. The tropical wave then drifted over the northern sections of South America where it became diffuse and difficult to track. The system then moved across Central America and into the Pacific on August 28. Initially, Tropical Depression Eighteen-E was estimated to have winds near 25 mph and was moving westward at 10 mph.

The circulation was upgraded to Tropical Storm status at 5 p.m. HST on September 7. After continued intensification and an increase in forward motion to about 15 mph, Iniki became a hurricane at 11 p.m. HST on September 8. At this time, Iniki was located near 13°N 152°W, or 510 miles south-southwest of Hilo and moving west-northwest at 15 mph.

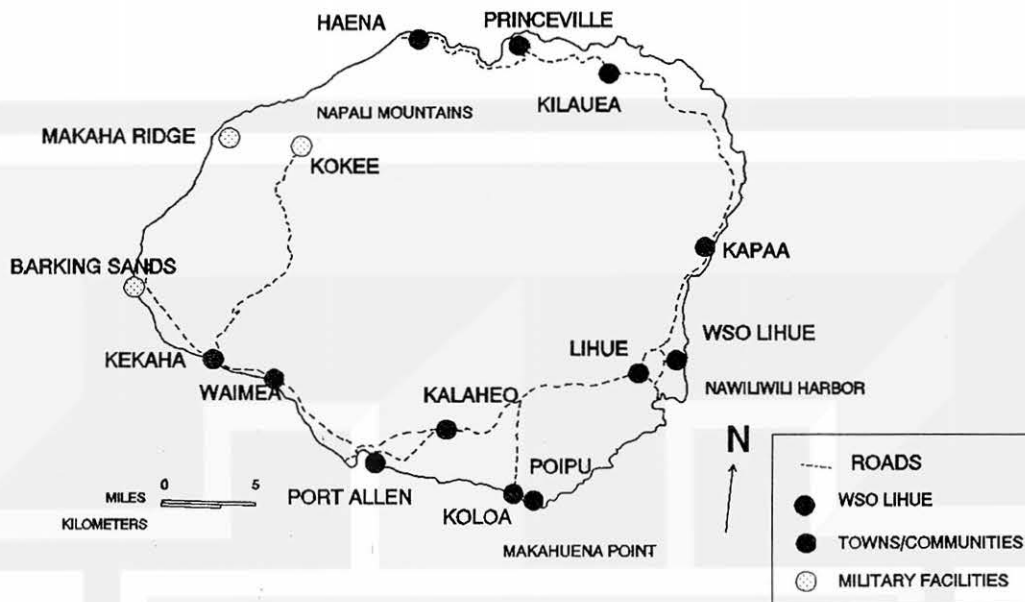
The subtropical ridge, a semipermanent feature that normally keeps hurricanes south of Hawaii weakened and thus allowed the steering winds to shift and eventually turn Iniki on a northward track. During the early morning hours of the 10th, the forward movement of Iniki decreased to 10 mph and was located near 15°N 159°W or 460 miles south-southwest of Honolulu. The central pressure was now 951 millibars. By late afternoon, Iniki's forward motion had slowed even more as it turned northwest. By 8:30 p.m. HST, the hurricane had a more northerly track, and by late morning of the 11th, was located about 140 miles south-southwest of Lihue. Forward movement had now increased to 15 mph with maximum sustained winds of 140 mph and gusts to 175 mph. The central pressure was now down to 938 millibars (27.70 inches) - the lowest pressure ever recorded in a Central Pacific Hurricane.



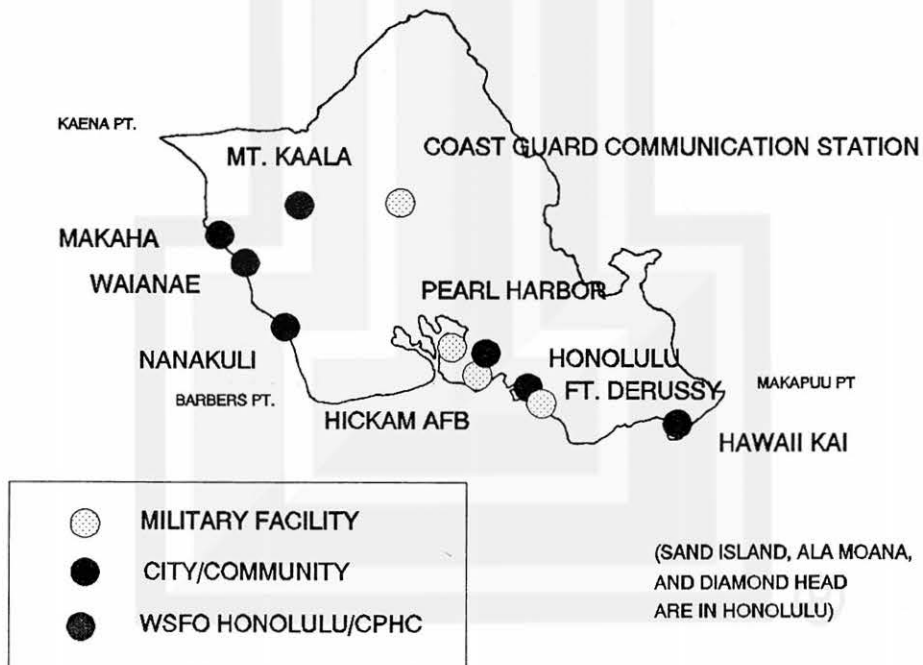
Iniki made landfall on the southwest Kauai coast, in the Waimea area, about 3:30 p.m. HST. The central pressure had risen to 945 millibars by the time of landfall. Iniki accelerated rapidly northward reaching a forward speed of 30 mph. The eye was back over the water at 4:10 p.m. HST. All warnings were discontinued by 11 p.m. HST. Iniki was downgraded to tropical storm status at 2 a.m. HST on the 13th and to extratropical status at 11 a.m. By September 15, it had become a northeasterly moving extra-tropical low.

**Left:** An AVHRR (Advanced Very High Resolution Radiometer) composite satellite image of Iniki at 3:00 p.m. HST on September 11, 1992. (Photo courtesy: Ralph E. Meiggs)

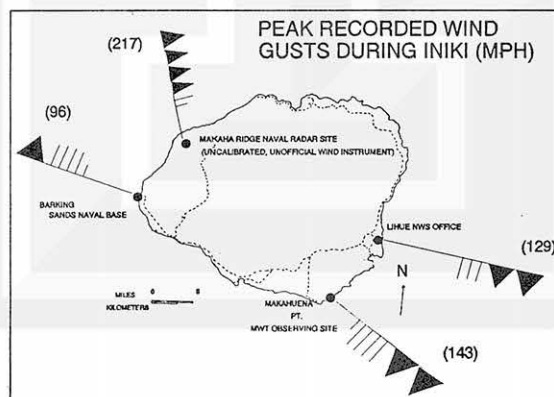
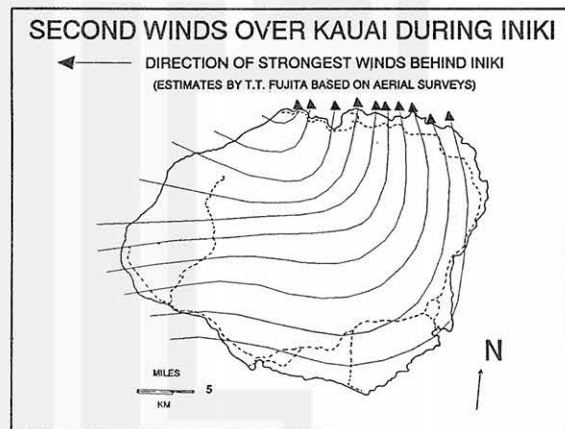
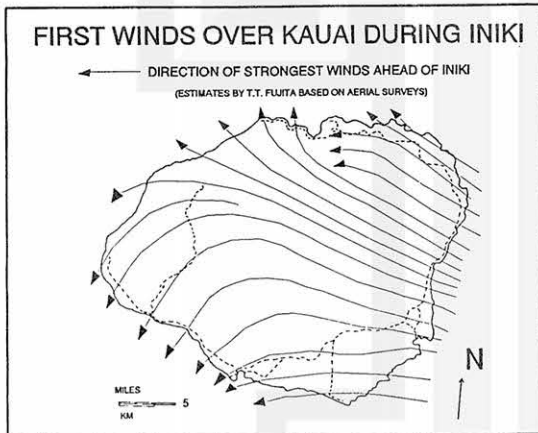
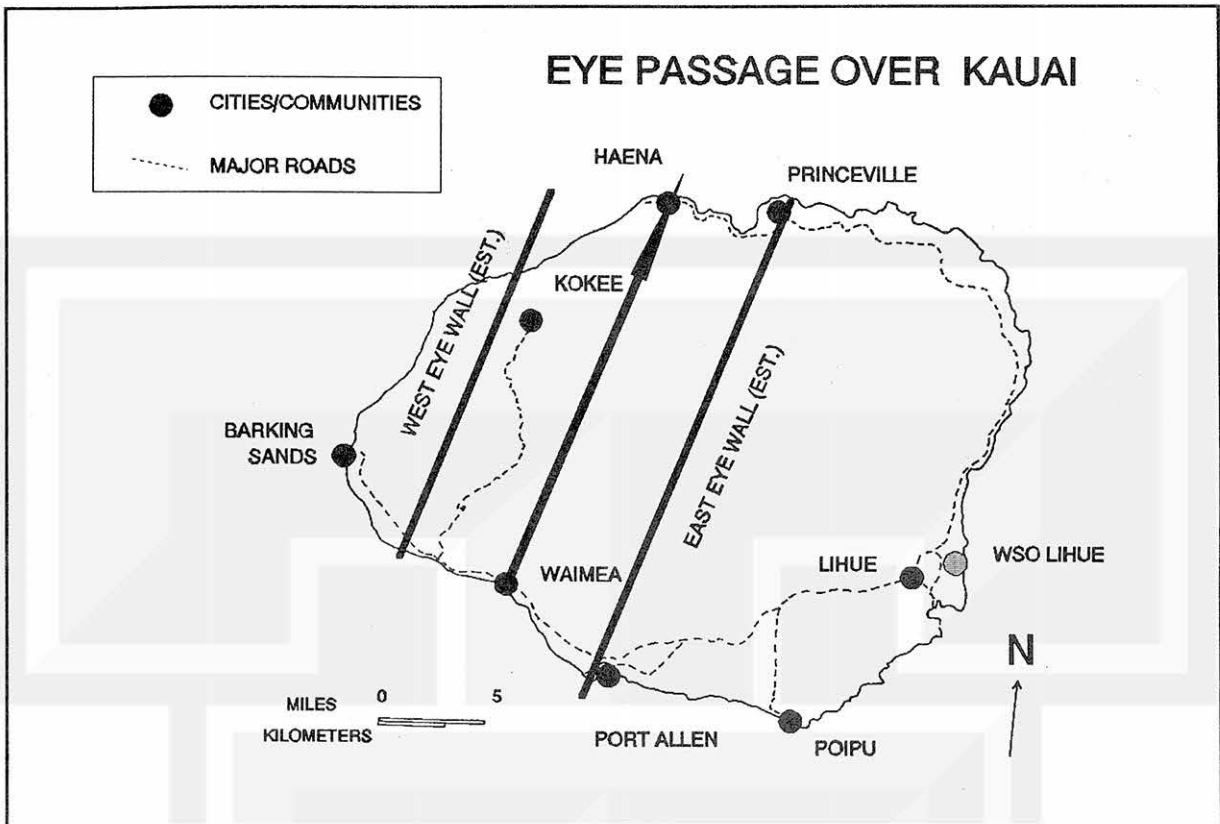
## SIGNIFICANT LOCATIONS ON KAUAI



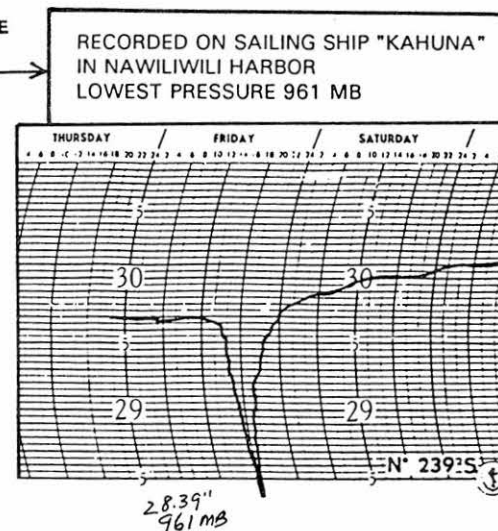
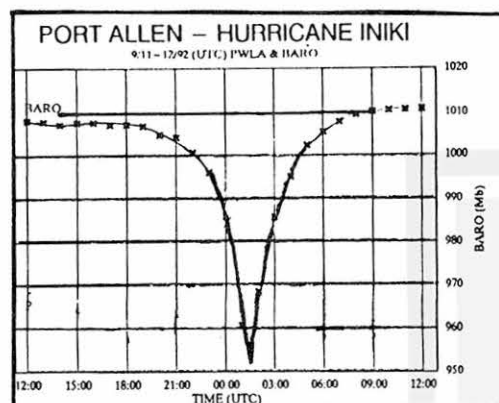
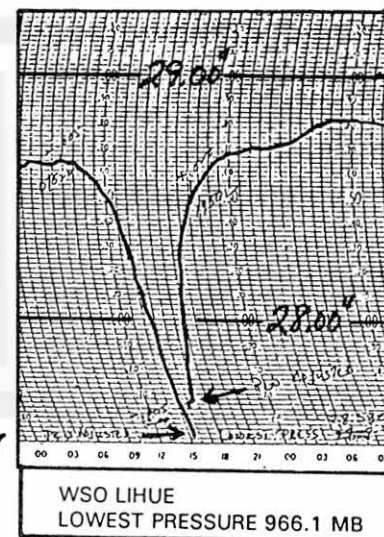
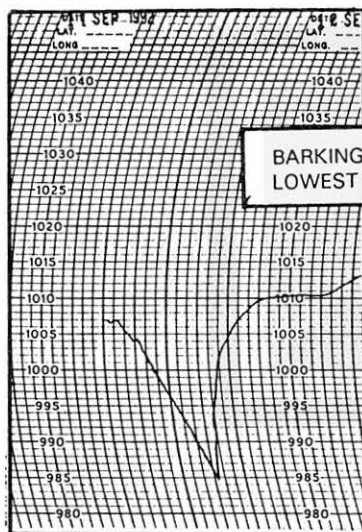
## SIGNIFICANT LOCATIONS ON OAHU







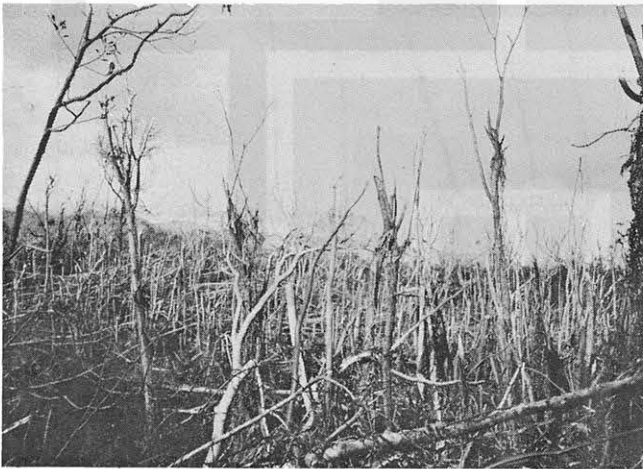
# KAUAI



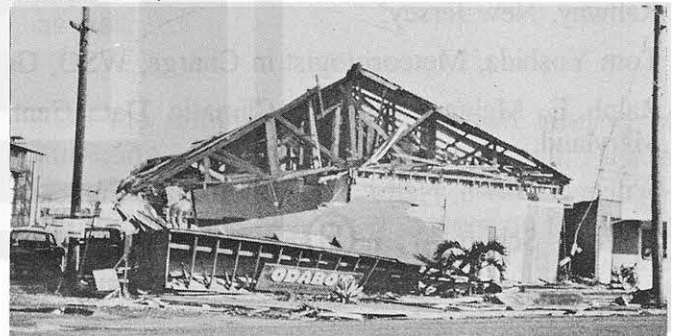
# EXAMPLES OF DAMAGE CAUSED BY HURRICANE INIKI

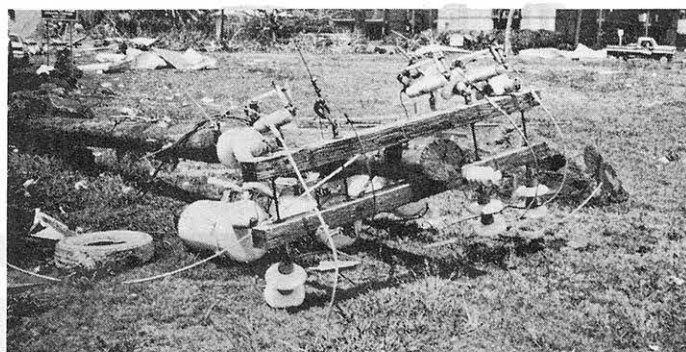


**Above(both):** Wind damaged beach front property and scattered roof debris. *(Photo courtesy: Property Claim Service)* **Left:** Tree damage along Highway 56, west of Kilauea. **Below:** Damaged vehicles at the Sheraton in Poipu. *(Photo courtesy: William Alder)*

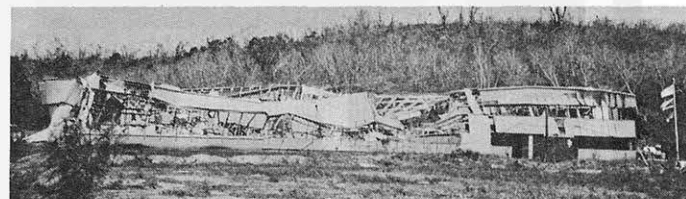


**Left:** Hurricane Iniki's winds damaged this condominium in the Princeville area. **Below:** A downtown business in Kapaa damaged by Iniki's winds. *(Photo courtesy: William Alder)*





**Above:** Iniki's strong winds produced widespread damage. Notice the scattered debris from the various structures as well as the coastal road blocked by sand! **Above(right):** Downed telephone and electrical poles were a common sight across the Kauai. **Right:** A warehouse in Lihue collapsed due to the force of the wind. *(Photo courtesy: William Alder)*



## A SPECIAL THANKS

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William H. Haggard, Certified Consulting Meteorologist, Climatological Consulting Corp., Asheville, North Carolina;

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William Brown, National Climatic Data Center, Global Analysis Branch, Asheville, North Carolina;

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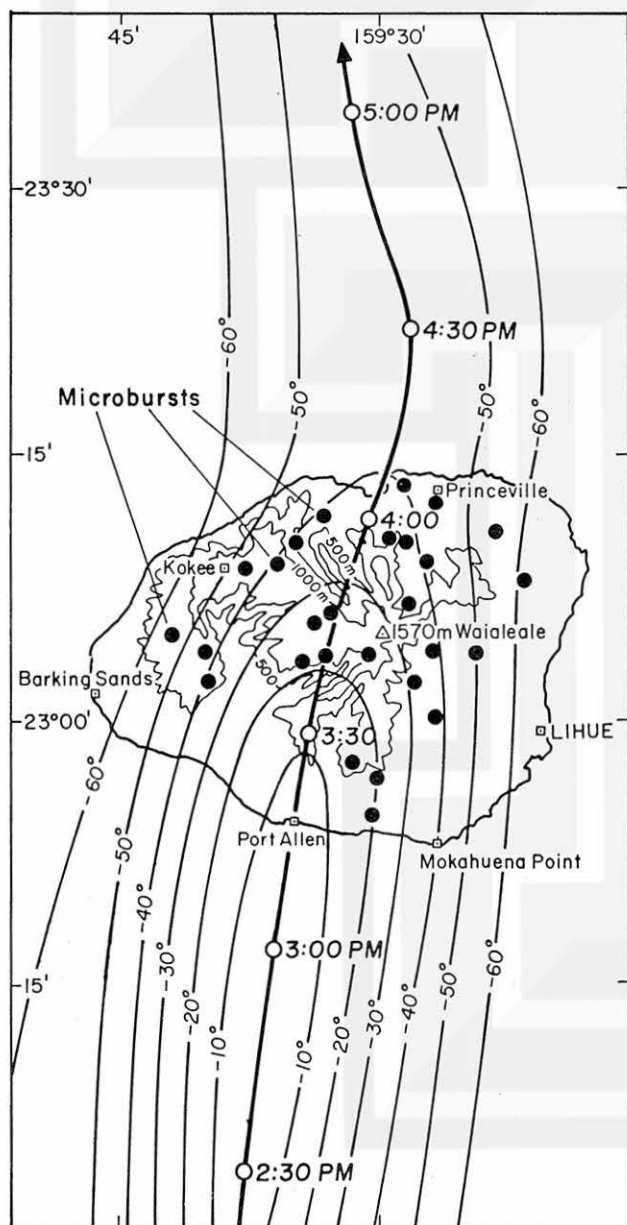


## Damage Survey of Hurricane Iniki in Kauai by Ted Fujita

In the afternoon of 11 September 1992 hurricane Iniki passed, from south to north, across the Garden Island of Kauai. Although, its exact path cannot be determined due to the lack of radar data, the path of the eye can be estimated by mapping the maximum cloud-top temperature measured by GOES 7 at 30-min intervals during the passage of the eye (See cloud-top temperature map shown below).

The warmest temperature inside the eye was  $-4^{\circ}\text{C}$  at 3:00 p.m. prior to the landfall. Thereafter, the eye broke up while moving over the central mountains of the island. During this stage, approximately 3:00 to 4:30 p.m. Hawaii time, a large number of microbursts occurred on the island. It is likely that the convective towers on the eyewall induced those microbursts during their fast-collapsing stage.

Cloud - top Temperature ( $^{\circ}\text{C}$ )



Microbursts were confirmed mainly based on the following aerial photographs.

- (1) 380 color photos in 9" x 9" size
- (2) 472 infrared photos in 9" x 9" size

**By Air Survey Hawaii**

- (3) 2,800 color photos in 35-mm size

**By Duane Stiegler of Fujita's Wind Research Lab**

- (4) In addition, several microbursts were investigated by Fujita during his anniversary visit to Kauai on 12-14 September 1993.

Locations of the Iniki microbursts which touched down during the first and second winds are shown in the map to the left and in the folding color map in this issue.

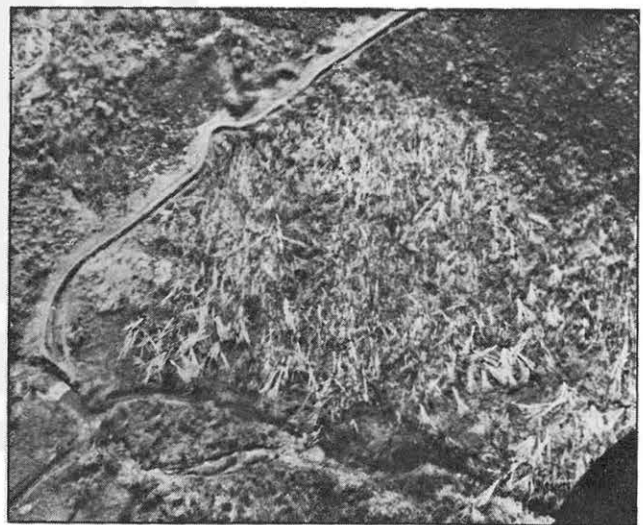
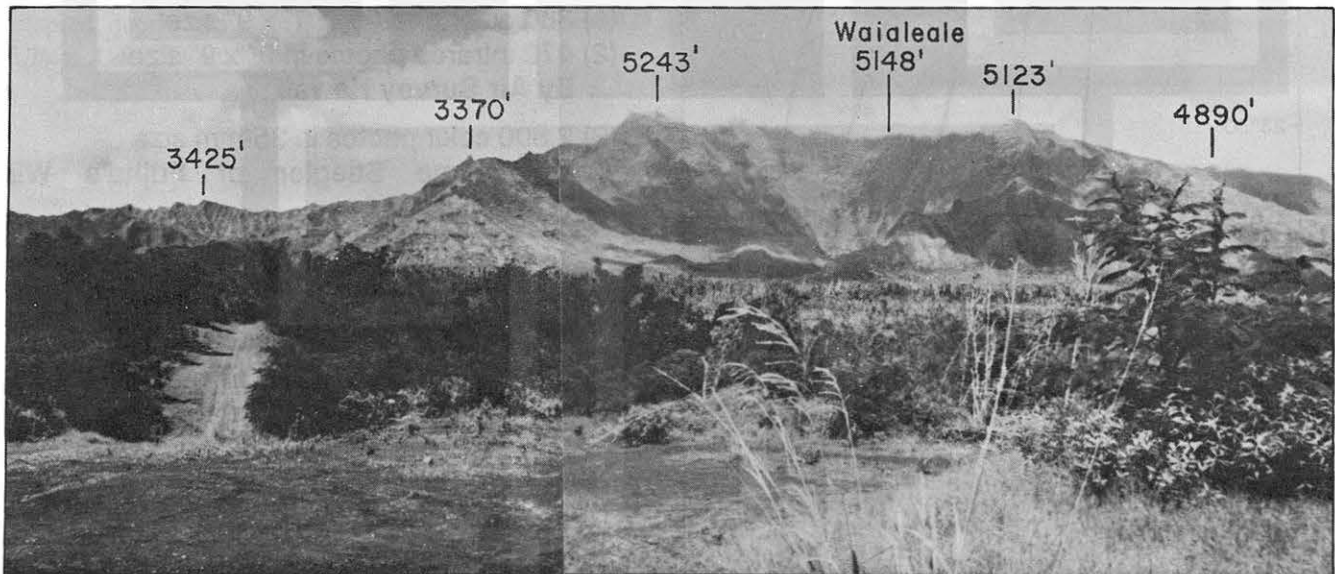
In general, horizontal dimensions of the Iniki microbursts were relatively small, less than 2 kilometers across. Some were very damaging in their small touchdown areas where the topsoil was blown off, trees blown away, and houses blown apart. Furthermore, microburst winds in mountains descended deep into canyons, uprooting trees on the slopes and at the bottom as well.

On the contrary to the pre-dawn landing of hurricane Andrew in south Florida, Iniki's damaging winds occurred during the mid-afternoon hours. Those who were on the island of Kauai witnessed the awesome fury of the damaging winds, recording scenes of destruction at various locations.

## The Roof of Garden Island

Based on the rainfall collected by the raingauge atop the 5,148' (1570 m) Waialeale, the roof region of Kauai is known as the wettest spot on the earth. The wet plateau of Alakai Swamp extends over 10 miles toward the west-northwest from Waialeale to near Kokee. Because of the orographic clouds which develop in the trade wind continuously, some areas north and west of Waialeale have not been photographed from the air. Ground access to the area was not possible after the storm.

The ground picture (below) of the central mountains was taken on 14 September 1993, from 4.8 miles ESE of Waialeale. Two Civil Defense officials, Sonny Gerardo and Edwin Petteys, escorted Fujita to the restricted area overlooking the roof of Kauai. The bottom-left picture by Stiegler shows the high-elevation slope, stripped of native ferns, and low vegetation. The other photo (bottom-right) by Stiegler shows the damaged trees of Microburst No. 5 in the Wailua River Valley, 1.5 miles closer to Waialeale.

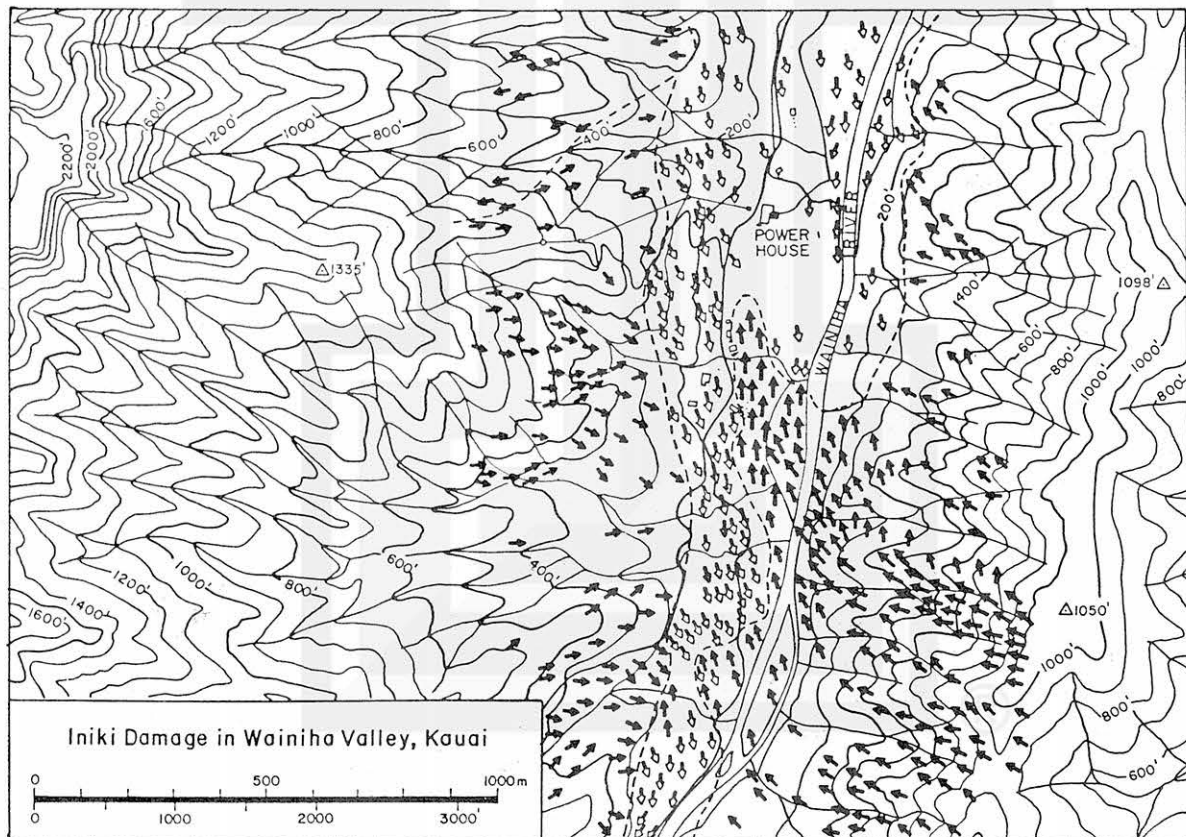
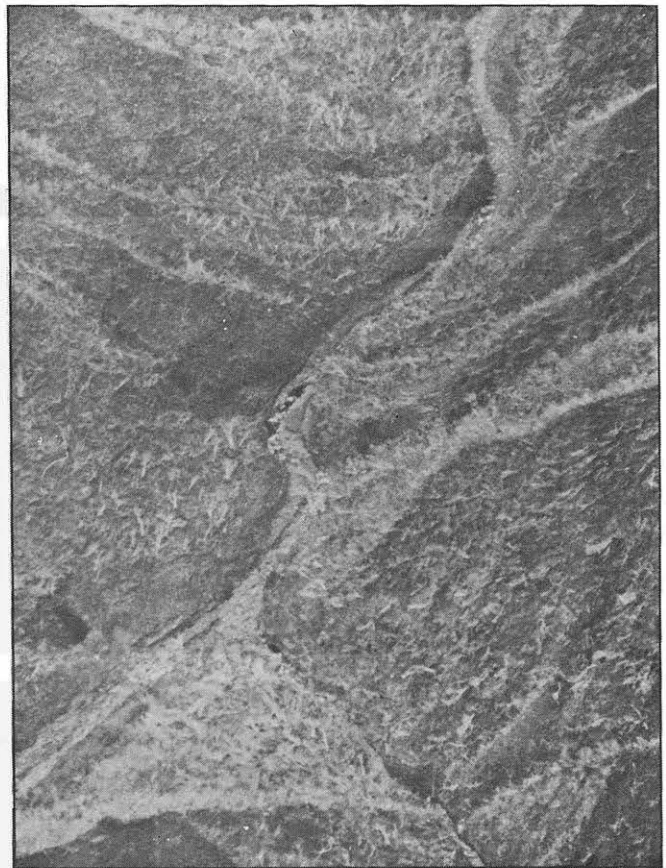


## Microbursts in Canyons

Winds in a microburst consist of a core of downflow and violent outburst winds on the ground. When a downflow descends into a canyon, the microburst winds blow down trees on the steep canyon walls and those at the bottom of the canyon floor.

The right-side photo taken by Stiegler shows numerous trees inside the 3,000' deep Olokele Canyon blown down by Microburst No. 8, one mile to the southwest of Waialeale.

A damage map below by Fujita shows the directions of trees uprooted by Microburst No. 22 which touched down atop the 1,050' ridge on the east side of Wainiha Valley. Intense outburst winds descended on the steep slope toward the northwest. Fortunately, the winds weakened approximately 700' short of the hydroelectric power house in the valley. The pattern of the damaging winds inside the valley was very complicated, consisting of the northerly first winds (open arrows) and easterly and westerly winds on both slopes of the valley.



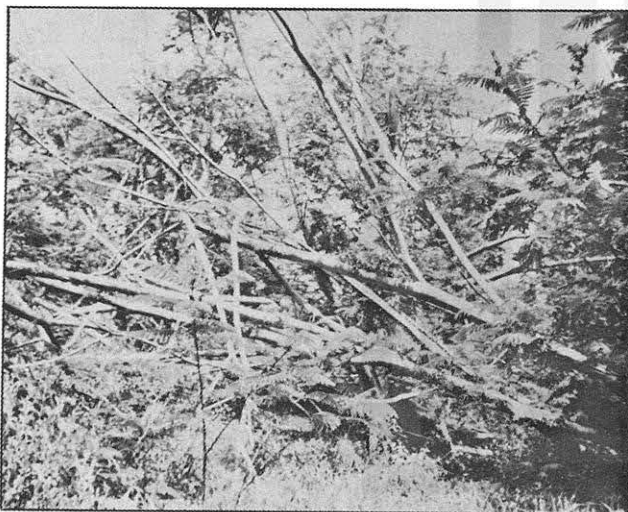
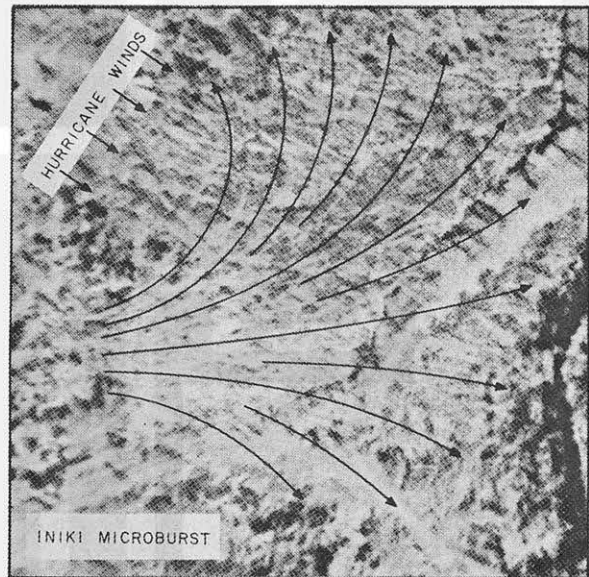
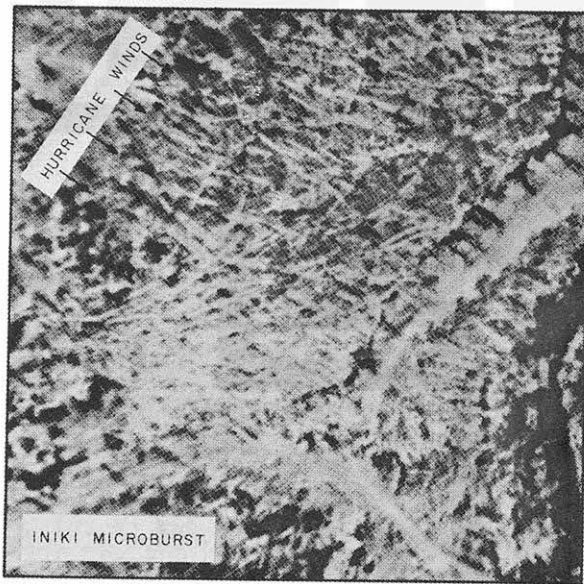


## Microburst in Albizzia Forest

One of the most beautiful patterns of microburst winds was made visible by the albizzia trees blown down by Microburst No. 4, which descended to the southwest of Wailua Reservoir with its water level at 472' MSL. The touchdown area was covered by albizzia trees in dense forests.

The upper aerial photographs, enlarged from a 9" x 9" color photo by Air Survey Hawaii show the evidence of Iniki's first wind from the southeast (upper-left). It is of interest to find the curvature of the tree trunks, frozen into the curved direction of the final wind.

The lower pictures, taken on 14 September 1993 by Fujita inside the microburst area, present close-up views of the albizzia damaged by the microburst. Albizzia grows very fast under the tropical sun with their light-weight, flexible, small trunks. Their multiple leaves are small and trees often grow to 30 to 50' tall. They turned out to be excellent indicators of the final damaging winds of Iniki and embedded microbursts. It was seen, during the anniversary visit, that most albizzia trees have been growing back fast. They will be ready to serve again as excellent indicators of damaging winds.

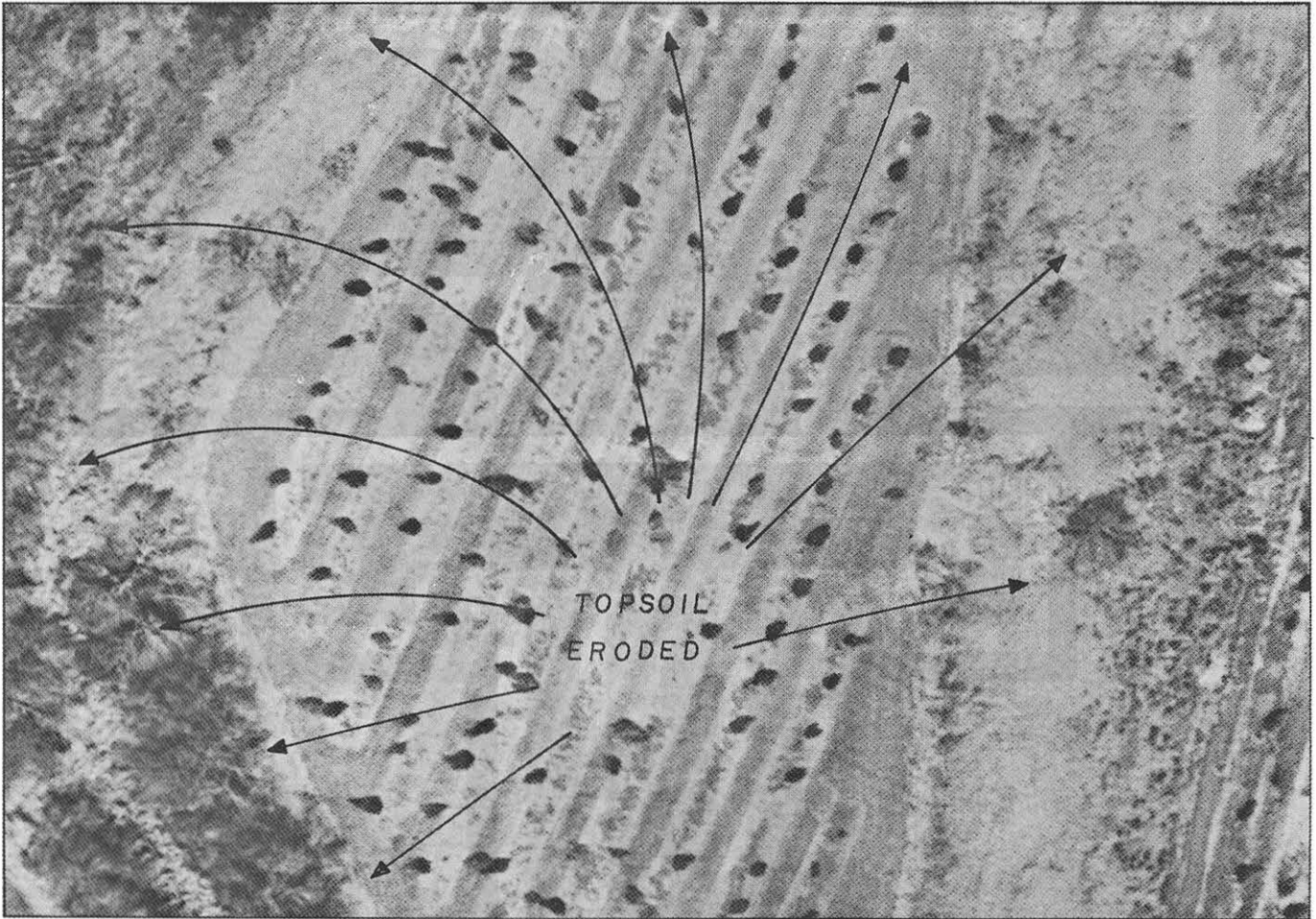




### Touchdown Spot of Microburst (1)

Macadamia-nut trees have been grown in a number of large farms on the south side of the island. However, the 10 to 15' clumpy trees (lower left) failed to withstand the Iniki winds. Some abandoned their farms after Iniki (lower

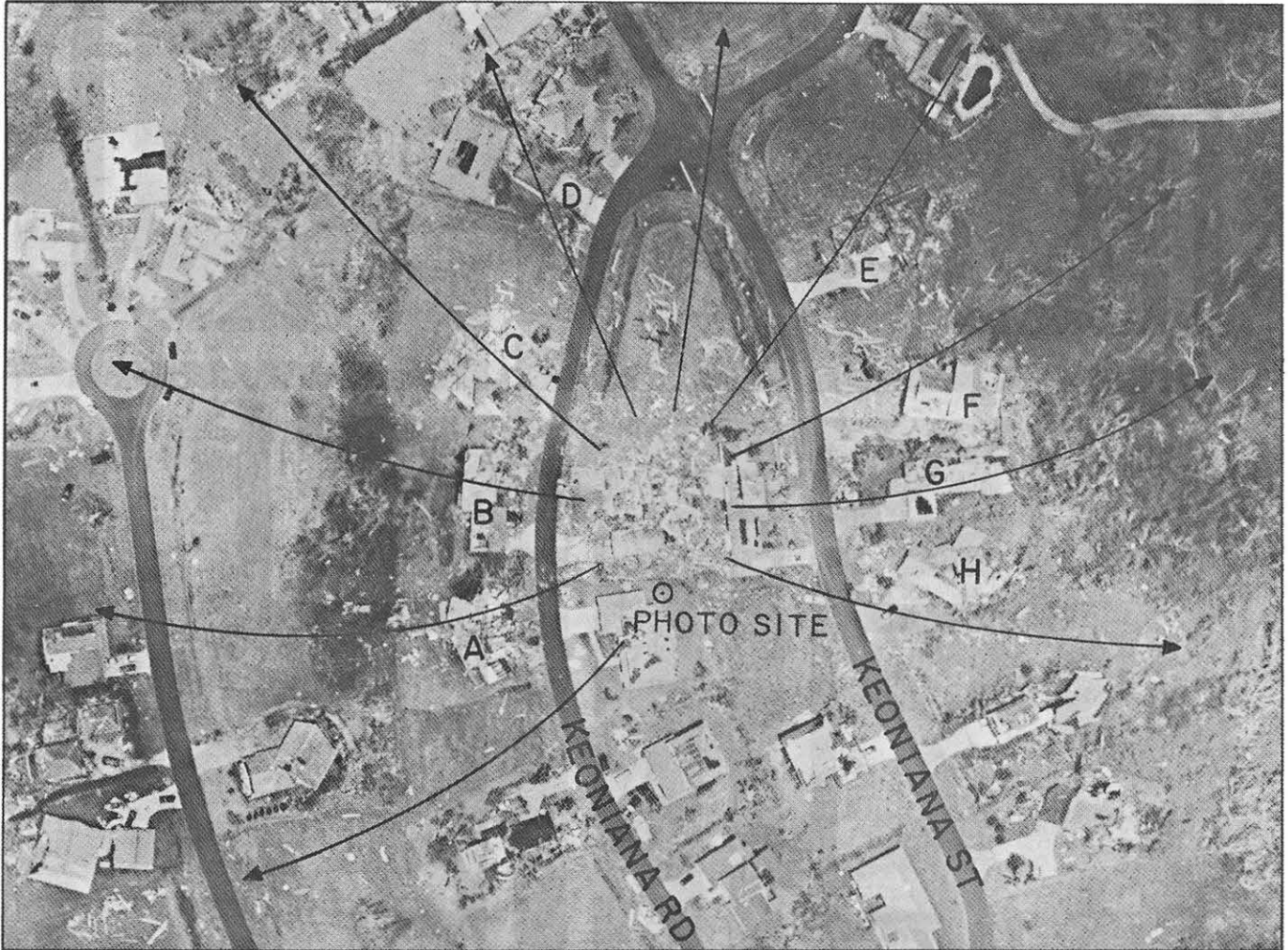
right). An aerial photo (below) shows the starburst pattern of uprooted and blown-off trees in Microburst No. 1 south of Lawai. Note that the topsoil at the touchdown spot was eroded.



## Touchdown Spot of Microburst (2)

Another violent spot of microburst touchdown is seen in an aerial photo looking north at the top. A house at the touchdown spot was literally blown apart, spreading high-speed debris in starburst directions. The reinforced block wall of house "G" was bombed by the

high-speed debris from the west and destroyed. The roof of house "A" flew away westward. Fujita's anniversary photo, taken at the Princeville site, reveals a large vacant grass field surrounded by houses A-H which have been restored.



## Flight of the Roof at Princeville

The scene of the roof of a house in Princeville blown away by the Iniki wind and video-taped by Mr. Dean Marshall of San Francisco. The continuous and steady scene used in this research lasted about 3 minutes or 180 seconds. Fujita's anniversary visit to the house

on 14 September 1993 revealed that it is a well-constructed two-story house with a square shaped roof atop the second floor. Apparently, the southerly wind from Microburst No. 19 began affecting the roof approximately 60 seconds before the roof began flying away.



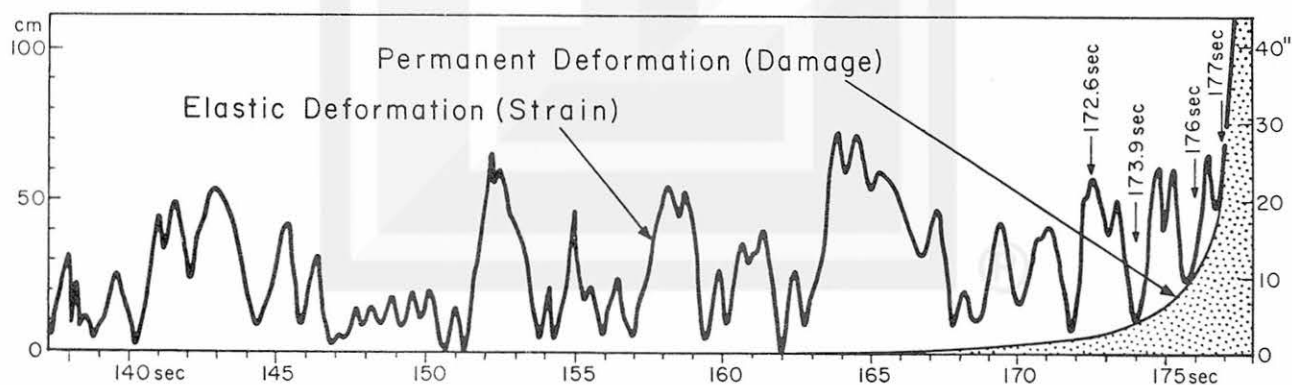
View of the restored house looking west. Southerly winds impinged upon the left-side blew off the roof toward the right.



The roof at 172.6 sec when the bulge was 22" (55 cm), mostly elastic deformation.



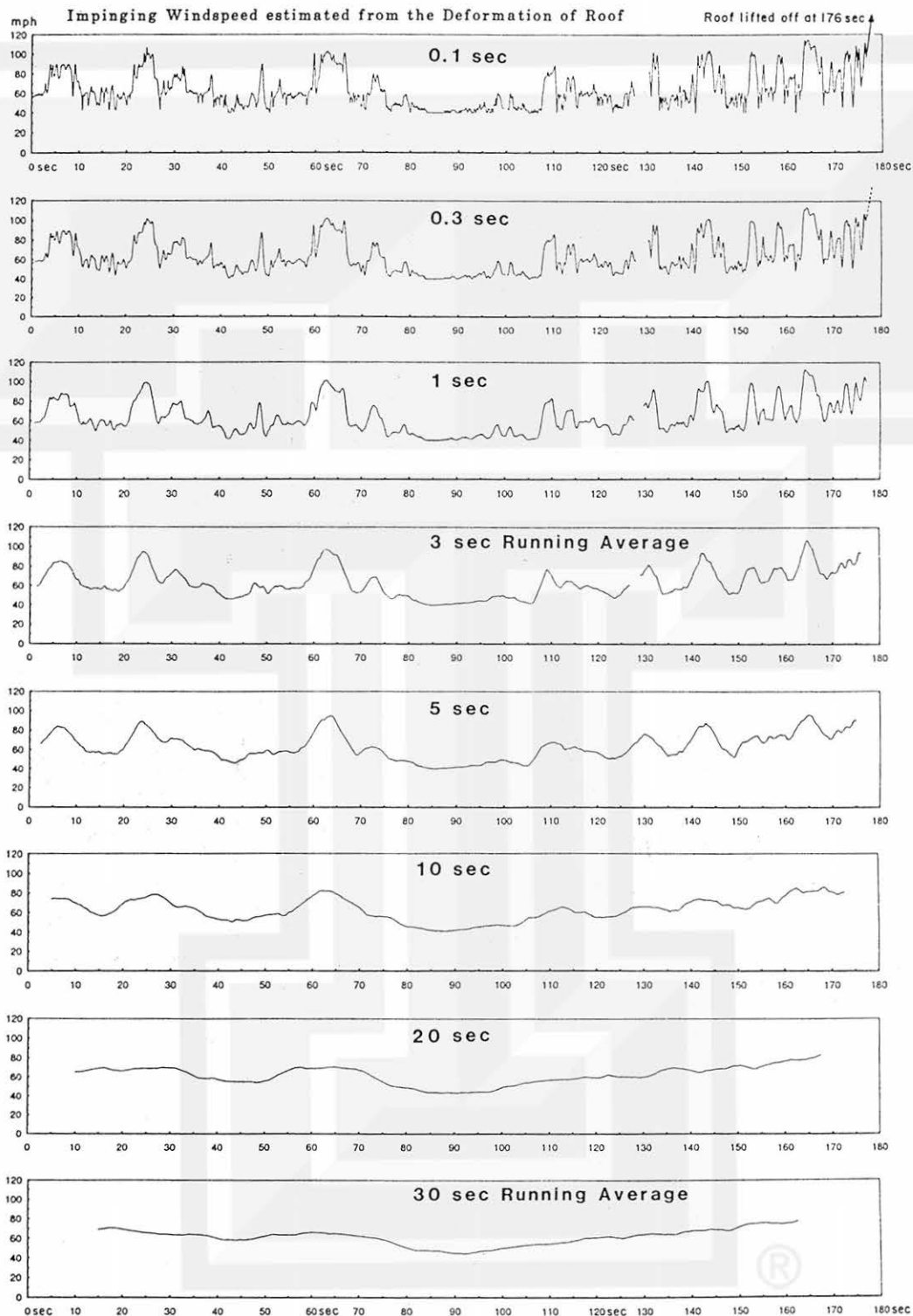
At 173.9 sec, wind diminished and the roof settled down to the 4" (10 cm) bulge.



Bulging motion of the roof caused mostly by the elastic deformation which disappeared during the dull periods of gusty winds.

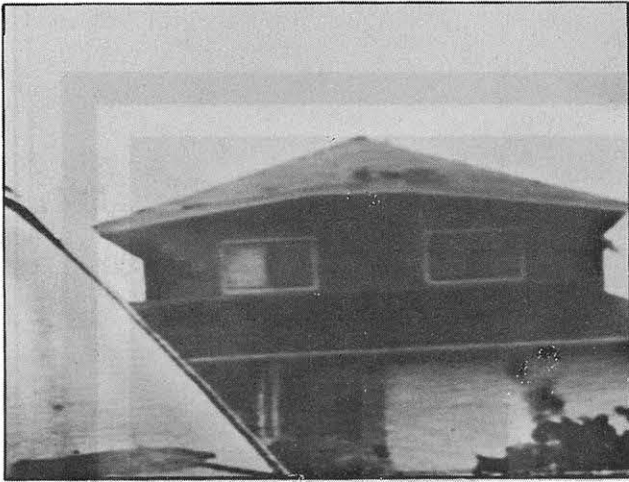


Under the assumption that the elastic deformation (bulge) is proportional to the square of the impinging windspeed while satisfying the following upper and lower bounds, the bulge was converted into the impinging windspeed. Upper bound: The roof left the house at 120 mph windspeed. Lower bound: No bulge occurred when windspeed was 40 mph or less.

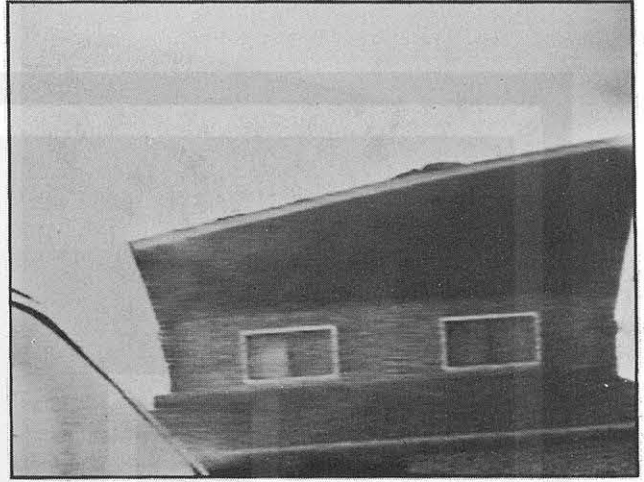


# Flight of the Roof Part 1 (1.4 seconds)

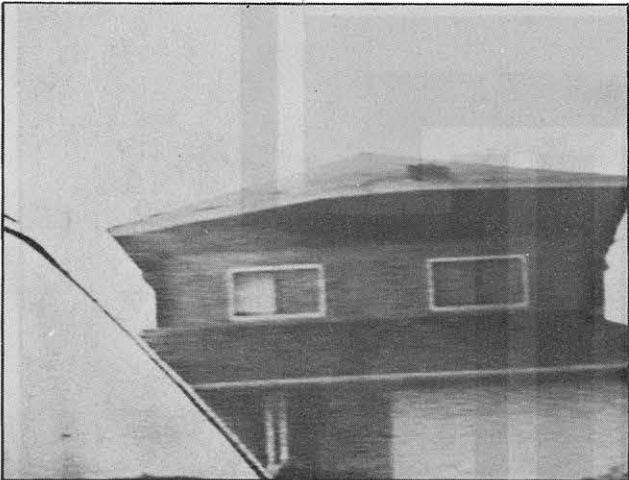
Video courtesy of Mr. Dean Marshall of San Francisco, California



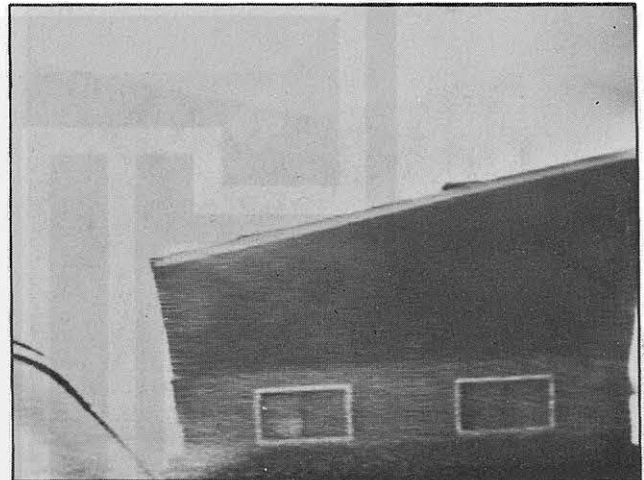
177.0 sec



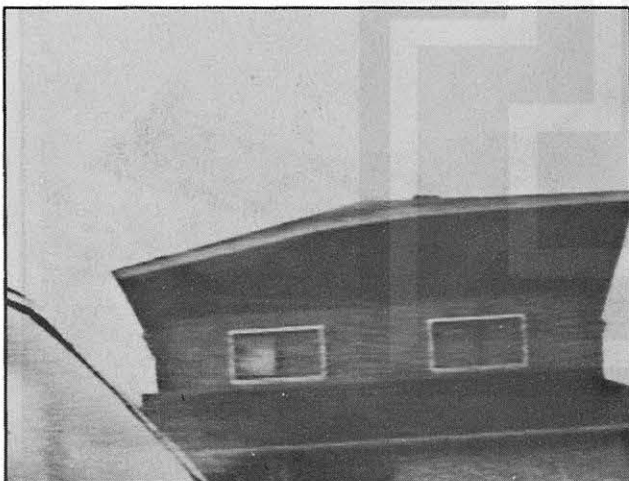
177.8 sec



177.4 sec



178.0 sec



177.6 sec



178.4 sec

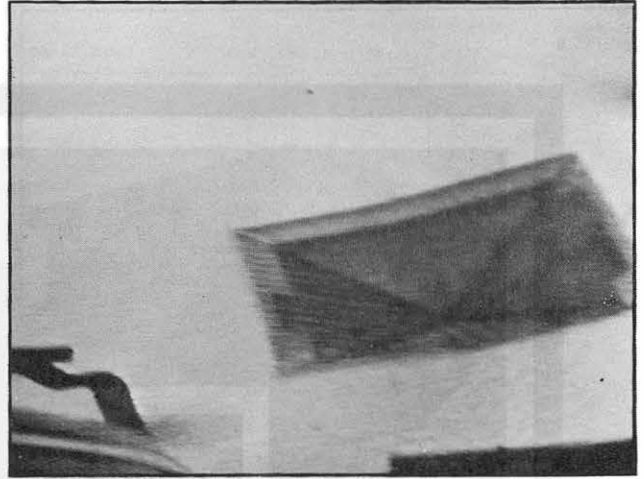


## Flight of the Roof Part 2 (1.0 second)

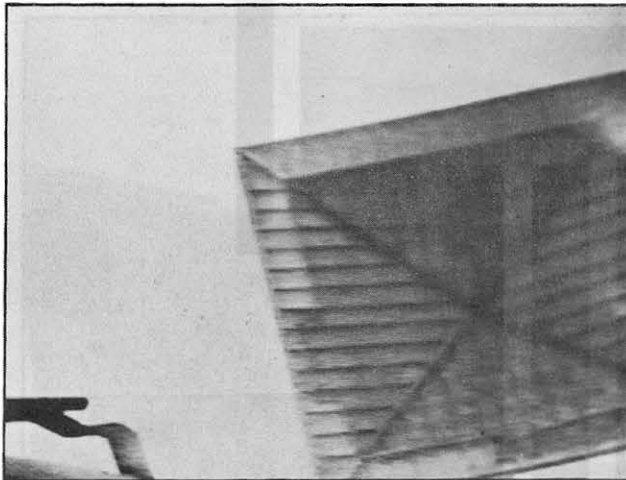
Video courtesy of Mr. Dean Marshall of San Francisco, California



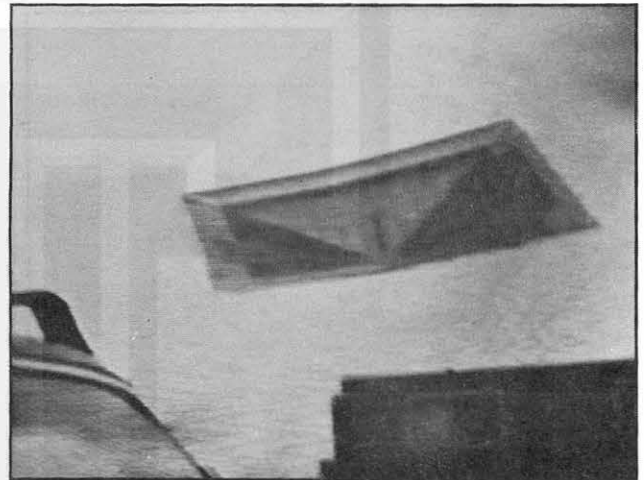
178.8 sec



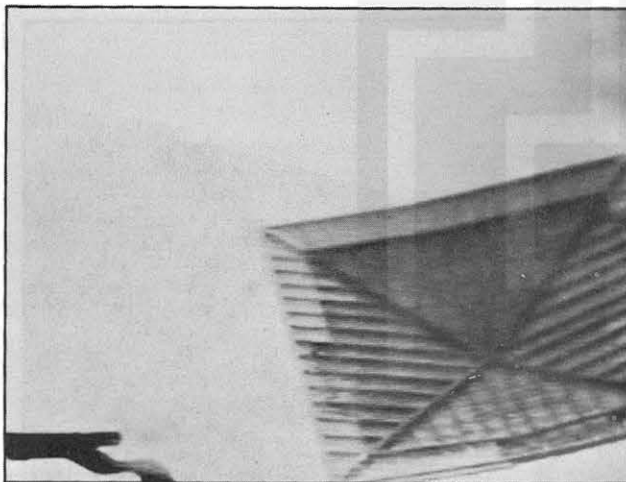
179.6 sec



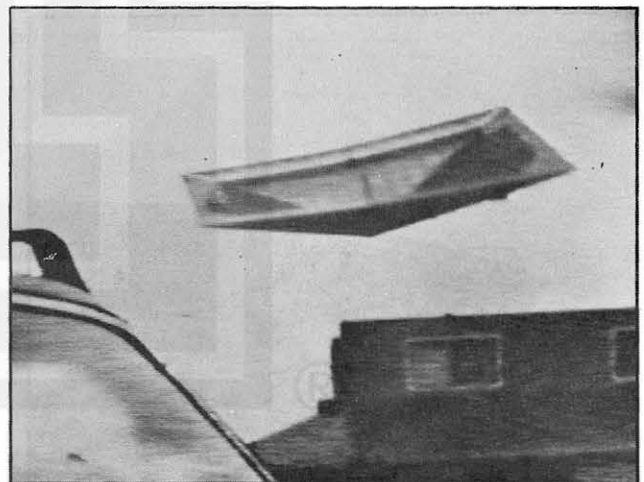
179.2 sec



179.7 sec



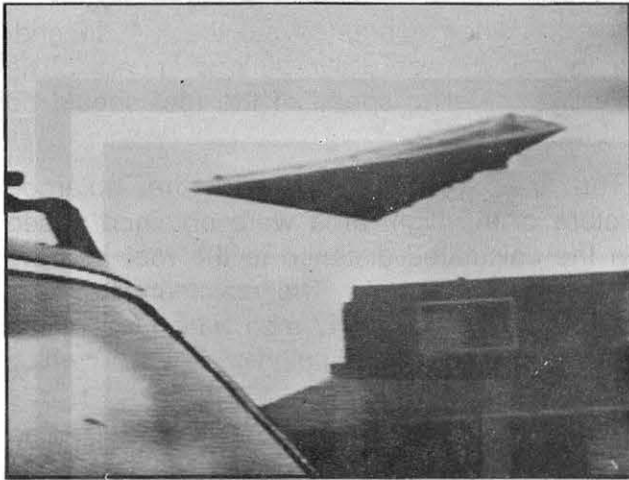
179.4 sec



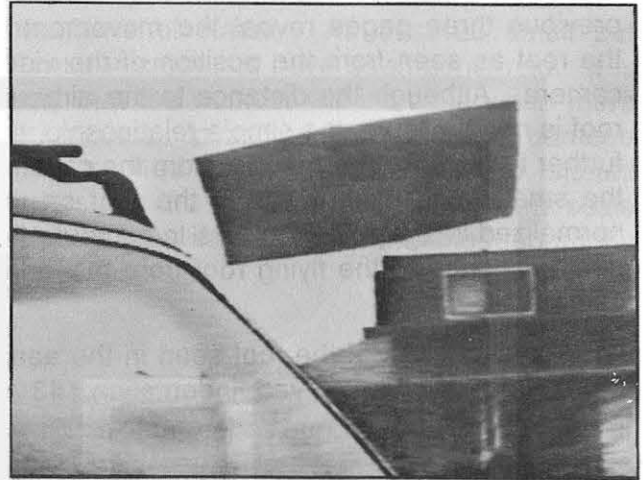
179.8 sec

## Flight of the Roof Part 3 (0.6 second)

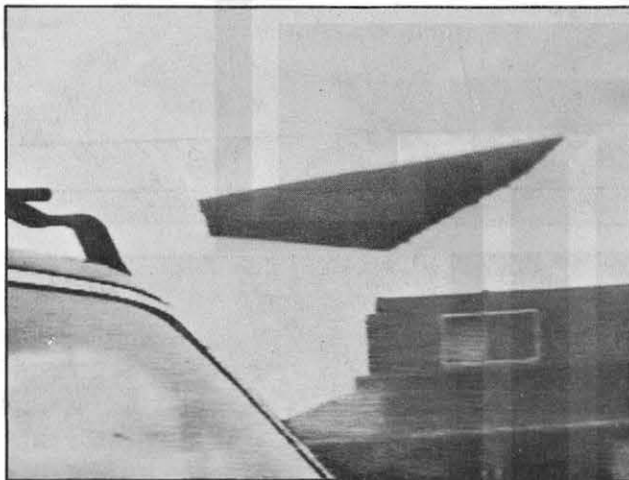
Video courtesy of Mr. Dean Marshall of San Francisco, California



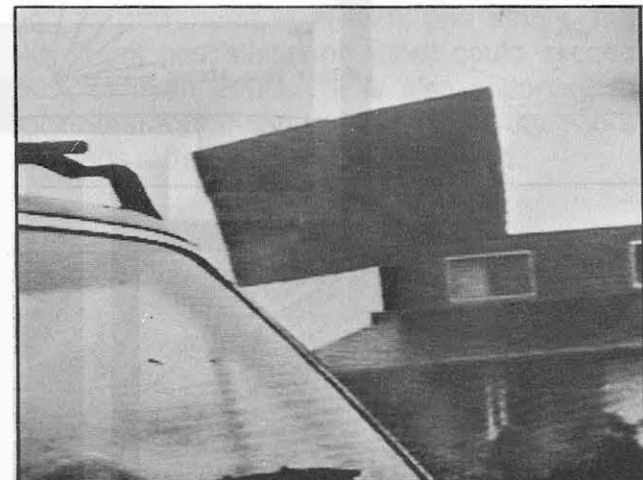
179.9 sec



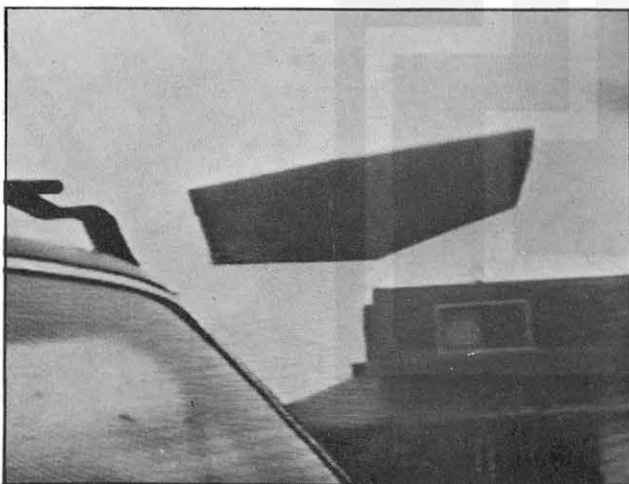
180.2 sec



180.0 sec



180.3 sec



180.1 sec



180.5 sec

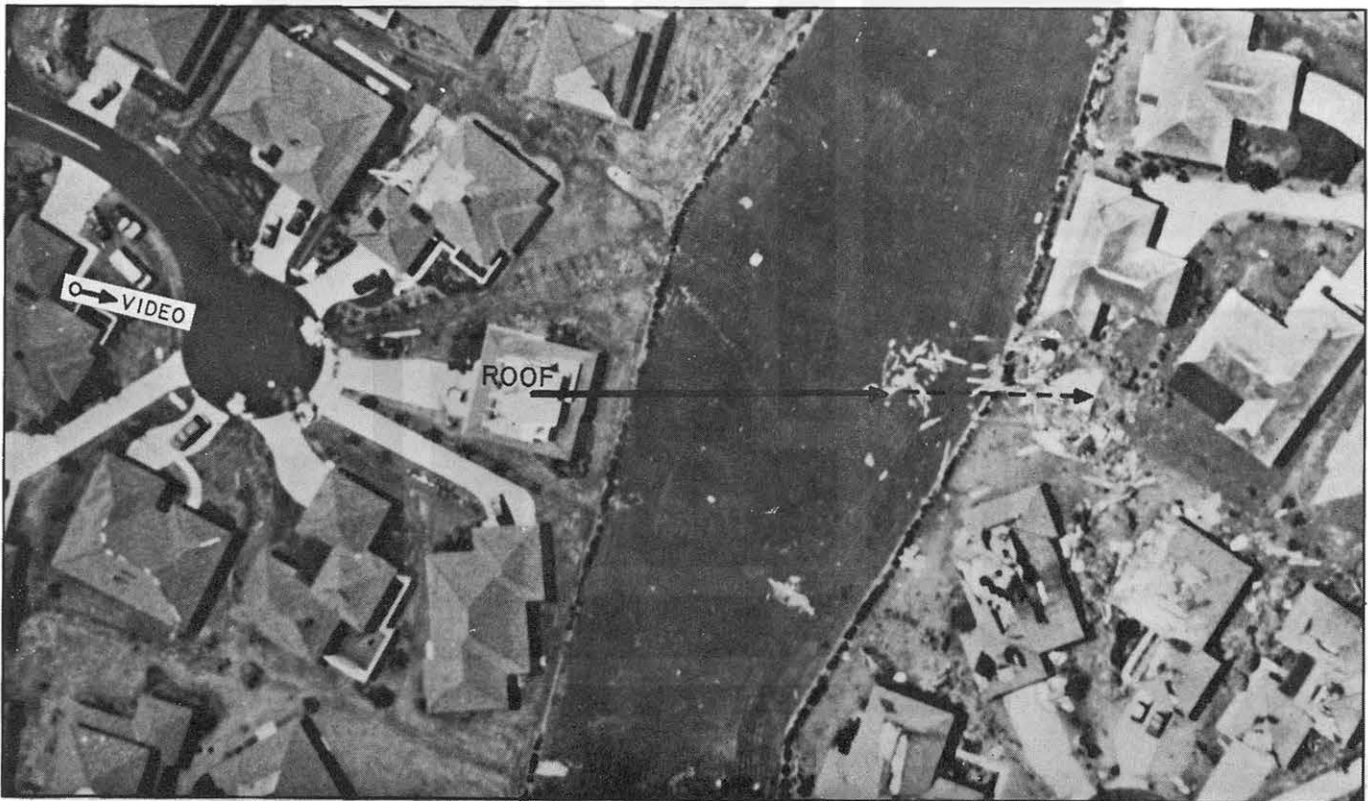
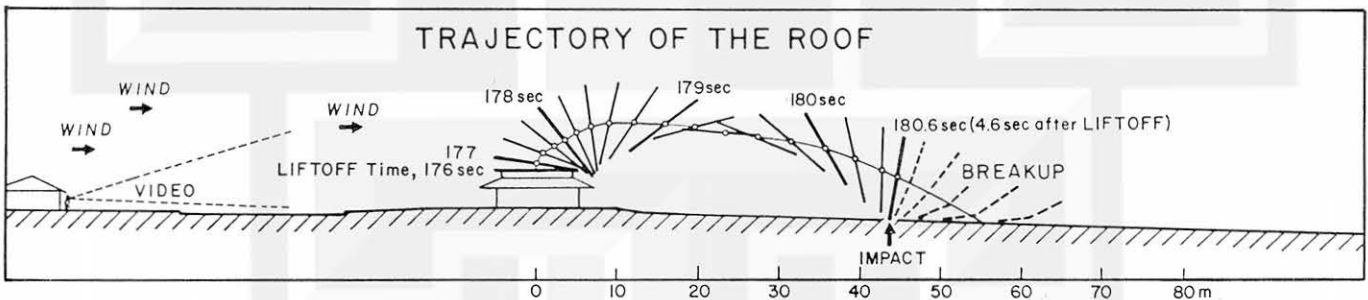
## Photogrammetric Analysis of the Roof

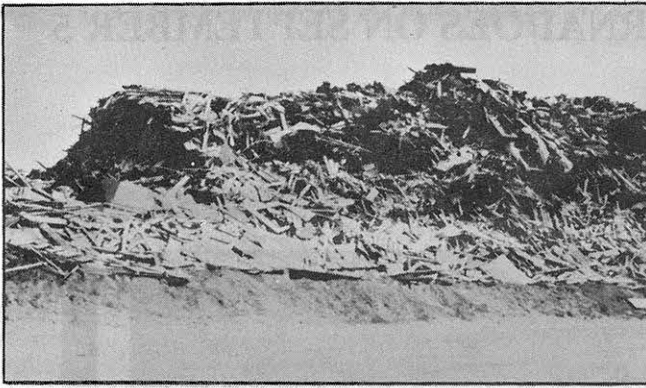
Successive pictures of the roof presented in the previous three pages reveal the movement of the roof as seen from the position of the video camera. Although the distance to the airborne roof is not available, the simple relationship, the further the distance to the roof from the camera, the smaller the dimensions of the roof on the normalized image, will permit us to compute the direct distance to the flying roof from the video camera.

The impact mark of the roof seen in the aerial photo is a slightly curved indentation, 43 m

downwind from the original position of the roof center. Video counts reveal the 4.6 second-flying time between take-off and impact. The average traveling speed of the roof should be 9.3 m/s (21 mph).

The trajectory diagram and the enlarged picture of the flight area were obtained based on the calculated distance to the roof and the attitudes of the roof. The maximum traveling speed of the roof was 47 mph, which was much slower than the impinging wind which accelerated the roof.





Hurricane Iniki left behind unbelievable tons of debris which were piled up into debris mountains soaring at several dump sites all around the island. It will take years before these mountains disappear somehow, restoring the beauty of the Garden Island in the Pacific. Photos taken by Fujita during his anniversary visit to the island in September 1993

### Concluding Remarks

Investigation of the Iniki damage on the island suggests two important aspects of the hurricane winds. They are **hurricane-topography interactions** and **damage-causing wind vs sustained wind**.

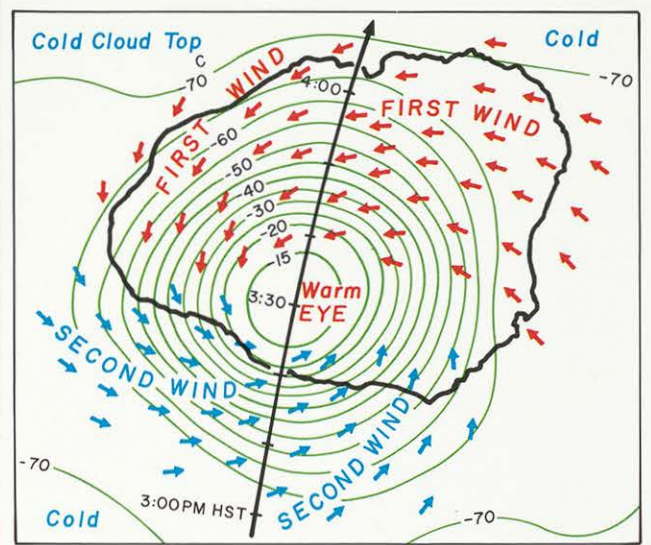
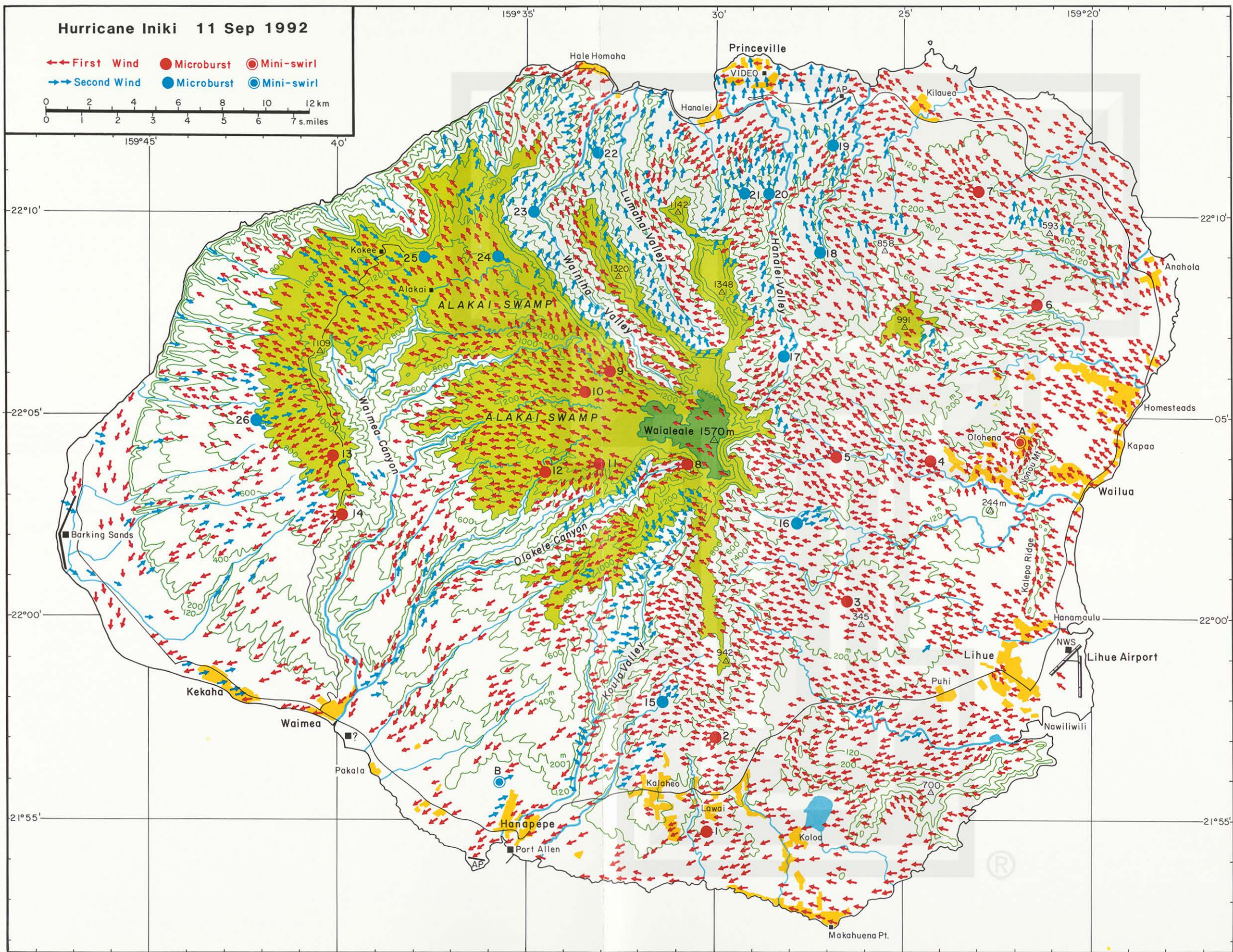
1. Unlike over-water hurricanes, the Iniki eyewall, along with embedded convective towers, weakened and collapsed very rapidly within only one hour while crossing the central mountains of Kauai. At least 26 small but intense microbursts have been confirmed. It is likely that the number will increase when more researchers investigate the local damage photographed after the storm. We should understand the structure of sub-hurricane-scale wind systems induced by hurricane-topography interactions.

2. The windspeed ratio (peak gust/sustained wind) in hurricanes under the influence of topography could be much larger and variable than that of over-water hurricanes. When the peak wind is caused by a specific wind system, such as microburst, mini-swirl, and others, the ratio (peak gust/sustained wind) could exceed 150% or even 200%. It is also important to realize that a roof can be blown away by 1 to 2 sec winds rather than a sustained wind.

### Acknowledgments

The post-Iniki aerial survey by Duane Stiegler and subsequent mapping were sponsored by NOAA/National Weather Service under contract 40AANW204612. Further research with 9" x 9" color photos and infrared photos from Air Survey Hawaii was sponsored by the Office of Naval Research under Grants N00014-91-J1136 and N00014-90-J-1526. Fujita's mapping and research were assisted by Jim Partacz, Jaime Tecson, and Ji Chung of the Wind Research Laboratory. Fujita's anniversary visit to Kauai was arranged by Mr. Paul Haraguchi of the Department of Land and Water Resources, State of Hawaii. The research leading to the completion of this paper was performed at the Wind Research Laboratory, The University of Chicago.

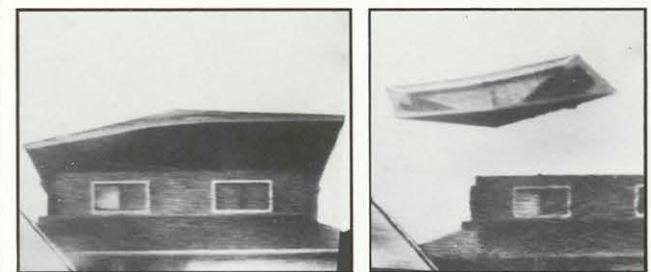




Hurricane-top temperatures measured by GOES-7 satellite suggest that Iniki's eye passed across the center of Kauai in the north-northeasterly direction. Cloud-top isotherms in the above map depict the warm, circular eye at 3:30 p.m. HST on 11 September 1992.

The damaging wind on the front side of the eye (first wind) either reversed or gradually changed into the back-side wind (second wind). The damage map on the left shows the direction of the first wind in red and that of the second wind in blue. In mountain areas, the downslope wind was found more damaging than the upslope wind.

Microburst (small downburst) has been known to endanger aircraft during landing and/or takeoff operations. Unexpectedly, 26 microbursts have been found in Kauai in the wake of Iniki. A video taken by Mr. Dean Marshall from San Francisco shows the scene of a roof at Princeville being blown off by the southerly wind induced by Microburst No. 20 shown in the damage map.



In addition, two mini-swirls (not tornadoes) were found in Kauai. The violent whirlwind, first identified in south Florida after hurricane Andrew of 24 August 1992, could induce a peak wind of 200 mph within a very small area. Iniki was a very complicated storm accompanied by both mini-swirls and microbursts.

Acknowledgements are due to Duane Stiegler for aerial photography, Jim Partacz for mapping and photography, and Jaime Tecson for laboratory assistance. Aerial color and infrared pictures were provided by Air Survey Hawaii. Aerial survey and analysis were supported by NOAA/ National Weather Service under Grant 40AANW204612 and Office of Naval Research under Grant N00014-91-J1136. The publication of this map was supported by the University of Chicago under Fund 2-64613.

This folding poster is a part of the contributed paper by T. Theodore Fujita, **Damage Survey of Hurricane Iniki in Kauai**. NOAA Storm Data, September 1992, Vol. 34, No.9.

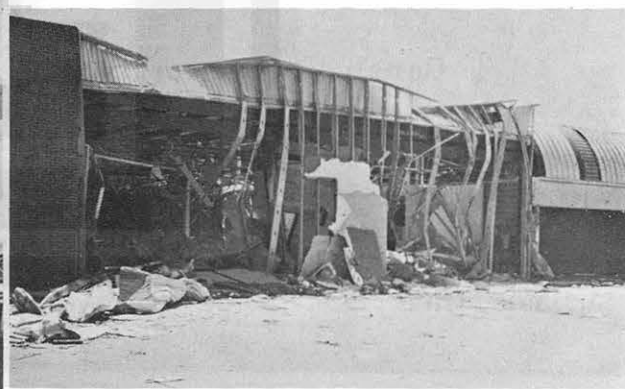


## 2. WICHITA, KANSAS HIT BY TORNADOES ON SEPTEMBER 5

### A. F2 TORNADO STRIKES EASTSIDE OF WICHITA, 1759 - 1815 CST



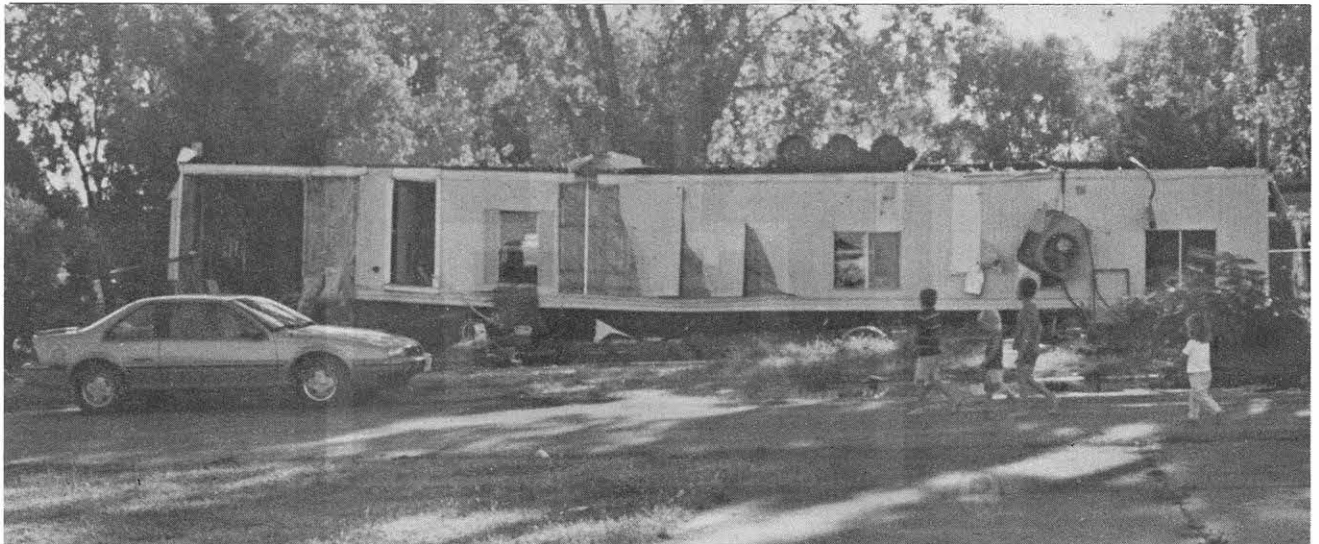
Shortly before 6:00 p.m. CST, September 5, the first of two tornadoes struck Wichita, Kansas (top). (Photo courtesy: Kim D. Johnson, *The Wichita Eagle*, Wichita, Kansas.) This tornado, rated as an F2 on the Fujita Tornado Scale, had a path length of three miles through the major business district on Kellogg Street in eastern Wichita. The tornado moved through the Towne East Mall. Several parking lot lights were downed causing damage to parked vehicles, below(left). (Photo courtesy: Steve Schurr) A vacant building, just west of Towne East Mall, sustained considerable damage from the tornado, below(right). (Photo courtesy: Steve Schurr)



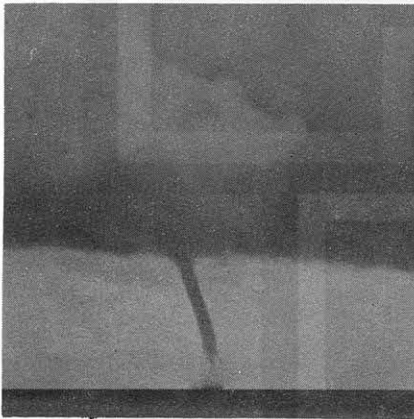
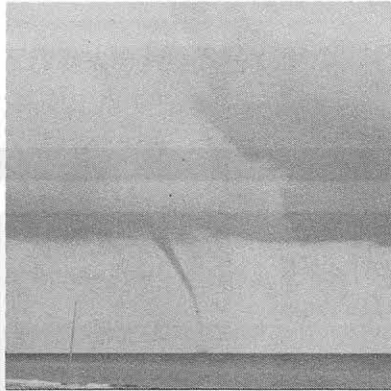
## B. F1 TORNADO STRIKES THE WESTSIDE OF WICHITA, 1930 - 1945 CST



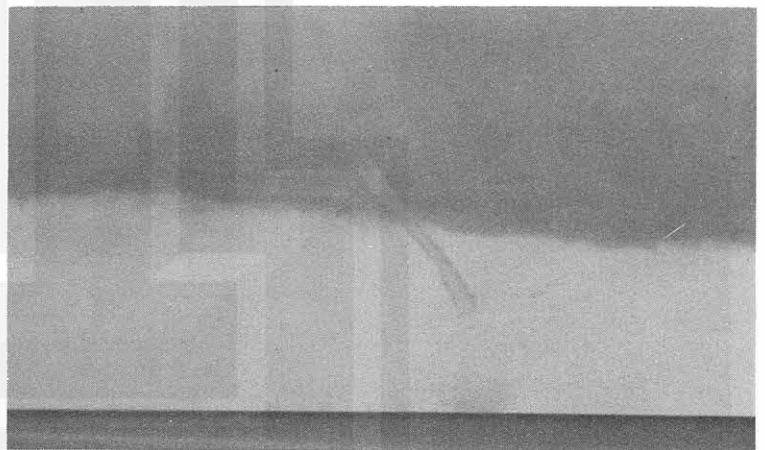
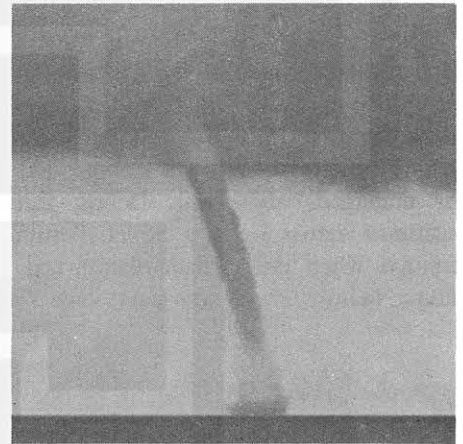
The second tornado of the day to affect Wichita formed at 7:30 p.m. CST. The second tornado (F1) was weaker than the first (F2) and it struck western Wichita. All eighty vehicles at Riner's Camper Sales were destroyed or damaged, **above(all)**. Debris from the store was scattered across Kellogg Street. Fortunately, no one was injured when the tornado overturned over this mobile home, **below**. (Photo courtesy: Steve Shurr)



### 3. WATERSPOUT SOUTH OF SANTA ROSA ISLAND, FLORIDA



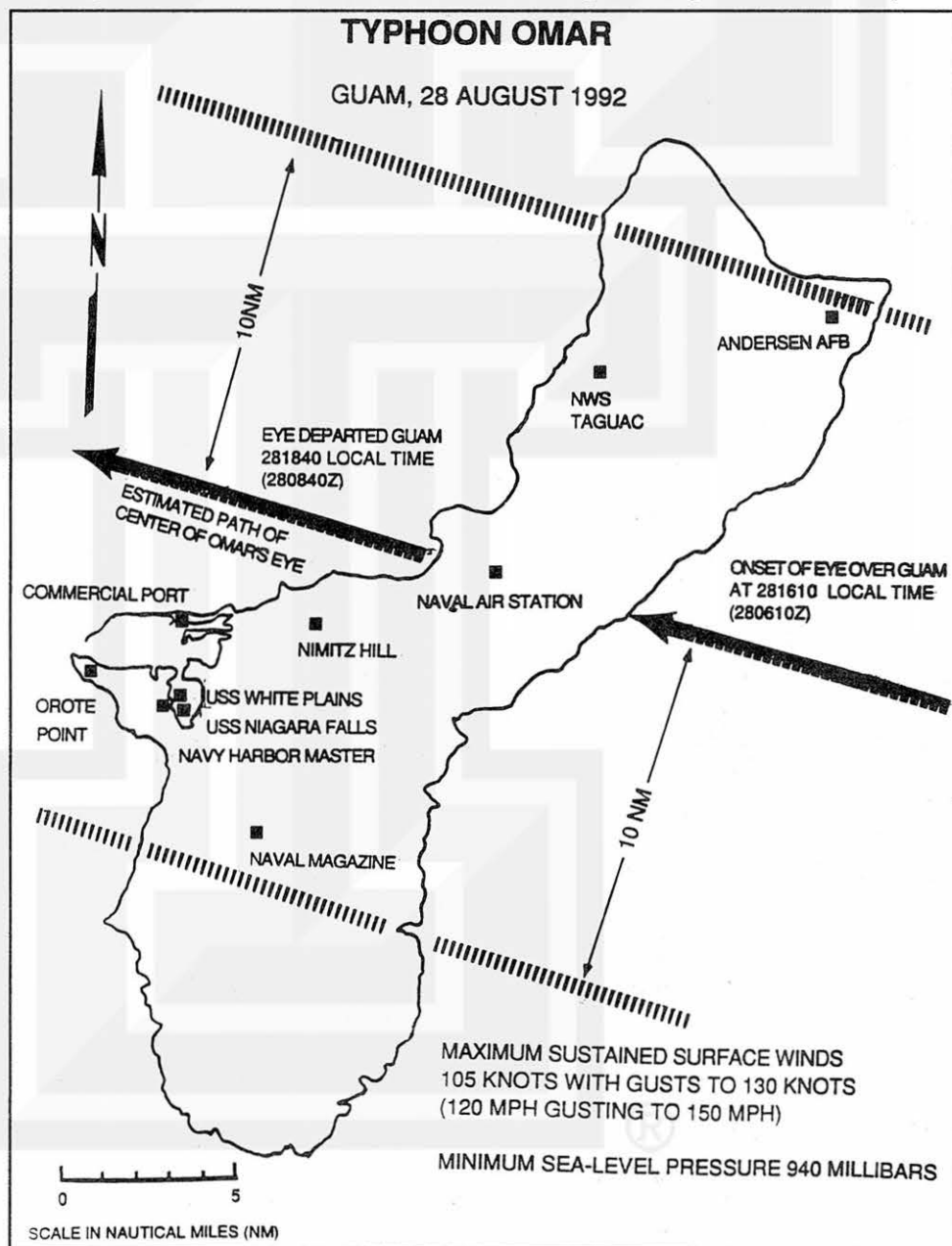
At approximately 12:30 p.m. EST on September 4, a waterspout formed south of Santa Rosa Island in Fort Walton Beach, Florida, **top(left)**. The waterspout moved in a westerly direction and intensified, **top(center and right)**. The pictures at **left and right** show the waterspout at its maximum intensity. The waterspout weakened and ended within 15 minutes of its beginning, never making landfall, **below(both)**. (Photo courtesy: Tracy Middlestead, Bay Saint Louis, Mississippi.)



## ET CETERA

### TYPHOON OMAR STRIKES GUAM ON AUGUST 28, 1992

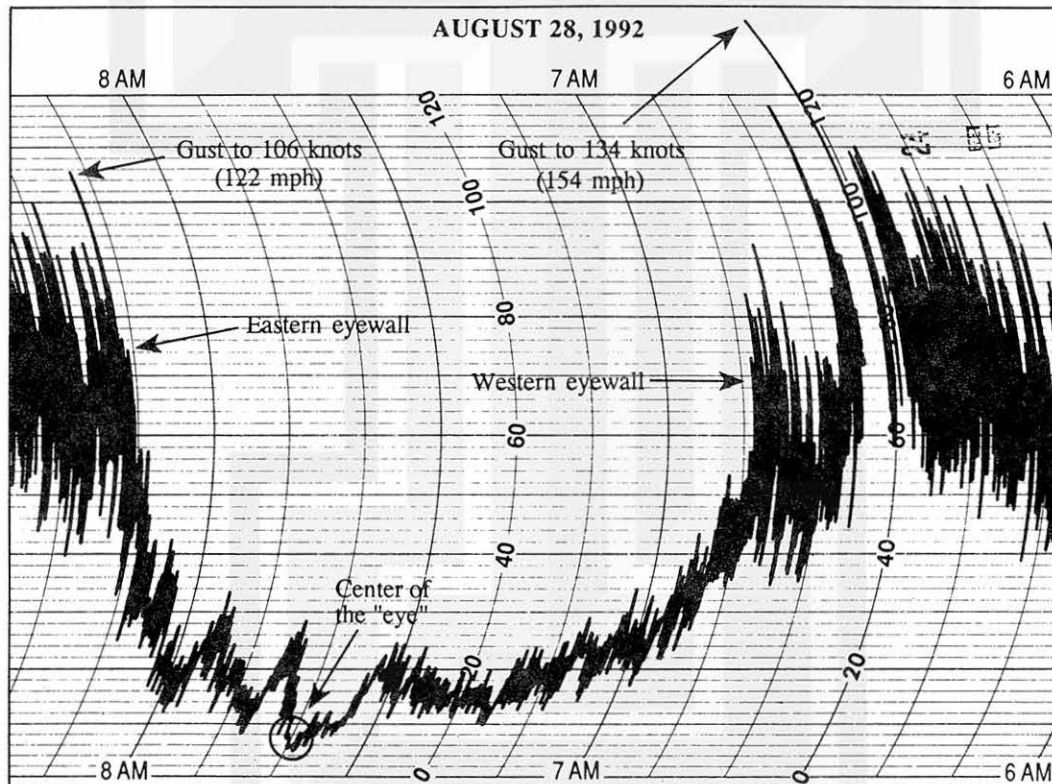
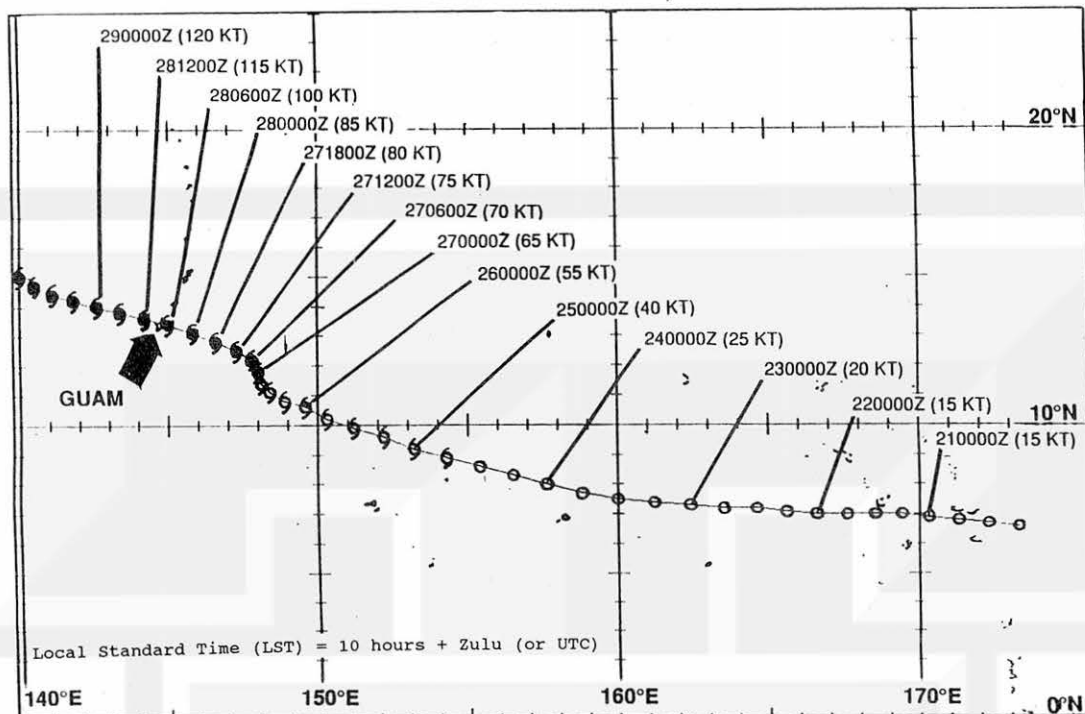
Typhoon Omar was the strongest typhoon to strike Guam since Typhoon Pamela in 1976. Omar began its development on August 20 from an area of cloudiness associated with the Intertropical Convergence Zone (ITCZ). During the morning of August 25, the disturbance was classified as a tropical storm. Further intensification was hindered by a weak tropical depression to the northwest, however it accelerated its forward motion and allowed Omar to gain strength. A small "eye" was discernible by the evening of the 27th. Maximum sustained (one minute average) winds were estimated at 125 to 130 mph with gusts over 150 mph as the western eyewall came ashore shortly after 3:00 p.m. local time on the 28th. The eye moved over the northern portion of the island and remained ashore for 2.5 hours due to Omar's slow forward speed of nine miles per hour. The northern coast was particularly hard hit with over 16 inches of rain (Andersen Air Force Base recorded 16.41 inches) and an estimated storm surge of eight to ten feet. (See page 33.) The USS White Plains, sheltered in Apra Harbor, registered a barometric reading of 940 mb (27.76 inches). Damage to Guam from Typhoon Omar was extensive and one fatality did occur. Recovery efforts were hampered by four more typhoons striking Guam in the next three months.





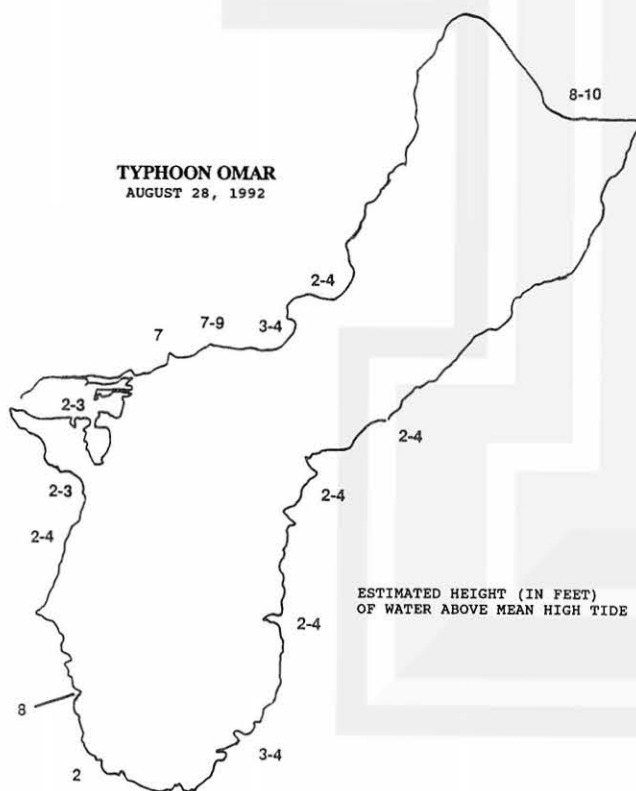
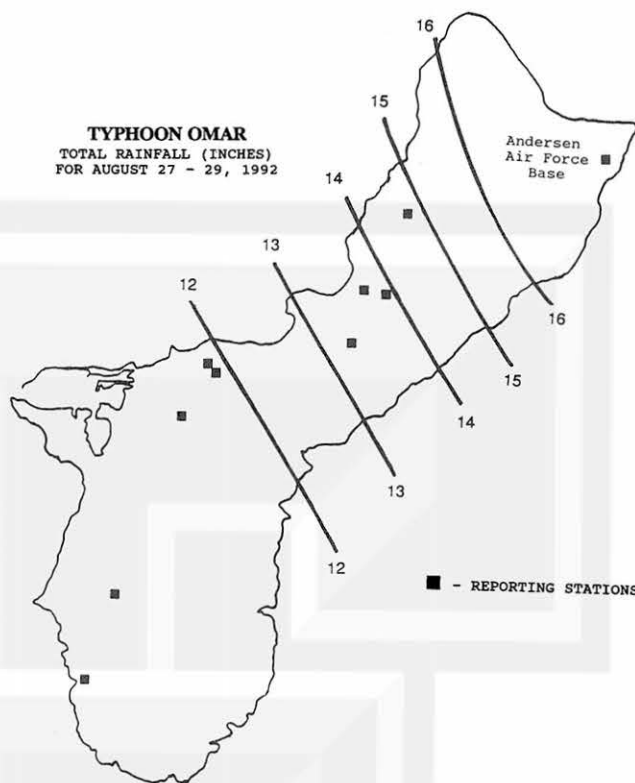
# TYPHOON OMAR (15W) TRACK

20 AUGUST - 29 AUGUST 1992



The wind chart from the U.S. Naval Oceanographic Command Detachment in Agana, Guam indicates a gust of 134 knots (154 mph) occurred at approximately 16:32 p.m. LST. (The time on the wind chart is in UTC.) With the "eye" overhead, the wind speed dropped to 5 knots (6 mph). Thirty five minutes later, the winds were gusting as high as 106 knots (122 mph). (*Wind Chart provided by National Climatic Data Center.*)

**Right:** Rainfall was heavy over the entire island (10+ inches). The maximum recorded rainfall was the 16.41 inches measured at the Andersen Air Force Base.



**Left:** Generally, the storm surge was 2 to 4 feet. However, the northern coast and a few sites along the western coast observed storm surges of 7 to 10 feet.

Maps and information provided by Tom Yoshida.

# Storm Data and Unusual Weather Phenomena

September 1992

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed | Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|--------------------------|
| ALABAMA   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Lawrence County<br>2 SW Moulton   | 02   | 1745CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Thunderstorm Winds       |
| Thunderstorm winds gusted to 60 mph in the Moulton vicinity.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Morgan County<br>Hartselle  | 03   | 1420CST                    |                           |                          | 0                              | 0       | 4                               | 0     | Thunderstorm Winds       |
| Two large oak trees were blown down by thunderstorm winds. One tree, estimated at over 100 years old, damaged a house and garage as it fell.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Jackson County<br>4 S Flat Rock<br>Eastern Portion  | 05   | 1733CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Flash Flood              |
|   | 05   | 1835CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Flash Flood              |
| Heavy rains from a nearly stationary thunderstorm caused flash flooding of Highway 71 between Flat Rock and Rosalie. Over six inches of rain fell within 1 hour in Eastern Jackson County resulting in considerable flash flooding. |      |                            |                           |                          |                                |         |                                 |       |                          |
| Cherokee County<br>7 NW Centre  | 10   | 1745CST                    |                           |                          | 0                              | 0       | 4                               | 0     | Thunderstorm Winds       |
| Thunderstorm winds destroyed a barn in the Sand Rock vicinity, and damaged farm equipment that was kept inside. Also, a chicken house was damaged and several trees were uprooted.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Houston County<br>Ashford   | 11   | 1447CST                    |                           |                          | 0                              | 1       | 0                               | 0     | Lightning                |
| A woman was injured slightly when lightning entered the building she was in and struck her through the telephone as she talked.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Lauderdale County<br>8 NW Florence  | 17   | 1545CST                    |                           |                          | 0                              | 0       | 4                               | 0     | Thunderstorm Winds       |
| A mobile home and an adjoining out building were destroyed by thunderstorm winds. Also, a car was destroyed when tree was blown down onto it.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Walker County<br>9 NE Jasper  | 17   | 1730CST                    |                           |                          | 0                              | 0       | 4                               | 0     | Thunderstorm Winds       |
| Thunderstorm winds destroyed one chicken house and damaged two others killing approximately 5,000 chickens in the Curry vicinity.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| ARIZONA   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Pima County<br>Green Valley   | 13   | 1500MST                    |                           |                          | 0                              | 0       | 2                               | 0     | Thunderstorm Winds (G63) |
| Tubac Golf Resort reported more than 70 trees felled by winds that reached as high as 72 mph.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Tucson  | 13   | 1517MST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G53) |
| Winds gusted to 61 mph and rainfall of close to one inch hit Tucson International Airport.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| 18 NNW Tucson   | 13   | 1725MST                    |                           |                          | 0                              | 0       | 2                               | 0     | Thunderstorm Winds       |
| Winds uprooted two trees near Ina and La Cholla. Police reported two traffic lights and some power poles down.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Coconino County<br>Page   | 15   | 1620MST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G52) |
| Page  | 15   | 1632MST                    |                           |                          | 0                              | 0       | 2                               | 0     | Hail (1.75)              |
| Winds blew down some fences and hail damaged a car at a golf course.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Grand Canyon  | 15   | 1900MST                    |                           |                          | 0                              | 0       | 0                               | 0     | Flash Flood              |
| Park rangers alerted hikers just before a 2- to 3-foot wall of water swept through Cottonwood campground. Persistent thunderstorms dumped very heavy rains in this area during the late afternoon.                                  |      |                            |                           |                          |                                |         |                                 |       |                          |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed | Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|--------------------------|
| <b>ARIZONA Cont'd</b>   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Maricopa County<br>Luke Air Force<br>Base   | 20   | 0015MST                    |                           |                          | 0                              | 0       | 3                               | ?     | Thunderstorm Winds (G65) |
| Luke Air Force<br>Base  | 20   | 0430MST                    |                           |                          | 0                              | 0       | 6                               | ?     | Flash Flood              |
| Slow-moving strong thunderstorms developed north and west of the base around midnight. Microburst winds damaged a metal garage just west of Luke. Nearby, at the University of Arizona Citrus Station at Perryville and Greenway 2.85 inches fell in just 75 minutes. Youngtown had 1.18 inches, Sun City West had 2.25 inches, and a farmer about 2.5 miles northwest of the base had six inches. Most of the rain fell between the White Tank Mountains, McMicken Dam and Luke Air Force Base washing a great deal of sediment from the farm areas onto the base. The silt cleanup effort, cost of relocation and damage repair is estimated at \$3.2 million. About 150 homes and several buildings on the base were flooded. A foot of mud covered runways and ramps. |      |                            |                           |                          |                                |         |                                 |       |                          |
| <b>ARKANSAS</b>   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Polk County<br>Potter   | 02   | 2100CST                    |                           |                          | 0                              | 0       | 5                               | 0     | Lightning                |
| Lightning was the cause of a house fire in Potter. The house was completely destroyed. No injuries were reported.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Little River County<br>Ogden  | 02   | 2350CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Hail (0.88)              |
| Hempstead County<br>Mt. Zion  | 03   | 0015CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G52) |
| Spring Hill   | 03   | 0020CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Hail (0.75)              |
| Miller County<br>2 E Texarkana  | 03   | 0020CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Hail (0.88)              |
| Columbia County<br>Walkerville  | 03   | 0127CST                    |                           |                          | 0                              | 0       | 3                               | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew out the window of a home.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Carroll County<br>2 E Green Forest  | 08   | 0700CST                    |                           |                          | 0                              | 0       | 5                               | 0     | Lightning                |
| Lightning caused a house fire outside of Green Forest. Lightning struck a telephone pole near the house and followed the lines into the house. The house was a total loss.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Stone County<br>Mountain View   | 08   | 0725CST                    |                           |                          | 0                              | 0       | 3                               | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew down some power lines.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Carroll County<br>Berryville  | 08   | 0800CST                    |                           |                          | 0                              | 0       | 4                               | 0     | Lightning                |
| Lightning struck a building in Berryville causing an extensive fire. Approximately half of the building and its contents were destroyed.  |      |                            |                           |                          |                                |         |                                 |       |                          |
| Perry County<br>Aplin   | 08   | 1700CST                    |                           |                          | 0                              | 0       | 3                               | 0     | Thunderstorm Winds       |
| Thunderstorm winds downed some trees and power lines.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Baxter County<br>Mountain Home  | 09   | 2130CST                    |                           |                          | 0                              | 0       | 2                               | 0     | Thunderstorm Winds (G30) |
| Thunderstorm winds blew down some large tree limbs.   |      |                            |                           |                          |                                |         |                                 |       |                          |
| Benton County<br>Gravette   | 09   | 2158CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G52) |
| Rogers  | 09   | 2202CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G52) |
| Washington County<br>Fayetteville   | 09   | 2230CST                    |                           |                          | 0                              | 0       | 3                               | 0     | Thunderstorm Winds       |



# Storm Data and Unusual Weather Phenomena

September 1992

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|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>ARKANSAS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Thunderstorm winds blew a tree down on top of a car.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Crawford County<br>2 SE Mountain-<br>burg   | 09   | 2240CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew down a large tree onto Highway 348.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Van Buren   | 09   | 2330CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| Franklin County<br>Ozark  | 09   | 2345CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G59) |
| Pope County<br>Russellville   | 10   | 0100CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds downed several trees and power lines.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Yell County<br>Danville   | 10   | 0110CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew down several trees and power lines.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Sebastian County<br>Greenwood   | 21   | 1536CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Greenwood   | 21   | 1536CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds downed several trees.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Logan County<br>Booneville  | 21   | 1615CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Subiaco   | 21   | 1635CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Yell County<br>5 E Danville   | 21   | 1710CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds knocked down some power lines.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Johnson County<br>Hartman   | 21   | 1714CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds knocked down several trees.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Clarksville   | 21   | 1730CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew down trees and caused minor roof damage to several homes.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Pope County<br>3 W Appleton   | 21   | 1740CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds blew down several trees and power lines.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Sevier County<br>Horatio  | 21   | 1835CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G56) |
| Thunderstorm winds blew down numerous trees and blew several cars off the road.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Howard County<br>Dierks   | 21   | 1900CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds       |
| Numerous trees were blown down by thunderstorm winds.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Sevier County<br>DeQueen  | 21   | 1915CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G48) |
| DeQueen   | 21   | 1915CST-<br>2115CST        |                           |                          | 0                    | 0       | 4                   | 0     | Flash Flood              |
| Heavy rains caused flash flooding in several parts of DeQueen. Most of the damage consisted of some city streets being washed out. No other property damage was reported. |      |                            |                           |                          |                      |         |                     |       |                          |
| Horatio   | 21   | 1930CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.88)              |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## ARKANSAS Cont'd

|               |    |         |  |  |     |     |                          |
|---------------|----|---------|--|--|-----|-----|--------------------------|
| Howard County | 21 | 1945CST |  |  | 0 0 | 0 0 | Hail (0.75)              |
| 8 W Nashville | 21 | 1945CST |  |  | 0 0 | 2 0 | Thunderstorm Winds (G48) |

Thunderstorm winds blew a car off the road on Highway 24.

|                                |    |          |  |  |     |     |                          |
|--------------------------------|----|----------|--|--|-----|-----|--------------------------|
| Little River County            | 21 | 2010CST  |  |  | 0 0 | 0 0 | Hail (0.88)              |
| Foreman                        | 21 | 2010CST  |  |  | 0 0 | 0 0 | Thunderstorm Winds (G48) |
| Hempstead County               | 21 | 2045CST  |  |  | 0 0 | 0 0 | Thunderstorm Winds (G52) |
| Washington                     |    |          |  |  |     |     |                          |
| Hempstead and Pike<br>Counties | 21 | 2100CST- |  |  |     |     |                          |
| 2 SE Billstown                 | 22 | 0000CST  |  |  | 0 0 | 4 0 | Flash Flood              |

Heavy rains caused the levee on a pond to fail 2 miles southeast of Billstown on the Hempstead/Pike County line. Water began flowing across Highway 195 and several homes were also evacuated.

## CALIFORNIA, Northern

None reported.

## CALIFORNIA, Southern

None reported.

## COLORADO

|             |    |         |  |  |     |     |                         |
|-------------|----|---------|--|--|-----|-----|-------------------------|
| Mesa County | 04 | 1350MST |  |  | 0 0 | ? ? | Thunderstorm Wind (G56) |
|-------------|----|---------|--|--|-----|-----|-------------------------|

Thunderstorms produced wind gusts to 64 mph (56 knots) at the National Weather Service office in Grand Junction.

|  |    |                     |  |  |     |     |            |
|--|----|---------------------|--|--|-----|-----|------------|
| COZ011-012<br>Front Range,<br>Northeast Plains | 04 | 1800MST-<br>2100MST |  |  | 0 0 | ? ? | High Winds |
|--|----|---------------------|--|--|-----|-----|------------|

Strong gradient winds behind a Pacific cold front moving across the Continental Divide blew at speeds above 40 mph with gusts as high as 60 mph. The highest recorded wind speed occurred at the National Weather Service mesonet station in Fort Collins, where a gust of 60 mph (52 knots) was measured. Fort Collins and Fort Morgan each recorded gusts to 57 mph (49 knots) while Keenesburg had a gust of 53 mph (46 knots).

|                 |    |         |       |        |     |     |              |
|-----------------|----|---------|-------|--------|-----|-----|--------------|
| Sedgwick County | 04 | 2100MST | Short | Narrow | 0 4 | 4 ? | Tornado (F0) |
|-----------------|----|---------|-------|--------|-----|-----|--------------|

A tornado developed near the Julesburg Reservoir, damaging several camping-trailers and injuring four people.

|             |    |         |  |  |     |     |                          |
|-------------|----|---------|--|--|-----|-----|--------------------------|
| Weld County | 17 | 1550MST |  |  | 0 0 | ? ? | Thunderstorm Winds (G51) |
| Nunn        | 17 | 1615MST |  |  | 0 0 | ? ? | Thunderstorm Winds (G50) |

Thunderstorms produced gusts of 59 mph (51 knots) at Nunn and 58 mph (50 knots) at Briggsdale.

|              |    |         |       |        |     |     |               |
|--------------|----|---------|-------|--------|-----|-----|---------------|
| Adams County | 17 | 1800MST | Short | Narrow | 0 0 | ? ? | Tornado (F0)] |
|--------------|----|---------|-------|--------|-----|-----|---------------|

A tornado touched down briefly near Bennett.

|                 |    |                     |       |        |     |     |              |
|-----------------|----|---------------------|-------|--------|-----|-----|--------------|
| Arapahoe County | 20 | 1435MST-<br>1437MST | Short | Narrow | 0 0 | 0 0 | Tornado (F0) |
|-----------------|----|---------------------|-------|--------|-----|-----|--------------|

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## COLORADO Cont'd

16 SE Buckley  
Air National  
Guard Base 20 1534MST-  
1539MST Short Narrow 0 0 0 0 Tornado (F0)

Observers at Buckley Air National Guard Base sighted two tornadoes southeast of the base. The tornadoes were short-lived and caused no injuries or damage.

Morgan County  
1 W Wiggins 21 1640MST 0 0 0 0 Hail (1.75)

Golf ball-size hail was reported near Wiggins.

## CONNECTICUT

Fairfield County  
Stamford  
Darien  
Norwalk  
Westport 03 1730EST-  
1800EST 0 3 5 0 Thunderstorm Winds

A powerful thunderstorm ripped into extreme southwest Connecticut causing a series of microbursts which injured three people and caused extensive damage to the Newfield Plaza in Stamford and downed many large trees which damaged homes and autos in Darien. In addition, there were trees blown down and damage to several homes in Norwalk and Westport.

## DELAWARE

DEZ001 > 003  
All of Delaware 24-  
26 0 0 4 0 Tropical Storm  
Danielle

Tropical Storm Danielle was centered about 100 miles southeast of Cape Hatteras North Carolina late Thursday afternoon, while strong high pressure was over New England. The circulation around both of these systems caused strong winds and heavy surf in the Delaware, Maryland and Virginia coastal areas ahead of Danielle as the storm moved North-Northwest. Danielle's center reached the Wallops Island, Virginia area around 6 PM Friday the 25th, and passed about 25 miles east of Baltimore, MD around 2 AM Saturday morning the 26th. It continued to weaken and move north as it crossed Delaware and moved into eastern Pennsylvania around 4 AM.

Strong winds throughout the area, with gusts to 60 mph recorded at Rehoboth Bay, caused beach erosion, downed tree limbs and power lines. Minor flooding of low lying areas closed several roads. About 45 residents in Kent and Sussex counties went to shelters Friday night. Four small boats were sunk and floating docks were damaged in Slaughter Beach. Several areas had flooded basements.

New Castle County 26 0030EST-  
0500EST 0 0 0 0 Flood

The Christina river overflowed its banks in the central part of the county due to very heavy rainfall that occurred with tropical storm Danielle.

## FLORIDA

Brevard County  
2 SE Sebastian  
Inlet 01 1115EST 0 0 0 0 Waterspout

A waterspout was sighted 2 miles southeast of Sebastian Inlet.

Hernando County  
29 N Tampa 01 1520EST short ? 0 0 0 0 Tornado (F0)

A small tornado touched down briefly about 1 mile northeast of Brooksville with no damage reported.

Sarasota County  
46 SSE Tampa 01 1650EST short ? 0 0 0 0 Tornado (F0)

A small tornado touched down about 8 miles east of Interstate 75 on Florida Highway 72. No damage was reported.

## Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm                |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-----------------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                                   |
| <b>FLORIDA Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>22 E Tampa  | 01   | 1740EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (1.00)<br>Thunderstorm Winds |
| Quarter-size hail fell and strong thunderstorm winds uprooted trees in Plant City.   |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>14 ESE Tampa  | 01   | 1754EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)                       |
| Quarter-size hail fell briefly in Brandon.   |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>11 SE Tampa   | 01   | 1808EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)                       |
| Quarter-size hail fell briefly in Gibsonton.   |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>13 ESE Tampa  | 01   | 1830EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)<br>Thunderstorm Winds |
| Dime-size hail fell briefly in Riverview. Two large oak trees were uprooted, a screened-in pool enclosure was destroyed, and turbines were ripped from a roof near Cork. |      |                            |                           |                          |                      |         |                     |       |                                   |
| Pinellas County<br>Lake Seminole   | 01   | 1852EST                    | short                     | ?                        | 0                    | 0       | 0                   | 0     | Tornado (F0)                      |
| A small tornado touched down near Lake Seminole blowing down several trees.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>Tampa   | 01   | 1855EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Clouds                     |
| Two funnel clouds were observed briefly over Tampa.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Pinellas County<br>16 SW Tampa   | 02   | 1536EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)                       |
| Quarter-size hail fell briefly in Seminole.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Pinellas County<br>18 WSW Tampa  | 02   | 1544EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52)          |
| Thunderstorm winds gusted to 60 mph along Indian Rocks Beach and Reddington Shores.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Pinellas County<br>15 WSW Tampa  | 02   | 1545EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)                       |
| Marble-size hail fell briefly at Largo.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>Tampa Area  | 02   | 1558EST-<br>1645EST        |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)                       |
| Marble to quarter-size hail fell at several locations including Ybor City, Carrollwood, Lutz, and Tampa.   |      |                            |                           |                          |                      |         |                     |       |                                   |
| Hillsborough County<br>Tampa Bay   | 02   | 1645EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G55)          |
| A tug pilot reported a wind gust to 63 mph near Egmont Key lighthouse at the mouth of Tampa Bay.   |      |                            |                           |                          |                      |         |                     |       |                                   |
| Manatee County<br>28 S Tampa   | 02   | 1721EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)                       |
| Quarter-size hail fell at Palmetto.  |      |                            |                           |                          |                      |         |                     |       |                                   |
| Manatee County<br>29 SSW Tampa   | 03   | 1345EST                    | 0.2                       | 30                       | 0                    | 0       | 4                   | 0     | Tornado (F0)                      |



## Storm Data and Unusual Weather Phenomena

September 1992

September 1992

| Location                           | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops | Character of Storm   |
|------------------------------------|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|--|
| <b>FLORIDA Cont'd</b>              |      |                            |                           |                          |  |   |                                       |  |
|                                    |      |                            |                           |                          |  |   |                                       | A small tornado tore shingles off three roofs, knocked a hole in one roof, and downed trees and power lines. |
| Citrus County                      | 03   | 1505EST                    |                           |                          | 0                                      | 0 | 3 0                                   | Thunderstorm Winds   |
|                                    |      |                            |                           |                          |  |   |                                       | Strong thunderstorm winds blew off roof shingles and destroyed a shed along Highway 581.                     |
| Hernando County<br>34 N Tampa      | 03   | 1515EST-<br>1530EST        |                           |                          | 0                                      | 0 | 2 0                                   | Thunderstorm Winds   |
|                                    |      |                            |                           |                          |  |   |                                       | Strong thunderstorm winds knocked down power lines in Spring Hill.   |
| Citrus County<br>51 S Gainesville  | 03   | 1530EST                    |                           |                          | 0                                      | 0 | 2 0                                   | Thunderstorm Winds   |
|                                    |      |                            |                           |                          |  |   |                                       | Strong thunderstorm winds knocked down power lines in Inverness.   |
| Pasco County                       | 03   | 1545EST                    |                           |                          | 0                                      | 0 | 2 0                                   | Thunderstorm Winds   |
|                                    |      |                            |                           |                          |  |   |                                       | Strong thunderstorm winds knocked down power lines north of Bayonet Point hospital.                          |
| Manatee County<br>31 SSW Tampa     | 06   | 1900EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Waterspout   |
|                                    |      |                            |                           |                          |  |   |                                       | Several waterspouts were sighted off Anna Maria Island and Longboat Key.                                     |
| Pasco County<br>25 NNW Tampa       | 07   | 1530EST                    |                           |                          | 0                                      | 0 | 3 0                                   | Thunderstorm Winds   |
|                                    |      |                            |                           |                          |  |   |                                       | Strong downburst winds damaged the roofs on a pharmacy, auto garage, and damaged tree limbs near Hudson.     |
| Hillsborough County<br>Tampa Area  | 07   | 1718EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Funnel Cloud   |
|                                    |      |                            |                           |                          |  |   |                                       | A funnel cloud was sighted briefly near MacDill AFB.   |
| Monroe County<br>Boca Chica Key    | 08   | 1320EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Waterspout   |
|                                    |      |                            |                           |                          |  |   |                                       | A waterspout was sighted near Boca Chica Channel.  |
| Hernando County<br>36 N Tampa      | 08   | 1430EST                    |                           |                          | 1                                      | 0 | 0 0                                   | Lightning  |
|                                    |      |                            |                           |                          |  |   |                                       | A Homosassa man was struck and killed while fishing in the Gulf of Mexico near Pine Island. (M21O)           |
| Monroe County<br>Sugarloaf Key     | 08   | 1535EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Waterspout   |
|                                    |      |                            |                           |                          |  |   |                                       | A waterspout was sighted just north of Sugarloaf Key.  |
| Martin County<br>30 SSE Vero Beach | 08   | 1613EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Waterspout   |
|                                    |      |                            |                           |                          |  |   |                                       | A waterspout was sighted 2 miles east of Stuart.   |
| Volusia County<br>Daytona Beach    | 10   | 1335EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Thunderstorm Winds (G52)   |
|                                    |      |                            |                           |                          |  |   |                                       | A thunderstorm gust to 60 mph was recorded at Daytona Beach.   |
| Seminole County<br>8 N Orlando     | 10   | 1500EST                    |                           |                          | 0                                      | 1 | 0 0                                   | Lightning  |
|                                    |      |                            |                           |                          |  |   |                                       | Lightning struck a pipe slightly injuring a plumbing company worker in Casselberry.                          |
| Monroe County<br>3 NW Key West     | 10   | 1830EST                    |                           |                          | 0                                      | 0 | 0 0                                   | Waterspout   |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992  |      |                            |                           |                          |                      |   |                     |   |                                   |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|-----------------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm                |
| FLORIDA Cont'd  |      |                            |                           |                          |                      |   |                     |   |                                   |
| A waterspout was sighted 3 miles northwest of Key West.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>1 W Key West   | 12   | 1115EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Waterspout                        |
| A waterspout was sighted 1 mile west of Key West.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Gulf County<br>22 E Panama City   | 12   | 1615EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Hail (0.75)<br>Thunderstorm Winds |
| Dime-size hail fell briefly at Wewahitchka. Trees and power lines were blown down.                                  |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>3 NE Key West  | 12   | 1740EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Waterspout                        |
| A waterspout was sighted 3 miles northeast of Key West.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Lee County<br>Fort Myers Area   | 12   | 1800EST-<br>1818EST        |                           |                          | 0                    | 0 | 0                   | 0 | Hail (0.88)                       |
| Dime to nickel-size hail fell near Cape Coral and North Fort Myers.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Polk County<br>40 S Orlando   | 13   | 1619EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds                |
| Thunderstorm winds toppled a large tree 8 miles east of Lake Wales.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Polk County<br>35 SSW Orlando   | 13   | 1645EST                    |                           |                          | 0                    | 3 | 0                   | 0 | Lightning                         |
| Three people were struck and injured by lightning in Dundee. One was hospitalized.                                  |      |                            |                           |                          |                      |   |                     |   |                                   |
| Sarasota County   | 13   | 1715EST-<br>1730EST        |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds (G52)          |
| A thunderstorm gust to 60 mph was reported in Venice. Numerous trees were blown down in Bee Ridge.                  |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>9 E Dry Tortugas   | 13   | 2200EST                    |                           |                          | 0                    | 0 | 3                   | 0 | Lightning                         |
| Lightning struck a fishing boat in the Gulf of Mexico 9 miles east of Fort Jefferson. The wheelhouse was destroyed. |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>Key Largo  | 14   | 1420EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Waterspout                        |
| A waterspout was sighted just east of the north end of Key Largo.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>4 NE Key West  | 14   | 1615EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Waterspout                        |
| A waterspout was sighted 4 miles northeast of Key West.   |      |                            |                           |                          |                      |   |                     |   |                                   |
| Polk County<br>N Lakeland   | 15   | 1830EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds                |
| Strong thunderstorm winds blew a large tree onto a roadway in North Lakeland.                                       |      |                            |                           |                          |                      |   |                     |   |                                   |
| Monroe County<br>3 W Key West   | 16   | 1106EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Waterspout                        |
| A waterspout was sighted 3 miles west of Key West.  |      |                            |                           |                          |                      |   |                     |   |                                   |
| Charlotte County<br>Boca Grande Key   | 16   | 1700EST                    | 0.3                       | 30                       | 0                    | 0 | 2                   | 0 | Waterspout-<br>Tornado (F0)       |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm          |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|-----------------------------|
|  |          |                            |                           |                          | Killed               | Injured | Property            | Crops |                             |
| <b>FLORIDA Cont'd</b>  |          |                            |                           |                          |                      |         |                     |       |                             |
| A waterspout formed over Charlotte Harbor, moved west over Boca Grande Key damaging plants and trees, then dissipated over the gulf.   |          |                            |                           |                          |                      |         |                     |       |                             |
| Palm Beach County<br>13 S West Palm<br>Beach   | 17       | 0945EST                    | short                     |                          | 0                    | 0       | 0                   | 0     | Waterspout-<br>Tornado (F0) |
| A waterspout moved onshore at Delray Beach but dissipated before doing any damage.   |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>5 WNW Key West  | 17       | 1422EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout                  |
| A waterspout was reported 5 miles west northwest of Key West.  |          |                            |                           |                          |                      |         |                     |       |                             |
| Volusia County<br>16 SW Daytona<br>Beach   | 22       | 1835EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds          |
| Strong thunderstorm winds blew down trees and power lines in Deland. One tree fell on a roof.  |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>Key West  | 27       | 1151EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout                  |
| Waterspouts were observed one mile southwest and 3 miles north of Key West.  |          |                            |                           |                          |                      |         |                     |       |                             |
| FLZ008-012<br>Duval, Flagler,<br>St. Johns, Nassau Cos.  | 27<br>29 | 1200EST-<br>1600EST        |                           |                          | 0                    | 0       | 6                   | 0     | High winds                  |
| Strong northeast winds and high tides as well as heavy surf from Tropical Storm Earl led to significant beach erosion and some coastal flooding along the northeast Florida coast.   |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>7 S Cudjoe Key  | 29       | 1225EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Clouds               |
| Three funnel clouds were sighted 7 miles south of Cudjoe Key.  |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>5 NW Key West   | 30       | 0635EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout                  |
| A waterspout was sighted 5 miles northwest of Key West.  |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>10 W Key West   | 30       | 0826EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout                  |
| A waterspout was sighted 10 miles west of Key West.  |          |                            |                           |                          |                      |         |                     |       |                             |
| Monroe County<br>10 N Key West   | 30       | 0953EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout                  |
| A waterspout was sighted 10 miles north of Key West.   |          |                            |                           |                          |                      |         |                     |       |                             |
| <b>GEORGIA</b>   |          |                            |                           |                          |                      |         |                     |       |                             |
| Ben Hill County<br>NE of Fitzgerald  | 03       | ?                          |                           |                          | ?                    | ?       | ?                   | ?     | Hail (?)                    |
| 2 Fitzgerald   | 03       | 1815EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds          |
| 6 E Fitzgerald   | 03       | 1840EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds          |
| Hail of unknown size fell northeast of Fitzgerald. Scattered trees were uprooted and power lines were torn down by winds west of Fitzgerald along Georgia Highway 107 and along Georgia Highway 319 northeast of Fitzgerald. The winds ripped the roof off a mobile home and a small storage building was damaged. |          |                            |                           |                          |                      |         |                     |       |                             |
| Taylor County<br>Butler  | 03       | 1600EST                    |                           |                          | 0                    | 0       | 2                   | ?     | Thunderstorm Winds          |
| Strong winds uprooted several trees and caused minor property damages in Butler. Time is estimated.  |          |                            |                           |                          |                      |         |                     |       |                             |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>GEORGIA Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Richmond County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Augusta  | 03   | 1700EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds |
| Augusta  | 03   | 1700EST                    |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Augusta  | 03   | 1900EST-<br>1700EST        |                           |                          | 0                    | 0       | ?                   | ?     | Lightning          |
| A strong thunderstorm knocked over trees in Augusta. A car was damaged after lightning split a nearby tree. An estimated five inches of rain fell in less than 2 hours. About 1830 EST, water began to rise inside homes, businesses, and a school. Many streets were flooded and traffic was impaired when cars stalled in waist-level water. No evacuations occurred. Times are estimated.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Jeff Davis County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Hazelhurst   | 04   | 1744EST-<br>2018EST        |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Thunderstorms with torrential rainfall developed over southeastern Georgia. By 1810 EST, drainage problems had developed over Hazelhurst and about five inches of rain had fallen over the city. Extensive flooding developed in the downtown area; one store had about 6 inches of water inside.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Rockdale County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Conyers  | 04   | 2235EST                    |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| A convenience store near Georgia Highway 20 was flooded after heavy rainfall developed over Rockdale County. Minor flooding occurred along Big Haynes Creek in northern Rockdale County.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Fulton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| East Point   | 04   | 2330EST-                   |                           |                          |                      |         |                     |       |                    |
|  | 05   | 0315EST                    |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Atlanta  | 04   | 2330EST-                   |                           |                          |                      |         |                     |       |                    |
|  | 05   | 0315EST                    |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| 12 N Atlanta   | 05   | 0015EST-<br>0800EST        |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| <b>Clayton County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| 2 S College Park   | 05   | 0015EST-<br>0315EST        |                           |                          | 1                    | 0       | 4                   | ?     | Flash Flood        |
| Heavy rainfall over the Atlanta metropolitan area produced flash flooding at East Point, College Park, and Atlanta in Fulton County and in northern Clayton County around College Park. Serious street flooding developed over the area as the heavy rainfall continued to 0315 EST. Flood water reached as high as 6 feet around the airport. Several apartment buildings, along with many homes, vehicles and other properties were flooded in College Park and Atlanta. Basements and a school were flooded in East Point. Flood damage to the school's carpets cost \$10,900 alone; other damage costs were over \$20,000. In College Park, a woman slipped into a storm drain and was swept away around 0145 EST. The body was not recovered. In north Atlanta, waters from Peachtree Creek entered several homes, inundated a golf course, and flooded several streets. Peachtree Creek crested around 0300 EST at 19.6 feet. (F340) |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Miller County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| Southwestern<br>Portion  | 07   | 1545EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds |
| The roof of a barn and a doghouse were damaged by strong winds over southwestern Miller County. Several trees were uprooted.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Fulton County</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| East Point   | 09   | 1839EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Lightning          |
| Lightning struck an apartment complex and caused minor damage to the electrical outlets. Lightning also killed a dog.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Jones County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| James  | 11   | 1940EST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds |
| A few trees and limbs were blown down at James.  |      |                            |                           |                          |                      |         |                     |       |                    |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## GEORGIA Cont'd

|  |    |         |  |  |   |   |   |   |                    |
|--|----|---------|--|--|---|---|---|---|--------------------|
| Toombs County<br>4 NW Cedar<br>Crossing  | 11 | 1624EST |  |  | 0 | 0 | ? | ? | Funnel Cloud       |
| Ware County<br>Waycross  | 11 | 1940EST |  |  | 0 | 0 | 4 | 4 | Thunderstorm Winds |
| Near the airport in Waycross, a mobile home on U.S. Highway 1 was damaged when a tree fell across a bedroom. Across the highway, a pecan orchard had considerable damage. Power outages developed over a large portion of northwestern Ware County.  |    |         |  |  |   |   |   |   |                    |
| Burke County<br>1 W Waynesboro   | 23 | 1545EST |  |  | 0 | 0 | 2 | ? | Thunderstorm Winds |
| Strong winds tore down tree limbs west of Waynesboro on Georgia Highway 24. Power outages developed at Gough and Vidette due to lightning strikes.   |    |         |  |  |   |   |   |   |                    |
| Chatham County<br>Pooler   | 23 | 2130EST |  |  | 0 | 0 | 2 | ? | Flash Flood        |
| Slow-moving thunderstorms produced torrential rainfall over western Chatham County. Rainfall totals were estimated at near five inches at Pooler. Major flooding of streets and drainage ditches along U.S. Highway 80 developed by 2130 EST. Several yards were flooded in the area; some houses had water up to the doorsteps. |    |         |  |  |   |   |   |   |                    |
| Fulton County<br>Atlanta   | 24 | 1650EST |  |  | 0 | 0 | 3 | ? | High Winds         |
| DeKalb County<br>Decatur   | 24 | 1650EST |  |  | 0 | 0 | 2 | ? | High Winds         |
| High winds downed power lines and left about 7,000 customers without power over metropolitan Atlanta. Some fine art was damaged after the winds overturned tents at an arts festival in Atlanta. Time is estimated.  |    |         |  |  |   |   |   |   |                    |

## IDAHO

|  |          |                     |  |  |   |   |   |   |                 |
|--|----------|---------------------|--|--|---|---|---|---|-----------------|
| IDZALL<br>Entire State   | 01<br>30 | 0000MST-<br>2400MST |  |  | 0 | 0 | ? | 8 | Extreme Drought |
| The Boise Reservoir storage was 4 percent of capacity and the upper Snake River basin reservoirs were 11 percent and 21 percent of capacity. Pocatello experienced its 9th driest September on record with 0.08 inches of rain. Precipitation amounts averaged about 60 percent of normal statewide, ranging from 9 percent of normal in southern Idaho at Pocatello to 138 percent of normal in the north at Kellogg. September started with virtually the entire state in the extreme drought category of the PDSI; but above normal rainfall in the north brought the northern PDSI down to the moderate drought category by the end of the month. Weather modification consultants, hired by the State, identified the Boise River and Payette River basins, the Wood River and Lost River basins, as well as the upper Snake River drainage and the Bear River basin as being suitable for cloud seeding. No water was available for some of the canal systems in southwestern Idaho. |          |                     |  |  |   |   |   |   |                 |
| IDZ006<br>West Central<br>Mountains  | 02<br>03 | 1530MST-<br>0500MST |  |  | 0 | 0 | 5 | 5 | Dry heat        |
| The person-caused Dunnigan Creek wild lands fire ignited about 1530MST and quickly ran through a small subdivision 14 ENE Boise burning a house under construction. Fire spread was primarily due to drought-cured grass and brush fuels on sloping terrain with temperatures in the 80s, relative humidity near 10 percent; the winds were light. The fire burned actively to 3,000 acres during the night; the relative humidity was 22 percent at 0030MST.  |          |                     |  |  |   |   |   |   |                 |
| IDZ006-003<br>West Central<br>Mountains, Upper<br>Snake River  | 03<br>03 | 1600MST-<br>1900MST |  |  | 0 | 0 | 5 | 5 | Dry heat, Winds |
| Northwest winds surfaced on the Dunnigan Creek fire doubling its size to 6,000 acres in a few hours. The Mosby Butte brush fire in the Idaho Falls BLM District burned 7,000 acres.  |          |                     |  |  |   |   |   |   |                 |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## IDAHO Cont'd

**IDZ006** 04 1500MST-  
West Central 04 2100MST 0 0 6 6 Winds  
Mountains

Cold front winds from the northwest at 15 to 25 mph with gusts to 40 mph redoubled the acreage burned of the Dunnigan Creek fire to 12,000 acres. The relative humidity dropped to between 30 and 40 percent and the maximum temperatures ranged from the mid 60s to the lower 70s. Light rain on the 5th with high temperatures in the 50s and relative humidity above 50 percent allowed a direct attack to be made on the fire. The fire was contained at 12,860 acres on the 7th and declared controlled on the 12th.

**Lemhi County** 23 1300MST 0 0 4 3 Thunderstorm Winds  
Salmon  
Winds toppled trees and utility lines.

**IDZ001-002-003** 24 0920MST-  
-006 24 1700MST 0 0 5 6 High Winds (G55)  
West Central  
Mountains and Snake  
River Valley

A strong cold front moved across the state with high winds knocking down trees and utility lines. Stacked pallets were blown into new 1993 automobiles on display in Twin Falls. Millions of dollars worth of beans and seed beans in the Magic Valley were knocked out of their pods. Bean vines stacked into windrows for drying were scattered and the beans shattered out of the pods. Blowing dust reduced the visibility to zero in widespread areas, closing Interstate 84 at Glens Ferry near noon. A thunderstorm with pea-size hail and a "big wind" had been reported at Cascade at 0610MST, but no reports of thunder or lightning were received during this period of high winds.

**Boise** 29 1550MST 0 0 0 0 Record Temperature

The high temperature for the day of 95° set a new record for so late in the season. The old record was 92° in 1989. The 5880 meter 500MB isoheight line was over Boise at 0500MST.

**Boise** 30 1450MST 0 0 0 0 Record Temperature

The high temperature of 96° became the record for so late in the season. The 5880 meter 500MB isoheight line was over Boise at 0500MST.

## ILLINOIS

**Franklin County** 03 1952CST 0 0 1 1 Hail (0.75)  
Zeigler

**Jackson County** 03 1952CST 0 0 1 0 Hail (0.75)  
Vergennes

**5 N Murphysboro** 03 1957CST 0 0 1 0 Hail (0.75)

**Hancock County** 07 1923CST 0 0 ? ? Thunderstorm Winds  
Niota

Downed trees were reported by the sheriff's office.

**Henderson County** 07 1942CST 0 0 ? ? Thunderstorm Winds  
Lomax

Downed trees were reported by the sheriff's office.

**McDonough County** 07 2010CST 0 0 ? ? Thunderstorm Winds  
Blandinsville

The highway department reported trees downed in the Blandinsville area.

**Warren County** 07 2025CST 0 0 ? ? Thunderstorm Winds  
Greenbush

Illinois Department of Transportation crews reported downed trees.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location                | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|-------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--|
|                         |      |                            |                           |                          | Killed               | Injured | Property            | Crops |  |
| <b>ILLINOIS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |  |
| <b>Fulton County</b>    |      |                            |                           |                          |                      |         |                     |       |  |
| 4 NE Ipava              | 07   | 2050CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
| Lewiston                | 07   | 2100CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Winds damaged farm buildings and blew down trees. Downed trees blocked highway 24.   |
| <b>Peoria County</b>    |      |                            |                           |                          |                      |         |                     |       |  |
| Peoria                  | 07   | 2117CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Trees were blown down near Bradley University campus.  |
| Peoria                  | 07   | 2120CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Trees were blown down in the East Bluff area of Peoria.  |
| <b>Tazewell County</b>  |      |                            |                           |                          |                      |         |                     |       |  |
| Pekin                   | 07   | 2140CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Trees were blown down in Pekin.  |
| <b>Madison County</b>   |      |                            |                           |                          |                      |         |                     |       |  |
| Bethalto                | 07   | 2148CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Ham radio spotters reported 6-inch-diameter tree limbs broke off.  |
| <b>Monroe County</b>    |      |                            |                           |                          |                      |         |                     |       |  |
| Waterloo                | 07   | 2233CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52)   |
|                         |      |                            |                           |                          |                      |         |                     |       | Wind gusts to 60 mph were reported.  |
| <b>Iroquois County</b>  |      |                            |                           |                          |                      |         |                     |       |  |
| Fairbury                | 07   | 2247CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds   |
| Chatsworth              |      |                            |                           |                          |                      |         |                     |       |  |
| Ford County             |      |                            |                           |                          |                      |         |                     |       |  |
| Piper City              | 07   | 2301CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Trees and large limbs were blown down in Fairbury. Limbs and power lines were downed in Chatsworth and Piper City.   |
| <b>St. Clair County</b> |      |                            |                           |                          |                      |         |                     |       |  |
| Shiloh                  | 07   | 2255CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds   |
| Shiloh                  | 07   | 2255CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud   |
|                         |      |                            |                           |                          |                      |         |                     |       | The Illinois State Police reported trees down and a sighting of a funnel cloud.  |
| <b>Randolph County</b>  |      |                            |                           |                          |                      |         |                     |       |  |
| Prairie                 |      |                            |                           |                          |                      |         |                     |       |  |
| Du Rocher               | 07   | 2305CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52)   |
|                         |      |                            |                           |                          |                      |         |                     |       | Wind gusts to 60 mph were reported.  |
| <b>Jackson County</b>   |      |                            |                           |                          |                      |         |                     |       |  |
| 1 NW to 15 NW           | 08   | 0021CST                    |                           |                          | 0                    | 0       | 2                   | 1     | Thunderstorm Winds   |
| Carbondale              |      |                            |                           |                          |                      |         |                     |       | Trees were blown down 15 miles northwest of Carbondale and power lines were blown down 1 mile north of Carbondale.   |
| <b>Kinkaid Lake</b>     | 08   | 1330CST                    |                           |                          | 0                    | 1       | 0                   | 0     | Lightning  |
|                         |      |                            |                           |                          |                      |         |                     |       | A young man was struck by lightning at the Kinkaid Lake spillway. He was swimming with a group of people when storms developed. He was climbing out of the water, using a tree to pull himself up. The tree was struck by lightning. |
| <b>Hancock County</b>   |      |                            |                           |                          |                      |         |                     |       |  |
| Carthage                | 09   | 0940CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)  |
| <b>McDonough County</b> |      |                            |                           |                          |                      |         |                     |       |  |
| Bushnell                | 09   | 1000CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds   |
|                         |      |                            |                           |                          |                      |         |                     |       | Trees were damaged 5 miles west of Bushnell.   |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |        | Character of Storm   |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|--------|--|
|   |          |                            |                           |                          | Killed               | Injured | Property            | Crops  |  |
| <b>ILLINOIS Cont'd</b>  |          |                            |                           |                          |                      |         |                     |        |  |
| Mason County<br>Chataouque Park   | 09       | 1200CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds   |
|   |          |                            |                           |                          |                      |         |                     |        | Trees were damaged by thunderstorm winds.  |
| Lee, DeKalb, Kane,<br>DuPage, Cook, Will,<br>Grundy and LaSalle<br>Counties | 09<br>10 | 1200CST-<br>0400CST        |                           |                          | 0                    | 0       | ?                   | ?      | Flash Flood  |
|   |          |                            |                           |                          |                      |         |                     |        | Around two to three inches of rain fell in 60-mile-wide band from near Moline to the south side of Chicago and into northwest Indiana between noon and 1800 CST. The heaviest rain, four to over five inches, fell from southern Lee County through Will County and southern Cook Counties. Some of the larger rainfall totals included; 5.25 inches at PawPaw, 5.02 inches at Joliet, 4.76 inches at Channahon, 4.74 inches at Oak Forest and 4.64 inches at Compton. The heavy rain resulted in flooding of streets, low lying areas, viaducts and basements. Some roads were closed due to high water. Many ditches and small streams overflowed. Area creeks and small streams crested between the evening of the 9th and the early morning hours of the 10th. |
| Cook County<br>Chicago  | 09       | 1430CST                    |                           |                          | 0                    | 1       | 0                   | 0      | Lightning  |
|   |          |                            |                           |                          |                      |         |                     |        | A woman suffered minor injuries when her arm was struck by lightning. She was holding an umbrella.   |
| Adams County<br>Mendon<br>7 NW Payson                                       | 09<br>09 | 1505CST<br>1550CST         |                           |                          | 0<br>0               | 0<br>0  | 3<br>3              | 0<br>0 | Hail (1.75)<br>Hail (1.75)   |
|   |          |                            |                           |                          |                      |         |                     |        | Golf ball-size hail was reported. Hail fell at the intersection of Highways 57 and 336 northwest of Payson at 1550 CST.  |
| Warren County<br>Monmouth   | 09       | 1530CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds   |
|   |          |                            |                           |                          |                      |         |                     |        | Trees and a mobile home were damaged by thunderstorm winds.  |
| Tazewell County<br>Washington   | 09       | 1600CST                    |                           |                          | 0                    | 1       | 0                   | 0      | Lightning  |
|   |          |                            |                           |                          |                      |         |                     |        | A man was struck by lightning while standing in a doorway.   |
| Peoria County<br>Peoria   | 09       | 1620CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds (G51)   |
|   |          |                            |                           |                          |                      |         |                     |        | A wind gust of 59 mph was measured at the National Weather Service office.   |
| Kickapoo  | 09       | 1622CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds (G58)   |
|   |          |                            |                           |                          |                      |         |                     |        | A 67-mph wind gust was measured at the Peoria County Emergency Operations Center.  |
| Fulton County<br>Canton   | 09       | 1626CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds   |
|   |          |                            |                           |                          |                      |         |                     |        | Trees and power poles were damaged.  |
| Tazewell County<br>Cooper   | 09       | 1630CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds (G57)   |
|   |          |                            |                           |                          |                      |         |                     |        | A 65-mph wind gust was measured at the Cooper Agricultural station.  |
| McLean County<br>Gridley  | 09       | 1646CST                    | 0.2                       | 10                       | 0                    | 0       | ?                   | ?      | Tornado (F0)   |
|   |          |                            |                           |                          |                      |         |                     |        | Trained spotters reported a brief tornado touch down in agricultural area with no damage observed.   |
| Woodford County<br>Eureka   | 09       | 1647CST                    |                           |                          | 0                    | 0       | ?                   | ?      | Thunderstorm Winds   |
|   |          |                            |                           |                          |                      |         |                     |        | Trees were damaged by high winds.  |



## Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>ILLINOIS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Menard County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Petersburg  | 09   | 1700CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Thunderstorm winds blew down several trees, as well as, some power lines. A few of the trees fell onto a car.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Tazewell County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Deer Creek  | 09   | 1703CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds |
| Trees were damaged by high winds.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Pike County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Pittsfield  | 09   | 1705CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Griggsville   | 09   | 1705CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Pleasant Hill   | 09   | 1712CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| Martinsburg   | 09   | 1712CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| The county sheriff reported trees down. The Illinois State Police reported 0.75-diameter hail covering the ground.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Livingston County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Pontiac   | 09   | 1710CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds |
| <b>Ford County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Piper City  | 09   | 1725CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds |
| <b>Iroquois County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Onarga  | 09   | 1739CST                    |                           |                          | 0                    | 2       | ?                   | 0     | Thunderstorm Winds |
| <b>Kankakee County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Hopkins Park  | 09   | 1745CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| A severe thunderstorm knocked down numerous trees and limbs in and south of Pontiac. The storm continued east through Piper City damaging large limbs and power lines. A 50-mph wind gust was measured by the Iroquois County Emergency Management Coordinator in Watseka. A few limbs were knocked down. More extensive damage occurred in nearby Onarga to a few miles east of Onarga. Large trees were uprooted and large limbs were blown down. A falling tree destroyed a mobile home and a large limb damaged another. Two cars were also damaged by tree limbs. East of Onarga a porch was destroyed and a few outbuildings were damaged at a farm. A tractor-semitrailer was overturned on Interstate 57 near Buckley, injuring two people. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>McLean County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Stanford  | 09   | 1710CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds |
| Chenoa  | 09   | 1714CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| Le Roy  | 09   | 1725CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| Trees were damaged by winds.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Morgan County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Jacksonville  | 09   | 1715CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Several trees and power lines were blown down in Jacksonville.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Greene County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| White Hall  | 09   | 1730CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Berden  | 09   | 1745CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| Wrights   | 09   | 1745CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)        |
| Trees were knocked down at White Hall.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Sangamon County</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Springfield   | 09   | 1735CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Springfield   | 09   | 1740CST                    |                           |                          | 0                    | 1       | ?                   | 0     | Thunderstorm Winds |
| Thunderstorm winds blew down numerous trees, power poles, and power lines on the southwest side of town. Also, a large store sign and signal lights were damaged. Two large trees were blown down onto two homes causing minor damage and a 60-foot maple tree fell on a car, injuring the driver.  |      |                            |                           |                          |                      |         |                     |       |                    |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>ILLINOIS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Iroquois County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Milford   | 09   | 1800CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds       |
| <b>Ford County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Paxton  | 09   | 1810CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds       |
| A storm damaged trees and power lines near Milford. Another severe storm knocked down tree limbs on route 115 near Paxton.                            |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Greene County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Carrollton  | 09   | 1813CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| Carrollton  | 09   | 1813CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Flash Flood              |
| Wind gusts to 60 mph with flash and street flooding.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Calhoun County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Countywide  | 09   | 1816CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Countywide  | 09   | 1816CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dime-size hail and several trees were blown down across southern Calhoun County.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Jersey County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Jerseyville   | 09   | 1845CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Several large trees and power lines were down.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Montgomery County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Nokomis   | 09   | 1849CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| Numerous power lines and tree limbs were blown down in Nokomis.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Douglas County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Arcola  | 09   | 1927CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds       |
| Several power lines were blown down in Arcola.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Madison County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Granite City  | 09   | 1929CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dime-size hail was reported.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Edgar County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Paris   | 09   | 1946CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Thunderstorm winds and very heavy rain damaged a porch and caused the roof of an old building to collapse. Also, numerous tree limbs were blown down. |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Monroe County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Waterloo  | 09   | 1955CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| The Illinois State Police reported a wind gust to 60 mph.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>St. Clair County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Washington Park   | 09   | 1955CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| Freeburg  | 09   | 2005CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Several large trees were blown down at Washington Park. The Freeburg Emergency Management reported trees and power lines down.                        |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Randolph County</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Sparta  | 09   | 2040CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds       |
| The Randolph County Emergency Operations Center reported numerous trees and power lines down.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Perry County</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Pinckneyville   | 09   | 2055CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| Power lines were knocked down causing power outages across central Perry County.  |      |                            |                           |                          |                      |         |                     |       |                          |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992    |      |                            |                           |                          |  |   |                                       |   |  |
|-------------------|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|---|--|
| Location          | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops |   | Character of Storm   |
| ILLINOIS Cont'd   |      |                            |                           |                          |  |   |                                       |   |  |
| Jackson County    | 09   | 2135CST                    |                           |                          | 0                                      | 0 | 0                                     | 0 | Thunderstorm Winds (G50)   |
| 1 W Murphysboro   | 09   | 2205CST                    |                           |                          | 0                                      | 0 | 3                                     | 0 | Thunderstorm Winds   |
| Murphysboro       |      |                            |                           |                          |  |   |                                       |   | Numerous trees and power lines were blown down.  |
| Saline County     | 09   | 2230CST                    |                           |                          | 0                                      | 0 | 2                                     | 0 | Thunderstorm Winds   |
| Harco             |      |                            |                           |                          |  |   |                                       |   | Several trees were blown down.   |
| Harrisburg        |      |                            |                           |                          |  |   |                                       |   |  |
| Williamson County | 09   | 2235CST                    |                           |                          | 0                                      | 0 | 2                                     | 0 | Thunderstorm Winds   |
| 5 SW Marion       |      |                            |                           |                          |  |   |                                       |   | Trees and power lines were blown down in the Crab Orchard National Wildlife Refuge.  |
| DuPage County     | 15   | 1400CST                    |                           |                          | 0                                      | 1 | 0                                     | 0 | Lightning  |
| Bloomington       |      |                            |                           |                          |  |   |                                       |   | A caddy was struck by lightning at a golf course.  |
| St. Clair County  | 20   | 2325CST                    |                           |                          | 0                                      | 0 | 3                                     | 0 | Thunderstorm Winds   |
| New Athens        |      |                            |                           |                          |  |   |                                       |   | County officials reported power lines down.  |
| Edgar County      | 21   | 0000CST                    |                           |                          | 0                                      | 0 | ?                                     | 0 | Thunderstorm Winds   |
| Paris             |      |                            |                           |                          |  |   |                                       |   | Two large hickory trees were blow over by high winds.  |
| INDIANA           |      |                            |                           |                          |  |   |                                       |   |  |
| St. Joseph County | 03   | 0200EST                    |                           |                          | 0                                      | 0 | 6                                     | 0 | Lightning  |
| Mishawaka         |      |                            |                           |                          |  |   |                                       |   | A car dealership was damaged by fire after it was struck by lightning. Damage was estimated at \$500,000.  |
| Kosciusko County  | 03   | 0430EST                    |                           |                          | 0                                      | 0 | 5                                     | 0 | Lightning  |
| North Webster     |      |                            |                           |                          |  |   |                                       |   | A house caught fire after it was struck by lightning. Damage was estimated at \$75,000 to \$80,000.  |
| Jasper County     | 08   | 0055EST                    |                           |                          | 0                                      | 0 | 5                                     | 0 | Thunderstorm Winds   |
| 5 S Rensselaer    |      |                            |                           |                          |  |   |                                       |   | One steel structure collapsed and a second structure was blown off its foundation.   |
| Cass County       | 08   | 0115EST                    |                           |                          | 0                                      | 0 | 4                                     | 0 | Thunderstorm Winds   |
| Clymers           |      |                            |                           |                          |  |   |                                       |   | Windows were blown out of a business building in Clymers. In Logansport, a garage was blown down and trees were downed. One tree fell on a house.                              |
| Logansport        |      |                            |                           |                          |  |   |                                       |   |  |
| Clinton County    | 08   | 0230EST                    |                           |                          | 0                                      | 0 | 4                                     | 0 | Thunderstorm Winds   |
| Cyclone           |      |                            |                           |                          |  |   |                                       |   | A greenhouse and camper were damaged. The roof was damaged at a business on U.S. Highway 421 between Kirklin and State Route 28, and two tractor-semitrailers were overturned. |
| Boone County      | 08   | 0300EST                    |                           |                          | 0                                      | 0 | 4                                     | 0 | Thunderstorm Winds   |
| 2 NW Zionsville   |      |                            |                           |                          |  |   |                                       |   | Numerous trees and power lines were downed. A barn was severely damaged and shifted off its foundation.  |
| St. Joseph County | 08   | 0330EST                    |                           |                          | 0                                      | 0 | 3                                     | 0 | Lightning  |
| Granger           |      |                            |                           |                          |  |   |                                       |   |  |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location                               | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--|
|  |          |                            |                           |                          | Killed               | Injured | Property            | Crops |  |
| <b>INDIANA Cont'd</b>                  |          |                            |                           |                          |                      |         |                     |       |  |
|  |          |                            |                           |                          |                      |         |                     |       | Lightning caused an estimated \$1,500 damage when it struck an electrical service line and burned a cable television converter box.  |
| Lake County                            | 09<br>10 | 1500EST-<br>0700EST        |                           |                          | 0                    | 0       | ?                   | ?     | Flash Flood  |
|  |          |                            |                           |                          |                      |         |                     |       | Rainfall of three to four inches fell over northern Lake County in the afternoon and early evening. The heavy rain resulted in flooding of streets, low lying areas, viaducts, and basements. Many ditches and tributaries to the Little Calumet River overflowed their banks. The Little Calumet crested at flood stage in the early morning hours of September 10. |
| Adams County                           | 09       | 1630EST                    |                           |                          | 0                    | 0       | 0                   | 4     | Flash Flood  |
|  |          |                            |                           |                          |                      |         |                     |       | Heavy rain caused flooding of roads and cropland in southern Adams County.   |
| Huntington County<br>3 S Andrews       | 09       | 1728EST                    |                           |                          | 0                    | 0       | 0                   | 3     | Hail (1.00)  |
| Pulaski County<br>4 W Winamac          | 09       | 1843EST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds   |
|  |          |                            |                           |                          |                      |         |                     |       | Thunderstorm winds damaged a house 4 miles west of Winamac.  |
| Elkhart County<br>1 S Goshen           | 09       | 1845EST                    |                           |                          | 0                    | 0       | 0                   | 6     | Hail (1.50)  |
|  |          |                            |                           |                          |                      |         |                     |       | Hail damaged an estimated 130,000 bushels of apples that were almost ready to be picked. Damage was estimated at \$750,000.  |
| Fulton County<br>Bruce Lake<br>Station | 09       | 1910EST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.75)  |
| Kosciusko County<br>N Webster          | 09       | 1923EST                    | Short                     | 5                        | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|  |          |                            |                           |                          |                      |         |                     |       | A small tornado touched down briefly, and caused no damage.  |
| Elkhart County<br>Elkhart              | 09       | 1930EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Lightning  |
|  |          |                            |                           |                          |                      |         |                     |       | A garage was destroyed by fire after it was struck by lightning. Damage was estimated at \$24,000.   |
| Benton County<br>5 SE Fowler           | 09       | 1937EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds   |
|  |          |                            |                           |                          |                      |         |                     |       | Part of a steel tower was blown down, and a building was also damaged. The County Emergency Management Director determined that winds of 70 to 80 mph caused the damage.   |
| Noble County                           | 09       | 1945EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds   |
|  |          |                            |                           |                          |                      |         |                     |       | Trees and power lines were blown down across the western part of the county.   |
| Whitley County                         | 09       | 1955EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds   |
|  |          |                            |                           |                          |                      |         |                     |       | Trees and power lines were blown down across the western part of the county.   |
| Huntington County<br>Huntington        | 09       | 2056EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Lightning  |
|  |          |                            |                           |                          |                      |         |                     |       | Lightning hit a home television antenna, and created a hole in the roof of the house. Damage was estimated at \$1,000.   |
| Vigo County<br>Pimento                 | 09       | 2115EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52)   |
|  |          |                            |                           |                          |                      |         |                     |       | Winds were estimated at 60 mph.  |
| Kosciusko County<br>Syracuse           | 09       | 2330EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Lightning  |
|  |          |                            |                           |                          |                      |         |                     |       | Lightning struck a home television antenna on a house, then traveled underground and blew up part of a driveway. The lightning also ignited a gas line, knocked pictures off the walls of the house, and damaged the wiring in the house.  |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## INDIANA Cont'd

|  |    |         |     |    |   |   |   |   |              |
|--|----|---------|-----|----|---|---|---|---|--------------|
| Jefferson County<br>0.5 S Paynesville  | 18 | 1702EST | 1.0 | 50 | 0 | 0 | 5 | 4 | Tornado (F1) |
| A small tornado touched down half-mile south of Paynesville. The tornado hit a house, three tobacco barns and a double wide mobile home. Three people in the mobile home were uninjured. The tornado also destroyed two trailers before lifting. |    |         |     |    |   |   |   |   |              |
| Allen County   | 21 | 1000EST |     |    | 0 | 0 | 3 | 0 | Flash Flood  |
| Almost two inches of rain in a 1-hour period produced flash flooding on Spy Run Creek in Fort Wayne. Sandbagging was ordered in the city of Fort Wayne to prevent property damage.   |    |         |     |    |   |   |   |   |              |
| Noble County   | 21 | 1015EST |     |    | 0 | 0 | 3 | 3 | Flash Flood  |
| Over two inches of rain fell during a 11.5 minute period and produced flooding of many county roads and streams in eastern Noble County. Some crop damage was also reported.   |    |         |     |    |   |   |   |   |              |
| Clay County<br>Knightsville  | 26 | 2235EST |     |    | 0 | 1 | 3 | 0 | Winds        |
| Part of a tree was blown down, and it fell into a nursing home. Several windows were broken, and the roof was damaged. One person was injured.   |    |         |     |    |   |   |   |   |              |

## IOWA

|                                |    |         |  |  |   |   |   |   |                           |
|--------------------------------|----|---------|--|--|---|---|---|---|---------------------------|
| Cass County<br>3 N Griswold    | 05 | 1835CST |  |  | 0 | 0 | 4 | 3 | Thunderstorm Winds (G50+) |
| Adair County<br>Fontanelle     | 05 | 1905CST |  |  | 0 | 0 | 3 | 4 | Hail (1.00)               |
| Warren County<br>Norwalk       | 05 | 2010CST |  |  | 0 | 0 | 3 | 4 | Hail (1.00)               |
| Marion County<br>Pleasantville | 05 | 2042CST |  |  | 0 | 0 | 4 | 3 | Thunderstorm Winds (G50+) |

A scattered line of thunderstorms developed along a cold front as it moved across the state. One-inch-diameter hail fell in Adair and Warren Counties. Other scattered severe weather reports were received. In Cass County, trees were downed by high winds north of Griswold. One of them fell onto a house, damaging the structure. Trees were also downed in Marion County by high winds. Other reports included small hail and gusty winds, but no significant damage.

|   |    |         |  |  |   |   |   |   |                  |
|---|----|---------|--|--|---|---|---|---|------------------|
| Johnson County<br>Solon   | 06 | 1431CST |  |  | 0 | 0 | 0 | 0 | Cold Air Funnels |
| Scattered light showers developed in the cold air following a cold frontal passage. Five cold air funnels were observed in the Solon area of Johnson County. None of them touched down. |    |         |  |  |   |   |   |   |                  |

|  |    |                     |  |  |   |   |   |   |                  |
|--|----|---------------------|--|--|---|---|---|---|------------------|
| Cedar County<br>Lowden   | 07 | 0715CST-<br>0725CST |  |  | 0 | 0 | 0 | 0 | Cold Air Funnels |
| Although there were no precipitation echoes indicated in the area, a trained observer reported two cold air funnels east of Lowden. They were observed coming out of a bank of cumulus congestus clouds. The bases were between 10,000 and 15,000 feet. One funnel was seen to descend about one-fourth way to the ground, while the other just made it barely past the cloud base. They were observed both with the naked eye and with a pair of binoculars. The funnels lasted 10 minutes. |    |                     |  |  |   |   |   |   |                  |

## IAZ061-062-075-076

|                                |    |          |  |  |   |   |   |   |             |
|--------------------------------|----|----------|--|--|---|---|---|---|-------------|
| Central into<br>Southeast Iowa | 09 | 0600CST- |  |  |   |   |   |   |             |
| Polk County                    | 11 | 1200CST  |  |  | 0 | 0 | 4 | 4 | Flood       |
| Des Moines                     | 09 | 0600CST  |  |  | 0 | 0 | 3 | 2 | Hail (.75)  |
| West Des Moines                | 09 | 0610CST  |  |  | 0 | 0 | 3 | 2 | Hail (.875) |
| Windsor Heights                | 09 | 0610CST  |  |  | 0 | 0 | 3 | 2 | Hail (.75)  |
| Des Moines                     | 09 | 0615CST  |  |  | 0 | 0 | 3 | 2 | Hail (.75)  |

A cluster of thunderstorms moved across central Iowa. The main feature with them was heavy rainfall. Dime- to nickel-size hail fell over the metropolitan Des Moines area. The hail covered the ground in several places.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>IOWA Cont'd</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Scott County   | 09   | 1330CST-<br>1600CST        |                           |                          | 0                    | 0       | 5                   | 4     | Flash Flood              |
| A line of very heavy thunderstorms formed ahead of a cold front as it moved across southeast Iowa. The main feature with them was the very heavy rainfall. Many sections of Scott County received between three and six inches of rainfall. Walcott, just west of the Quad Cities, received six inches of rain. Flash flooding occurred along Duck Creek in Davenport. Considerable flooding occurred in the Quad Cities as streets flooded. Cars were forced off of the road and flooding was reported in homes and businesses. |      |                            |                           |                          |                      |         |                     |       |                          |
| Kossuth County<br>4 E Algona   | 13   | 2050CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (1.75)              |
| A line of thunderstorms brushed the northern part of Iowa. They developed ahead of a weak frontal system. One storm became severe, dropping golf-ball size hail east of Algona.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Palo Alto County<br>6 E Mallard  | 14   | 0400CST                    |                           |                          | 0                    | 0       | 3                   | 4     | Hail (1.50)              |
| Thunderstorms once again swept into northern Iowa in advance of a frontal system. Many were just below severe limits, however one did produce hail about 1.50 inches in diameter in Palo Alto County. Car damage was reported east of Mallard.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Union County<br>Creston  | 14   | 1918CST                    |                           |                          | 0                    | 0       | 5                   | 4     | Thunderstorm Winds (G65) |
| Thunderstorms developed during the late afternoon a hours ahead of a cold front. For the most part, they were just producing pea- to marble-size hail, heavy rain, and gusty winds. One cell moved through the Creston area and produced winds of 75 mph. Damage was quite widespread in the city. Many trees were downed.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Clarke County  | 14   | 2200CST-                   |                           |                          |                      |         |                     |       |                          |
|  | 15   | 0800CST                    |                           |                          | 0                    | 0       | 7                   | 7     | Flash Flood              |
| Union County   | 14   | 2200CST-                   |                           |                          |                      |         |                     |       |                          |
|  | 15   | 0800CST                    |                           |                          | 0                    | 0       | 7                   | 7     | Flash Flood              |
| Decatur County   | 15   | 2336CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0800CST                    |                           |                          | 0                    | 0       | 7                   | 7     | Flash Flood              |
| Wapello County   | 15   | 0130CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0500CST                    |                           |                          | 0                    | 0       | 6                   | 6     | Flash Flood              |
| Lucas County   | 15   | 0200CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0800CST                    |                           |                          | 0                    | 0       | 7                   | 6     | Flash Flood              |
| Wayne County   | 15   | 0200CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 6                   | 6     | Flash Flood              |
| Appanoose County   | 15   | 0230CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 6                   | 6     | Flash Flood              |
| Madison County<br>Southern Portion   | 15   | 0300CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 6                   | 6     | Flash Flood              |
| Marion County<br>Extreme Southern<br>Portion   | 15   | 0300CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 5                   | 5     | Flash Flood              |
| Adair County   | 15   | 0300CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 6                   | 6     | Flash Flood              |
| Adams County   | 15   | 0300CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 6                   | 5     | Flash Flood              |
| Ringgold County  | 15   | 0300CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0800CST                    |                           |                          | 0                    | 0       | 6                   | 5     | Flash Flood              |
| Monroe County  | 15   | 0400CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 0600CST                    |                           |                          | 0                    | 0       | 5                   | 5     | Flash Flood              |
| Guthrie County   | 15   | 0400CST-                   |                           |                          |                      |         |                     |       |                          |
|  |      | 1000CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Flash Flood              |
| Madison County<br>Winterset  | 15   | 0445CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Lightning                |



## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

### IOWA Cont'd

The combination of strong warm air advection on a strong southerly low-level jet, deep tropical moisture, thickness diffluence, and a stalled cold frontal boundary resulted in a classic back-developing Mesoscale Convective System. As the low level jet collided with an old thunderstorm outflow boundary in southern Iowa, deep convection began. The thunderstorms formed, and would move eastward, training over the same areas most of the night. The rain tapered off by mid-morning on the 15th. The system produced one of the worst flash flooding cases on record. The floods that followed were of record proportions and will be addressed later in this report. Four to eight inches or more of rain were common over a large area of south central Iowa. The highest rainfall total was 16 inches at Van Wert, in Decatur County. Most of the rain fell between 1900 CST and 0500 CST of the evening of the 14th and early morning of the 15th. Other flooding during the night occurred in Cass County, but it was not major. Massena, in Cass County, reported 6.45 inches of rainfall, however no roads were overtopped with water. A brief run down of some of the flood reports follows. In Adair County, county roads north and east of Hebron along the Grand River were closed. In Madison County, 4.99 inches of rain fell at Winterset. County roads were closed south of Highway 92. Unofficial reports of 5 1/2 to 7 inches of rain were received south of Highway 92. In Union County, 14 inches of rain fell (unofficially) at Thayer. Officially, 8.60 inches fell at Lorimor. Unofficially, 10 inches of rain fell at Creston. Numerous paved and gravel county roads were under water. The county reported that they had run out of barricades to block flooded roads. An earthen dam was also breached near Thayer. In Clarke County, 8.80 inches of rain fell at Osceola. Several county roads were under water. U.S. Highway 69 was closed from 2 to 8 miles south of Osceola. In Lucas County, officially 6.95 inches of rain fell at Chariton. Several unofficial reports of 10 to 13 inches were received from near Chariton. Derby officially reported 11.50 inches. All highways into Chariton were closed by flood waters. Highway 14, U.S. Highways 65 and 69 were all closed. In Monroe County, 4.61 inches of rain fell officially at Albia, closing U.S. Highway 34 there. In Wapello County, 6.28 inches fell at Eddyville, and 6.07 at Ottumwa (both official reports). Several county gravel roads were under water by flash flooding. In Ringgold County, seven inches of rain fell officially at Beaconsfield, with several reports unofficially of four to six inches elsewhere. Ten to twelve county gravel and paved roads were closed, as was Highway 2. In Decatur County, officially 6.64 inches of rain fell at Leon. Unofficially, 16 inches of rain fell at Van Wert, however this was verified by bucket survey. Highway 2 was closed east of Corydon. Interstate 35 was closed at the 7 mile marker. In Wayne County, 8.80 inches of rain fell officially at Promise City, with 5.20 inches at Clio. Unofficial rainfall reports include a 13 inch report north of Corydon near Millerton. All highways and county roads were closed. There was as much as 4 feet of water over Highway 2 east of Promise City. The flash flooding was incredible. It was very widespread. Many many homes were flooded and several school districts remained closed for 2 days due to high water and flooded schools. Bridge and road washouts were too numerous to mention here. Damage was extensive to both public and private property. Crop damage was also severe. Many fields were washed away or flattened by the rising flood waters. Small creeks became torrents, while rivers quickly became like lakes. Twenty-five head of sheep and 225 head of cattle were lost in the floods. Some of the rivers were as wide as 5 miles in width by later in the day. In fact, the satellite river reporting gage at Promise City was reportedly completely submerged by flood waters by the afternoon. In Lucas County, an empty coal train, 25 cars in length, was derailed as the flood waters swept it off the tracks near Lucas. Lightning struck the communications center of the Madison County law enforcement agency. The radio equipment was destroyed. There were two other reported lightning strikes in the county around mid morning of the 15th. Both of them were in Scott Township. A house was struck by one lightning stroke, a barn by another. Both were set on fire, but damage was quite minor.

IAZ058-059-070 >  
076-080 > 085-090 >  
096-NEZ010  
Southwest and  
South-central  
Iowa

14 0500CST-  
20 1500CST

0 0 7 6 Major Flood

A major flood event occurred over southwest and south central Iowa. After up to 16 inches of rain fell in some areas. The rain was the result of a prolonged moderate to heavy rain over a large area. The largest rainfall report for the 24-hour period ending at 0700 CST on the 15th, from a National Weather Service cooperative observer, was 11.50 inches at Derby in Lucas County. The largest unofficial total was 16 inches at Van Wert in Decatur County, with Thayer (Union County) close behind at 14 inches. A small dam was breached near Thayer during the flooding. By 0910 CST, flood warnings were issued for Union, Clarke, Lucas, Monroe, Wapello, Decatur, and Wayne Counties. Nearly all rivers and streams in these counties had serious flooding. All-time record crests were observed in the Chariton River basin, with water levels reaching 5 to 6 feet higher than

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## IOWA Cont'd

previous known crests. The Data Collection Platforms at the Chariton and Promise City gages quit working for a while as the flood waters rose inside the gage houses. The Thompson River at Davis City reached nearly 5 feet above its previous record; only the flood mark from the August 9, 1885 flood was higher. Significant flooding also occurred on portions of Whitebreast Creek upstream from Dallas, Elk Creek near Decatur City, Cedar Creek near Bussey, the Middle and South Rivers, the East Nodaway River, and in the Platte River basin. Some official record flood stages include, the record flood stage on the Thompson (locally known as the Grand) River and the Chariton River. At Davis City, the Thompson River crested at 24.25 feet, flood stage is 9 feet. The previous record flood was 19.43 feet on June 10, 1974. The Chariton River at Chariton crested at 29.43 feet, flood stage is 15 feet. The previous record crest was 23.14 feet on July 4, 1981. On the South Fork of the Chariton River at Promise City, a crest of 34.85 feet occurred, flood stage is 18 feet. The previous record was 29.95 feet on July 4, 1981. Most of the rivers in southwest and south central Iowa crested between 2 and 10 feet above flood stage. The rainfall that produced the flooding was considered to be greater than a 100-year rain. In fact, the 16-inch rainfall total at Van Wert was 207% of a 100-year, 24-hour rainfall, which is 7.74 inches. Interstate 35 was closed at the 7-mile marker for about 1.5 days. This was the first time since the highway was built over 20 years ago that it has ever been closed due to flooding in that area. Other U.S. and State highways, too numerous to mention, were also closed due to the flooding. A few towns were isolated for a time. Most county and gravel roads were also inundated near creeks and rivers. There were no deaths or known injuries associated with all the flooding, although there were a few close calls when people drove vehicles (some deliberately driving around barricades) into flood waters. Total damage estimates are difficult to assess. Separation between the flash flooding and the general flooding is even more difficult. A minimum of 30 bridges were destroyed by the flood waters. Damage to those bridges alone is in excess of \$10 million. In Decatur County alone, 11 bridges were destroyed and 25 others suffered heavy damage. At the time of this writing, 9 counties were declared federal disaster areas by President Bush. They were Adams, Clarke, Decatur, Lucas, Madison, Monroe, Ringgold, Union, and Wayne.

### Bremer County Sumner

23 2130CST 0 0 3 0 Lightning

Thunderstorms moved over Bremer County. Lightning struck two houses in the town of Sumner. The wall paper was peeled off of the walls in one house, with damage occurring to some of the wiring. No fire was started. The owners reported that some of the childrens' toys began to function due to the charge of the lightning passing through the house. In the second house, only very minor damage was reported.

### IAZ002 > 011-013 > 030-033 > 042-045 > 052-058-SDZ066- SDZ018 Northern Iowa

28 2200CST-  
29 0800CST 0 0 0 7 Frost

Cold high pressure settled in over Iowa, bringing an early season frost/freeze for about the north half of Iowa. Since crops were well behind schedule this season, much of the corn crop was not completely mature. Light frost damage occurred over a wide area of the state. Damage was reported to be under \$50 million, or put another way under 1% of the anticipated corn yield for 1992.

## KANSAS

### Greeley County

9 W Tribune

7 W Tribune

### Jewell County

Mankato

### Geary County

Fort Riley Military Airfield

01 1515CST 0 0 0 3 Hail (0.75)  
01 1528CST 0 0 0 3 Hail (0.75)  
01 2136CST 0 0 4 4 Hail (0.75)  
05 1722CST 0 0 3 0 Hail (1.00)

One-inch hail fell briefly at Marshall Airfield.

### Sedgwick County

Wichita

Wichita

Wichita

Wichita

05 1726CST 0 0 4 0 Hail (1.75)  
05 1728CST 0 0 4 0 Hail (1.75)  
05 1730CST 0 0 2 0 Hail (0.75)  
05 1730CST 0 0 2 0 Hail (0.75)

# Storm Data and Unusual Weather Phenomena

September 1992

| Location             | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm        |
|----------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|---------------------------|
|                      |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                           |
| <b>KANSAS Cont'd</b> |      |                            |                           |                          |                      |         |                     |       |                           |
| Wichita              | 05   | 1731CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)               |
| Wichita              | 05   | 1731CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.50)               |
| Wichita              | 05   | 1731CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.75)               |
| Wichita              | 05   | 1735CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (2.00)               |
| Wichita              | 05   | 1740CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.50)               |
| Wichita              | 05   | 1741CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)               |
| Leavenworth County   |      |                            |                           |                          |                      |         |                     |       |                           |
| Lansing              | 05   | 1745CST                    |                           |                          | 0                    | 0       | 2                   | 1     | Hail (1.50)               |
| Sedgwick County      |      |                            |                           |                          |                      |         |                     |       |                           |
| Wichita              | 05   | 1745CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52+) |
| Wichita              | 05   | 1747CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.75)               |
| Wichita              | 05   | 1748CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (2.75)               |
| Wichita              | 05   | 1749CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (2.00)               |
| Wichita              | 05   | 1757CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (2.75)               |

Sedgwick, Kingman and Butler Counties between 1726 CST and 1959 CST on the 5th: A mass of thunderstorms formed over Wichita that dropped large hail on the northwestern side of town. Hail and wind gusts greater than 60 mph also hit the northeastern side of town early in the episode. A tornado occurred (described separately) just before 1800 CST on the eastern side of town and caused a great deal of damage. The storm system was slow to move, but spread east and west of Wichita. Two more tornadoes (described separately) came to the ground out of the storm complex between 1900 CST and 2000 CST.

Large hail continued to fall in portions of Wichita until near 2000 CST.

Report locations and times follow.

Wichita 05 1759CST-1815CST 3.0 200 0 1 7 0 Tornado (F2)

A tornado touched down about a mile east of the intersection of Interstate 135 and U.S. Highway 54, and continued east 3 miles. The twister took a path on the east side of Wichita along Kellogg Street from Bluff to 0.5 mile northeast of Towne East Shopping Mall (near the intersection of Lochinvar & Heather Streets.) The tornado hit one of the most active business districts in Wichita and many businesses suffered heavy damage. The area of damage was bordered on the west by Bluff Street, on the north by Douglas Avenue, on the east by Webb Road, and on the south by Lincoln Street.

Particularly hard hit were several car dealers, with nearly their entire stock damaged severely. A motel had its entire roof ripped off. A total of 8 homes were destroyed, and 47 others heavily damaged in Wichita (by this and the 1930 CST tornado.) Towne East Mall took a direct hit with many cars in the parking lot damaged, several metal light poles bent to the ground, and roof damage to the building. A woman in the mall was hit by glass when a skylight was knocked out, but she was treated for minor cuts at a hospital and released.

Leavenworth County  
Lansing 05 1800CST 0 0 2 1 Hail (1.00)  
Nemaha County  
3 SE Goff 05 1810CST 0 0 4 4 Flash Flood

Heavy rains caused 2 to 3 feet of water to overflow highway K-9 between Goff and Wetmore.

Jackson County  
2 SW Whiting 05 1825CST-1835CST 3.0 15 0 0 3 3 Tornado (F0)

A small weak tornado had a broken path 3 miles long in open country southwest of Whiting damaging some trees and a power line as it moved southeast.

Sedgwick County  
Wichita 05 1831CST 0 0 3 0 Hail (1.00)  
Wichita Airport 05 1832CST-1845CST 0 0 3 0 Hail (1.00)  
Wichita 05 1836CST 0 0 2 0 Hail (0.75)  
Goddard 05 1839CST 0 0 4 3 Hail (1.75)  
Atchison County  
Muscotah 05 1840CST 0 0 5 3 Thunderstorm Winds (G55)

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## KANSAS Cont'd

Strong thunderstorm winds in excess of 60 mph caused considerable damage in the western half of Atchison county to trees, farmsteads and power lines. Some residents thought it may have been a tornado, but none was spotted.

### Jackson County 1 W Denison

05 1840CST 0 0 0 0 Funnel Cloud

A funnel cloud, likely the remains of the weak tornado southwest of Whiting, was sighted west of Denison moving to the southeast.

### Sedgwick County

#### Wichita

05 1848CST 0 0 3 0 Hail (1.00)

#### Wichita

05 1849CST 0 0 4 0 Hail (1.50)

#### Wichita

05 1849CST 0 0 4 0 Hail (1.50)

### Jackson County Holton

05 1851CST 0 0 4 3 Thunderstorm Winds (G52)

Thunderstorm winds to 60 mph downed tree limbs and power lines in and near the city of Holton.

### Sedgwick County

#### Wichita

05 1855CST 0 0 4 0 Hail (4.50)

#### Wichita

05 1856CST 0 0 4 0 Hail (1.75)

#### Wichita

05 1857CST 0 0 4 0 Hail (1.75)

### Butler County

#### 5 E Andover

05 1902CST 0 0 0 0 Funnel Cloud

### Marion County

#### Goessel

05 1903CST 0 0 3 3 Hail (1.00)

#### Marion

05 1903CST 0 0 3 3 Hail (1.00)

A thunderstorm (separate from the Sedgwick County storm) dropped 1.00-inch-diameter hailstones at Goessel and Marion. Little damage resulted.

### Sedgwick County

#### Wichita

05 1903CST 0 0 4 0 Hail (2.50)

### Kingman County

#### 1 N to 2 E

05 1913CST-1918CST 0.5 50 0 0 3 0 Tornado (F1)

#### Norwich

A tornado touched down initially near the Kingman-Sedgwick County Border northeast of Norwich. It tore up trees and damaged outbuildings at a farm just west of the Sedgwick County line. It continued east into southwest Sedgwick County.

### Sedgwick County

#### 1 N to 2 E

05 1918CST-1940CST 6.0 100 0 0 3 0 Tornado (F1)

#### Norwich to

#### 3 W Viola

A tornado that formed northeast of Norwich in Kingman County entered Sedgwick County about 9 miles west of Viola and took a path 6 miles to the east, lifting 3 miles west of Viola. Videotape showed this as a fairly good sized tornado. Fortunately, it crossed open fields and caused little damage. On farm just north of 111th South and 375th West in the far southwest corner of Sedgwick County had some damage done to outbuildings.

### Wichita

05 1930CST-1945CST 3.7 100 0 0 6 0 Tornado (F1)

The third tornado of the evening came to the ground on the west side of Wichita, cutting a path from Kellogg and Dugan Streets southeast nearly 4 miles and lifting 2 blocks west of 31st and Meridian. Riner Camper Sales (at Kellogg and Dugan) caught the first and most severe damage with the entire inventory of 80 camper trailers and recreational vehicles destroyed and scattered across Kellogg Street. Sheplers Western Wear (at Kellogg and Dugan) had a large section of roof ripped off its office building. A narrow trail of continuous damage to trees, homes and buildings was found throughout the track.

The tornado caught the southwest corner of a mobile home park at 2625 South West Street. One home was turned over and 10 others damaged heavily. Fortunately, no one was injured by this twister.



# Storm Data and Unusual Weather Phenomena

September 1992

| Location                             | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm   |
|--------------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--|
|                                      |      |                            |                           |                          | Killed               | Injured | Property            | Crops |  |
| <b>KANSAS Cont'd</b>                 |      |                            |                           |                          |                      |         |                     |       |  |
| Wichita                              | 05   | 1959CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)  |
| Franklin County<br>Ottawa            | 05   | 2145CST                    |                           |                          | 0                    | 0       | 4                   | 3     | Thunderstorm Winds (G44)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | Winds estimated at 50 mph caused tree and power line damage in and near Ottawa.                                  |
| Gove County<br>12 SSE Gove           | 06   | 1905CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado very briefly dipped down in open county with no damaged observed or reported.               |
| 11 SSE Gove                          | 06   | 1910CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado very briefly dipped down in open county with no damaged observed or reported.               |
| 3 W Grinnell                         | 06   | 1918CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (0.75)  |
| Decatur County<br>12 W Oberlin       | 06   | 1952CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado dipped down in open county and uprooted some trees, otherwise no other damage was reported. |
| Gove County<br>12 SE Gove            | 06   | 2010CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado very briefly dipped down in open country with no damage observed or reported.               |
| Trego County<br>15 S Voda            | 06   | 2125CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (1.00)  |
| Decatur County<br>18 S Oberlin       | 06   | 2130CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado briefly touched down with no reported damage.   |
| 5 SW Dresden                         | 06   | 2135CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Tornado (F0)   |
|                                      |      |                            |                           |                          |                      |         |                     |       | A small weak tornado briefly touched down with no reported damage.   |
| Trego County<br>Cedar Bluff Dam      | 06   | 2150CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.00)  |
| Phillips County<br>2 SW Phillipsburg | 06   | 2210CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| Ellis County<br>Antonino             | 06   | 2238CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.00)  |
| Rooks County<br>7 S Palco            | 06   | 2327CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (0.75)  |
| 7 SW Plainville                      | 07   | 0025CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (1.75)  |
| 5 SW Plainville                      | 07   | 0033CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (1.50)  |
| Osborne County<br>5 E Natoma         | 07   | 0035CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| 2 S Natoma                           | 07   | 0100CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| Russell County<br>Paradise           | 07   | 0115CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| Jewell County<br>Webber              | 07   | 0350CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| Republic County<br>Republic          | 07   | 0400CST                    |                           |                          | 0                    | 0       | 4                   | 4     | Hail (0.75)  |
| Jefferson County<br>8 N Lawrence     | 07   | 1340CST                    | 0.1                       | 15                       | 0                    | 0       | 0                   | 3     | Tornado (F0)   |

A small weak tornado dipped to the ground only briefly in open country with no reported damage to property and only minor damage to crops. The tornado was spotted by a storm chaser driving on the Kansas turnpike at Lawrence.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm        |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|---------------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                           |
| <b>KANSAS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Franklin County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| Wellsville  | 07   | 1658CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.00)               |
| Princeton   | 07   | 1720CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Thunderstorm Winds (G52)  |
| Winds estimated over 60 mph caused some minor damage.   |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Miami County</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
| Osawatimie  | 07   | 1730CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Lightning                 |
| Numerous lightning strikes caused power outages and interruption of cable, telephone and emergency communications. Electricity was out in some areas for 90 minutes, and some power poles were set on fire by the lightning.  |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Paola</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
|   | 07   | 1730CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Lightning                 |
| Numerous lightning strikes caused power outages and interruption of telephone, cable and emergency communications. Police and fire radio communications were nearly knocked out completely, with a backup system taking over.   |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Paola</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
|   | 07   | 1734CST                    |                           |                          | 0                    | 0       | 2                   | 1     | Hail (0.75)               |
| <b>Franklin County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| 5 N Ottawa  | 07   | 1737CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (0.75)               |
| <b>Butler County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| 4 NE Leon   | 07   | 1813CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Hail (0.75)               |
| 4 SW Beaumont   | 07   | 1822CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Hail (1.00)               |
| Three-quarter-inch diameter hail fell northeast of Leon and southwest of Beaumont. Little damage resulted.  |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Coffey County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| 2 W Gridley   | 07   | 1843CST                    |                           |                          | 0                    | 0       | 4                   | 3     | Hail (1.75)               |
| <b>Anderson County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| Garnett   | 07   | 1914CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (0.75)               |
| <b>Allen County</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
| Elmore  | 07   | 2059CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud              |
| Moran   | 07   | 2107CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud              |
| Funnels were sighted near Elmore and Moran. Neither touched down, and no damage was reported.   |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Crawford County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| Walnut  | 07   | 2140CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Hail (0.75)               |
| 4 NE Pittsburg  | 07   | 2145CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud              |
| 2 N Pittsburg   | 07   | 2207CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud              |
| Opolis  | 07   | 2220CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52+) |
| A thunderstorm dropped 0.75-inch hail at Walnut and produced damaging winds (in excess of 60 mph) at Pittsburg and Opolis. Pittsburg caught the worst damage: many trees in Lincoln Park were knocked down and damaged, a tree was knocked atop a home at 409 West 5th, and a 40-by 40-foot section of roof was peeled off a supermarket at Meadowbrook Mall on the south end of town. Funnels were spotted northeast and north of town, but the nature and random distribution of damage indicated downburst winds were the cause. |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Pittsburg</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
|   | 07   | 2220CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds (G52+) |
| <b>Pratt County</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
| 1 NE Preston  | 08   | 0400CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)               |
| <b>Shawnee County</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
| 2 E Auburn  | 09   | 0040CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (2.00)               |
| <b>Forbes Airport</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
|   | 09   | 0045CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)               |
| <b>6 SE Topeka</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
|   | 09   | 0105CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.50)               |
| Walnut-size hail fell just south and east of Lake Shawnee.  |      |                            |                           |                          |                      |         |                     |       |                           |
| <b>Jefferson County</b>   |      |                            |                           |                          |                      |         |                     |       |                           |
| Oskaloosa   | 09   | 0125CST                    |                           |                          | 0                    | 0       | 4                   | 3     | Hail (4.00)               |
| <b>Atchison County</b>  |      |                            |                           |                          |                      |         |                     |       |                           |
| Atchison  | 09   | 0239CST                    |                           |                          | 0                    | 0       | 4                   | 3     | Thunderstorm Winds (G52)  |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date   | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm       |
|--|--|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------------|
| <b>KANSAS Cont'd</b>   |  |                            |                           |                          |  |                                       |                          |
| Winds estimated at 60 mph knocked trees and power lines with damage to several buildings.                  |  |                            |                           |                          |  |                                       |                          |
| Bean Lake Area   | 09   | 0300CST                    |                           |                          | 0 0                                    | 5 3                                   | Thunderstorm Winds (G52) |
| Winds to around 60 mph damaged homes and buildings in the Bean Lake area and also knocked down tree limbs. |  |                            |                           |                          |  |                                       |                          |
| Wilson County  | 09   | 1650CST                    |                           |                          | 0 0                                    | 4 3                                   | Hail (1.75)              |
| Fredonia   | 09   | 1655CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (1.75)              |
| 3 NW Fredonia  | Golf ball-size hail fell in and around Fredonia. Some cars and roofs were damaged.   |                            |                           |                          |  |                                       |                          |
| Cowley County  | 09   | 1707CST                    |                           |                          | 0 0                                    | 3 0                                   | Hail (1.00)              |
| 4 SE Arkansas City   | One-inch-diameter hail fell southeast of Arkansas City. Little damage was done.  |                            |                           |                          |  |                                       |                          |
| Montgomery County  | 09   | 1740CST                    |                           |                          | 0 0                                    | 2 0                                   | Hail (0.75)              |
| 5 NE Elk City  | Three-quarter-inch hail fell northeast of Elk City. Little damage resulted.  |                            |                           |                          |  |                                       |                          |
| Chautauqua County  | 09   | 1745CST                    |                           |                          | 0 0                                    | 2 0                                   | Thunderstorm Winds (G52) |
| 1 S Cedar Vale   | Thunderstorm winds estimated at 60 mph were reported south of Cedar Vale. Little damage resulted.  |                            |                           |                          |  |                                       |                          |
| Crawford County  | 09   | 1811CST                    |                           |                          | 0 0                                    | 2 2                                   | Hail (0.75)              |
| Arcadia  | Three-quarter-inch hail fell at Arcadia. Little damage was done.   |                            |                           |                          |  |                                       |                          |
| Douglas County   | 17   | 0335CST                    |                           |                          | 0 0                                    | 4 0                                   | Lightning                |
| Lawrence   | Lightning hit a house and set it on fire causing extensive damage. Heavy rains accompanied the strong thunderstorm.  |                            |                           |                          |  |                                       |                          |
| Wyandotte County   | 17   | 0750CST                    |                           |                          | 0 1                                    | 0 0                                   | Lightning                |
| Kansas City  | Lightning struck a 27-year-old male as he was hooking a trailer to a truck. The man experienced only minor injuries, but was admitted to a hospital for observation. |                            |                           |                          |  |                                       |                          |
| Lincoln County   | 17   | 1700CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| 2 S Hunter   | 17   | 1715CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| 1 W Ash Grove  | 17   | 1720CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| Denmark  | 17   | 1813CST                    |                           |                          | 0 0                                    | 5 4                                   | Thunderstorm Winds (G56) |
| Vesper   | 17   | 1830CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| Lincoln  | 17   | 1830CST                    |                           |                          | 0 0                                    | 4 4                                   | Thunderstorm Winds (G52) |
| Ottawa County  | 17   | 1900CST                    |                           |                          | 0 0                                    | 4 4                                   | Hail (1.00)              |
| 2 W Delphos  |  |                            |                           |                          |  |                                       |                          |
| Washington County  | 17   | 1900CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| Washington   | 17   | 1915CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| Hanover  |  |                            |                           |                          |  |                                       |                          |
| Marshall County  | 17   | 1920CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (1.00)              |
| 8 N Marysville   | The walnut-size hail fell in the city of Bremen.   |                            |                           |                          |  |                                       |                          |
| Herkimer   | 17   | 1920CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (1.00)              |
| Oketo  | 17   | 1930CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (1.00)              |
| Jewell County  | 17   | 2218CST                    |                           |                          | 0 0                                    | 3 3                                   | Hail (0.75)              |
| 2 E Mankato  |  |                            |                           |                          |  |                                       |                          |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>KANSAS Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Severe thunderstorms that moved across the area dropped large hail and caused high winds damaging several farms across central Lincoln county.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Douglas County<br/>Lawrence</b>  | 20   | 1600CST-<br>2100CST        |                           |                          | 0                    | 0       | 5                   | 3     | Flash Flood        |
| Up to four inches of rain in less than one hour caused flash flooding in the Lawrence area. Many streets were flooded with 2 to 3 feet of water and many buildings had flooded basements. Traffic was stalled on many main streets and highways. The heavy rains knocked out power in some areas and caused numerous traffic accidents.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Johnson County<br/>Olathe</b>  | 20   | 1725CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| High winds overturned large trucks and stripped roofs from homes and commercial buildings.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Olathe</b>   | 20   | 1801CST                    |                           |                          | 0                    | 0       | 3                   | 2     | Thunderstorm Winds |
| High winds snapped trees at the base and blew down privacy fences.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Olathe</b>   | 20   | 1803CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| A chimney was blown down and roofs were removed from homes.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Sumner County<br/>Near Conway<br/>Springs</b>  | 21   | 1536CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.75)        |
| <b>Harper County<br/>Harper</b>   | 21   | 1545CST                    |                           |                          | 0                    | 0       | 3                   | 3     | Hail (1.75)        |
| A thunderstorm dropped golf ball-size hail near Conway Springs and at Harper. Little damage resulted.   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Sedgwick County<br/>Wichita</b>  | 21   | 1720CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (1.00)        |
| One-inch-diameter hail fell on the west side of Wichita at 18th Street North and Tyler Road. Little damage was done.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Republic County<br/>3.6 NW Narka</b>   | 23   | 1700CST-<br>0400CST        |                           |                          | 0                    | 0       | 3                   | 4     | Flash Flood        |
| Isolated rainfall of nearly ten inches fell near the Nebraska border from near Mahaska to Narka to Munden causing significant crop damage and damage to railroad bridges, tracks, ties and county roads. The Rose creek was severely out of banks due to the high water, and many longtime local residents said it was the worst flooding in 50 years. The heavy rains extended into southern Nebraska. |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>KENTUCKY</b>   |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Boone County</b>   | 05   | 1600EST                    |                           |                          | 2                    | 0       | 0                   | 0     | Lightning          |
| James E. Williams, 36 and his fiance Linda Lampe, 32 were killed by lightning at a golf course in Florence. The couple had been struck by lightning while standing under a tree.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Trimble and<br/>Henry Counties</b>   | 18   | 1710EST-<br>1725EST        | 0.5                       | 50                       | 0                    | 0       | 4                   | 0     | Tornado (F1)       |
| A tornado destroyed a house near Mount Pleasant after crossing the Ohio river from Indiana. The tornado also totaled two cars on the property. One of the cars was moved 300 feet. The tornado then lifted and decended one more time in Henry County. There it destroyed two tobacco barns.  |      |                            |                           |                          |                      |         |                     |       |                    |
| <b>Bullitt County</b>   | 18   | 1845EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| A fast moving storm system sliced through a section of northern Bullitt County, shearing roofs off structures and destroying a house under construction. The storm also downed trees and left some 300 homes without electricity.   |      |                            |                           |                          |                      |         |                     |       |                    |



## Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm                      |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|---|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |   |
| <b>KENTUCKY Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| Shelby County   | 18   | 1905EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds                      |
| Several trees and powerlines were blown down throughout the county.   |      |                            |                           |                          |                      |         |                     |       |   |
| Adair and Russell Counties  | 19   | 0005EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Flash Flood                             |
| Thunderstorms producing up to two inches of rain in an hour, flooded roads and streets throughout the area.   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>LOUISIANA</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| Caddo Parish<br>Shreveport  | 01   | 1440CST                    |                           |                          | 0                    | 0       | ?                   | 0     | Thunderstorm Winds<br>Lightning         |
| Lightning struck a Shreveport home and set it on fire.  |      |                            |                           |                          |                      |         |                     |       |   |
| Webster Parish<br>Sibley  | 01   | 1542CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds                      |
| Bienville Parish<br>5 N Ringgold  | 01   | 1550CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.88)       |
| Webster Parish<br>4 S Sibley  | 01   | 1615CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.75)       |
| A cluster of thunderstorms moving northeast at 15 mph blew down several trees in Sibley and 4 miles south of Sibley. Penny- to nickle-size hail fell 5 miles north of Ringgold and 4 miles south of Sibley. |      |                            |                           |                          |                      |         |                     |       |   |
| Morehouse Parish<br>Gallion   | 02   | 1635CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (1.00)       |
| W Carroll Parish<br>8 SW Oak Grove  | 02   | 1640CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.88)       |
| Richland Parish<br>6 N Holly Ridge  | 02   | 1655CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.88)       |
| Franklin Parish<br>Bakers   | 02   | 1710CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (1.00)       |
| A line of scattered thunderstorms moving southeast at 25 mph produced nickle- to quarter-size hail in Gallion, 8 miles southwest of Oak Grove, 6 miles north of Holly Ridge, and in Bakers.                 |      |                            |                           |                          |                      |         |                     |       |   |
| Caddo Parish<br>2 N Blanchard   | 02   | 1915CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds                      |
| 1 N Cross Lake  | 02   | 1934CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (1.00)       |
| Caldwell Parish<br>10 W Columbia  | 02   | 1940CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds                      |
| Winn Parish<br>5 NE Joyce   | 02   | 1944CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.75)       |
| Bossier Parish<br>3 S Bossier City  | 02   | 1947CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.75)       |
| 2 E Elm Grove   | 02   | 1950CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds                      |
| Desoto Parish<br>2 E Stonewall  | 02   | 2000CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G50)<br>Hail (0.88) |
| Bienville Parish<br>3 W Ringgold  | 02   | 2023CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds<br>Hail (0.88)       |

## Storm Data and Unusual Weather Phenomena

September 1992

|  |      |                            |                           |                          |                      |   |                     |   | September 1992                          |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|---|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm                      |
| LOUISIANA Cont'd   |      |                            |                           |                          |                      |   |                     |   |   |
| Red River Parish<br>2 N Hanna  | 02   | 2037CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| Natchitoches<br>2 E Powhatan   | 02   | 2048CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G54)                |
| Desoto Parish<br>5 E Mansfield   | 02   | 2051CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| Winn Parish<br>5 SE Dodson   | 02   | 2052CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds<br>Hail (0.88)       |
| Desoto Parish<br>2 E Carmel  | 02   | 2115CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds<br>Hail (0.88)       |
| Red River Parish<br>3 E East Point   | 02   | 2130CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| Natchitoches<br>2 E Provencal  | 02   | 2135CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| Cypress  | 02   | 2140CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| Sabine Parish<br>2 N Belmont   | 02   | 2140CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| A line of numerous thunderstorms moving southeast at 25 mph blew down numerous trees and power lines 2 miles north of Blanchard, 10 miles west of Columbia, 5 miles northeast of Joyce, 3 miles south of Bossier City, 2 miles east of Elm Grove, 2 miles east of Stonewall, 2 miles north of Hanna, 2 miles east of Powhatan, 5 miles east of Mansfield, 3 miles east of East Point, 2 miles east of Provencal, in Cypress, and 2 miles north of Belmont. Penny- to quarter-size hail was reported just north of Cross Lake, 5 miles northeast of Joyce, 3 miles south of Bossier City, 2 miles east of Stonewall, 3 miles west of Ringgold, 5 miles southeast of Dodson, and 2 miles east of Carmel. |      |                            |                           |                          |                      |   |                     |   |   |
| Webster Parish<br>Springhill   | 03   | 0130CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G58)<br>Hail (0.75) |
| Bossier Parish<br>Plain Dealing  | 03   | 0135CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds<br>Hail (0.75)       |
| 1 N Benton   | 03   | 0150CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G50)                |
| Scattered thunderstorms moving southeast at 25 mph produced 60 to 70 mph winds which blew down numerous trees in Springhill, Plain Dealing, and just north of Benton. Dime-size hail fell in Springhill and in Plain Dealing.  |      |                            |                           |                          |                      |   |                     |   |   |
| Calcasieu Parish<br>Westlake   | 04   | 1430CST                    |                           |                          | 0                    | 0 | 5                   | ? | Thunderstorm Winds<br>Lightning         |
| Lightning struck a 300-foot tower and KAB Construction Company's offices in Westlake which was set on fire. The blaze did about \$100,000 damage to the company's office.  |      |                            |                           |                          |                      |   |                     |   |   |
| Cameron Parish<br>Cameron  | 11   | 1435CST                    | 0.1                       | 10                       | 0                    | 0 | 0                   | 0 | Waterspout<br>Tornado (F0)              |
| The sheriff's office reported a waterspout made landfall at Cameron before dissipating. No damage was reported in Cameron.   |      |                            |                           |                          |                      |   |                     |   |   |
| Avoyelles Parish<br>Moreauville  | 19   | 1630CST                    |                           |                          | 0                    | 0 | 4                   | 0 | Thunderstorm Winds                      |
| Thunderstorm winds blew down a cinder block warehouse which was under constuction in Moreauville.  |      |                            |                           |                          |                      |   |                     |   |   |
| Caddo Parish<br>Vivian   | 21   | 2245CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds                      |
| A thunderstorm moving east-southeast at 25 mph blew down some trees in Vivian.   |      |                            |                           |                          |                      |   |                     |   |   |

# Storm Data and Unusual Weather Phenomena

September 1992

September 1992

| Location   | Date      | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm              |
|--|-----------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|---------------------------------|
| LOUISIANA Cont'd   |           |                            |                           |                          |                      |   |                     |   |                                 |
| Caddo Parish<br>Vivian   | 22        | 0000CST                    |                           |                          | 0                    | 0 | 5                   | ? | Thunderstorm Winds<br>Lightning |
| Lightning struck a petroleum tank farm near Vivian. Three 210-barrel tanks were destroyed and the top of a 100-barrel tank was blown off. It took firemen about an hour to extinguish the blaze.                                   |           |                            |                           |                          |                      |   |                     |   |                                 |
| Bossier Parish<br>McDade   | 22        | 0010CST                    |                           |                          | 0                    | 0 | 3                   | ? | Thunderstorm Winds              |
| Scattered thunderstorms moving east-southeast at 25 mph blew down a few trees in McDade; one of these trees fell on top of a home damaging a roof.   |           |                            |                           |                          |                      |   |                     |   |                                 |
| Calcasieu Parish<br>Sulphur<br>Moss Bluff  | 22        | 1245CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds              |
| Scattered thunderstorms moving east at 25 mph blew down power lines in Sulphur and Moss Bluff.   |           |                            |                           |                          |                      |   |                     |   |                                 |
| MAINE  |           |                            |                           |                          |                      |   |                     |   |                                 |
| Oxford County<br>Sweden  | 21        | 2235EST                    |                           |                          | 0                    | 0 | ?                   | 0 | Lightning                       |
| Lightning caused a fire that destroyed a house in Sweden.  |           |                            |                           |                          |                      |   |                     |   |                                 |
| Penobscot County<br>Bangor   | 21<br>22  | 2345EST-<br>0230EST        |                           |                          | 0                    | 0 | ?                   | 0 | Thunderstorm Winds              |
| High winds associated with thunderstorms that moved across the area knocked down trees. Power outages resulted as the trees fell across power lines. Approximately 400 customers were without power until 0820 EST.                |           |                            |                           |                          |                      |   |                     |   |                                 |
| MARYLAND and DC  |           |                            |                           |                          |                      |   |                     |   |                                 |
| Prince Georges County<br>Upper Marlboro  | 04        | 1450EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds              |
| Numerous trees were knocked down by powerful thunderstorm winds.   |           |                            |                           |                          |                      |   |                     |   |                                 |
| St. Marys County   | 06        | 1005EST-<br>1230EST        |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                     |
| Charles County   | 06        | 1005EST-<br>1230EST        |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                     |
| More than three inches of rain fell in a short time on already saturated ground in these areas and caused widespread flooding which flooded many small streams and roads. Some roads had water four feet deep flowing across them. |           |                            |                           |                          |                      |   |                     |   |                                 |
| Prince Georges<br>County   | 06        | 1115EST-<br>1300EST        |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                     |
| Calvert County   | 06        | 1115EST-<br>1300EST        |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                     |
| Excessive rainfall between three and five inches caused widespread flooding of small streams which closed many roads.  |           |                            |                           |                          |                      |   |                     |   |                                 |
| St. Marys County   | 06        | 1425EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flood                     |
| Additional heavy rain in areas that had flooded earlier caused small streams to come out of their banks again closing more roads.  |           |                            |                           |                          |                      |   |                     |   |                                 |
| Washington County<br>Clear Spring  | 10        | 1630EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds              |
| Powerful thunderstorm winds knocked down trees and power lines in the Clear Springs area.  |           |                            |                           |                          |                      |   |                     |   |                                 |
| MDZ001 > 006<br>Eastern Maryland   | 24-<br>26 |                            |                           |                          | 0                    | 0 | 4                   | 0 | Tropical Storm<br>Danielle      |

## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

### MARYLAND and DC Cont'd

Tropical Storm Danielle was centered about 100 miles southeast of Cape Hatteras North Carolina late Thursday afternoon, while strong high pressure was over New England. The circulation around both of these systems caused strong winds and heavy surf in the Delaware, Maryland and Virginia coastal areas ahead of Danielle as the storm moved North-Northwest. Danielle's center reached the Wallops Island, Virginia area around 6 PM Friday the 25th, and passed about 25 miles east of Baltimore, MD around 2 AM Saturday morning the 26th. It continued to weaken and move north as it crossed Delaware and moved into eastern Pennsylvania around 4 AM.

Damage was minimal in Eastern Maryland. The damage was mostly beach erosion and flooding to low lying areas as Danielle produced wind gusts up to 65 mph and average rainfall was three to five inches. Many areas had downed tree limbs and power lines. In Ocean City, significant beach erosion occurred along a three block stretch of beach. About 20 residents of St. George Island evacuated their homes due to flooding of low lying areas on Friday.

|               |           |  |  |  |   |   |   |   |                            |
|---------------|-----------|--|--|--|---|---|---|---|----------------------------|
| Washington DC | 24-<br>26 |  |  |  | 0 | 0 | 0 | 0 | Tropical Storm<br>Danielle |
|---------------|-----------|--|--|--|---|---|---|---|----------------------------|

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No major damage was reported in the District. Some streets in low lying areas were flooded and some tree limbs were broken due to the high winds.

### MASSACHUSETTS

|   |          |                    |  |  |        |        |        |        |  |
|---|----------|--------------------|--|--|--------|--------|--------|--------|--|
| Berkshire County<br>W Stockbridge<br>Egremont | 22<br>22 | 1945EST<br>2209EST |  |  | 0<br>0 | 0<br>0 | ?<br>? | 0<br>0 | Thunderstorm Winds<br>Thunderstorm Winds |
|---|----------|--------------------|--|--|--------|--------|--------|--------|--|

Trees were downed and pea-size hail accumulated in Great Barrington.

|                             |    |         |  |  |   |   |   |   |                    |
|-----------------------------|----|---------|--|--|---|---|---|---|--------------------|
| Hampden County<br>Blandford | 22 | 2040EST |  |  | 0 | 0 | ? | 0 | Thunderstorm Winds |
| Worcester County<br>Auburn  | 22 | 2130EST |  |  | 0 | 0 | ? | 0 | Thunderstorm Winds |

Large branches were blown down in Auburn and surrounding areas. The National Weather Service at the Worcester Airport reported a peak wind gust of 48 mph.

### MICHIGAN

|                              |    |         |  |  |   |   |   |   |              |
|------------------------------|----|---------|--|--|---|---|---|---|--------------|
| Genesee County<br>1 N Lennon | 06 | 1812EST |  |  | 0 | 0 | 0 | 0 | Funnel Cloud |
|------------------------------|----|---------|--|--|---|---|---|---|--------------|

A funnel cloud was reported by an off-duty police officer near the intersection of Michigan Highway #21 and #13.

|                         |    |         |  |  |   |   |   |   |           |
|-------------------------|----|---------|--|--|---|---|---|---|-----------|
| Genesee County<br>Flint | 06 | 1900EST |  |  | 0 | 0 | 3 | 0 | Lightning |
|-------------------------|----|---------|--|--|---|---|---|---|-----------|

About 4000 homes and businesses lost power due to blown fuses and other problems related to the lightning strike.

|                            |    |         |  |  |   |   |   |   |                    |
|----------------------------|----|---------|--|--|---|---|---|---|--------------------|
| Calhoun County<br>Marshall | 09 | 1020EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
|----------------------------|----|---------|--|--|---|---|---|---|--------------------|

Strong thunderstorm winds, gusting to 40 mph caused considerable damage to Marshall. Many trees and power lines were blown down. This cause numerous local power outages across the city. The storm was so intense the afternoon kindergarten classes in Marshall were canceled. Pea-size hail and street flooding were also reported with this storm. Some of the trees and tree limbs fell on homes in Marshall but damage was mostly limited to roofs.



# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|--|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
| <b>MICHIGAN Cont'd</b>   |      |                            |                           |                          |  |                                       |                    |
| <b>Calhoun County<br/>Albion</b>   | 09   | 1450EST                    |                           |                          | 0 0                                    | 3 0                                   | Lightning          |
| Lightning struck an Albion garage, setting it on fire. The garage was used as a storage shed. Before the fire could be put out, about \$3,000 damage was done to the garage.   |      |                            |                           |                          |  |                                       |                    |
| <b>Calhoun County<br/>Battle Creek</b>   | 09   | 1915EST                    |                           |                          | 0 0                                    | 4 0                                   | Lightning          |
| Lightning caused an estimated \$40,000 damage to an apartment building and caused the residents to move to a motel that night. Lightning struck the Village Apartments, at 120 Greentree Blvd, which then caused a fire in the attic of the three story, 24 apartment, building. The strike also damaged the electrical system. Two firefighters suffered minor injuries but none of the residents were injured due to the fire or the lightning strike.   |      |                            |                           |                          |  |                                       |                    |
| <b>Washtenaw County<br/>Whitmore Lake</b>  | 09   | 2000EST                    |                           |                          | 0 4                                    | 0 0                                   | Lightning          |
| Four people, three high-school football players and a coach were injured in Whitmore Lake, when lightning sent a strong electrical current through the wet turf of their practice field. All four were treated and released from a local hospital that night.  |      |                            |                           |                          |  |                                       |                    |
| <b>Monroe County<br/>Temperance</b>  | 09   | 2055EST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds |
| Strong thunderstorm winds blew down trees and power lines. Some damage was done to several cars when the trees or large limbs fell on them.  |      |                            |                           |                          |  |                                       |                    |
| <b>Monroe County<br/>Monroe</b>  | 09   | 2100EST                    | 6.3                       | 440                      | 0 0                                    | 3 0                                   | Tornado (F1)       |
| A tornado touchdown 3.7 miles to the west-northwest of the City of Monroe. From there, the tornado traveled east-southeast for about 6.3 miles before lifting up, 2.6 miles east-southeast of the City of Monroe. The damage path width was fairly uniform at about 0.25 mile. The damage began just to the west of the county fair ground, on the west side of Raisinville road, and ended near the Ford Motor Company between I-75 and Lake Erie. The path was not quite a straight line. The first two thirds of it's length was east-southeast, then the final one third of it's length was almost due east. Damage was mostly downed trees and power lines. The Monroe Junior High reported two second floor windows blown out as the tornado passed over the school building. Several vehicles were damaged by this tornado. Most of this damage was from trees or tree limbs that were blown onto the vehicles. Damage of this type included several crushed cars, but mostly damages glass or dents. Parts of many homes were damaged by trees falling or large limbs. Also, many buildings and homes in the damage path reported windows blown out. At Monroe Junior High, not only were two window blown out, but an uprooted tree fell through the roof of the choir room and the flag pole was bent sideways. Besides that, \$4,000 worth of CD-ROMS were blown out the window. An anemometer, owned by the Michigan Gas Utilities, was right near the center of the damage path and recorded a wind gust to 77 mph. |      |                            |                           |                          |  |                                       |                    |
| <b>Monroe County<br/>Monroe</b>  | 09   | 2105EST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.00)        |
| Quarter-size hail reported at the Monroe Junior High by the school's principal.  |      |                            |                           |                          |  |                                       |                    |
| <b>Monroe County<br/>Across County</b>   | 09   | 2200EST                    |                           |                          | 0 0                                    | 3 0                                   | Flash Flooding     |
| Heavy thunderstorm rainfall, from one to two inches in about an hour, caused many county roads to flood. Several basements were flooded during the storm.  |      |                            |                           |                          |  |                                       |                    |
| <b>Monroe County<br/>Monroe</b>  | 09   | 2215EST                    |                           |                          | 0 0                                    | 4 0                                   | Thunderstorm Winds |
| Strong thunderstorm winds blew down many trees and power lines in many areas of the county. Several thousand homes lost power across the county. Clean-up from this storm was in the thousands of dollars.   |      |                            |                           |                          |  |                                       |                    |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992   |          |                            |                           |                          |                      |   |                     |   |                         |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|-------------------------|
| Location   | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm      |
| <b>MICHIGAN Cont'd</b>   |          |                            |                           |                          |                      |   |                     |   |                         |
| Cass County<br>10 NE South<br>Bend   | 15       | 1710EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Hail (1.00)             |
| Citizen reported 1.00 inch hail 10 miles northeast of South Bend, Indiana.   |          |                            |                           |                          |                      |   |                     |   |                         |
| Cass County<br>5 W Edwards-<br>burg  | 15       | 1755EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Thunderstorm Winds      |
| Large tree was blown across road 5 miles west of Edwardsburg, west of Leet Street in southern Cass County, by strong thunderstorm winds.   |          |                            |                           |                          |                      |   |                     |   |                         |
| Berrien County<br>Niles  | 15       | 1845EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Heavy Rain              |
| Heavy thunderstorm rains resulted in as much as 3.60 inches rainfall. This included up to 3.00 inches of rain in 45 minutes. This caused considerable street flooding, but no other damage was reported.   |          |                            |                           |                          |                      |   |                     |   |                         |
| Berrien County<br>St Joseph<br>River   | 15       | 1848EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flooding          |
| The river remain below flood stage, but rose rapidly, flooding low lying areas with as much as 4 inches of water. No significant damage was reported.  |          |                            |                           |                          |                      |   |                     |   |                         |
| Cass County<br>Edwardsburg   | 15       | 1900EST                    |                           |                          | 0                    | 0 | 0                   | 0 | Flash Flooding          |
| Thunderstorm caused heavy rainfall at Edwardsburg, resulting in 3.60 inches of rain in 1 1/2 hours. No significant damage was reported.  |          |                            |                           |                          |                      |   |                     |   |                         |
| Lenawee County<br>Tecumseh   | 16<br>17 | 0000EST<br>0700EST         |                           |                          | 0                    | 0 | 0                   | 0 | Flood                   |
| The River Raisin, near Tecumseh, crested at 9.95 feet, .95 feet above its flood stage, at 1431EST on the 16th. The river level then slowly receded, falling below its flood stage of 9.95 feet, at 0700EST on the 17th. As a result the river was at or above flood stage for one day and 7 hours. The flood resulted from two to three inches of rain that had fallen on the night of the 15th. This flood resulted in no significant damage to the area.   |          |                            |                           |                          |                      |   |                     |   |                         |
| Mason County<br>Ludington to<br>Walhalla   | 18       | 0600EST                    |                           |                          | 0                    | 0 | 4                   | 0 | Thunderstorm Winds (56) |
| A strong thunderstorm moved onshore from Lake Michigan around 0600EST by Ludington. Wind gusts to 60 mph were recorded at the Ludington Coast Guard Station at 0600EST, to 59 mph at the Mason County Sheriff Department at 0601EST, and to 65 mph at the Mason County Airport at 0603EST. The storm caused 986 customers of the Western Michigan Electric Cooperative to loss power. The storm moved almost straight east across the central part of Mason county. After the storm hit Ludington, it then hit Scottville, then Custer and finally Walhalla. At this point the storms intensity lessened. The damage was almost continuous along this 17 mile long path. The Scottville Police Chief said one of the towns streets, State Street, looked like a war zone. There were trees and limbs down all over the place. A gospel crusade tent, in the town of Ludington, was flattened during the storm. Over the rest of the 17 mile path of destruction, the damage was mostly downed trees and power lines. |          |                            |                           |                          |                      |   |                     |   |                         |
| Ingham County<br>2 N Webber-<br>ville  | 21       | 1610EST                    | 1.3                       | 50                       | 0                    | 0 | 4                   | 3 | Tornado (F1)            |
| A tornado touched down just north of Webberville and had a damage path that was 1.25 miles long. The tornado touched down just southwest of the intersection of Webberville and Allen roads, 1 mile northwest of Webberville, and moved east to the intersection of Gramer and Allen Roads, 1 mile northeast of Webberville. Two barns were destroyed. A horse, worth \$25,000 was killed and at least 2 homes and vehicles were damaged. Also, an empty semi-trailer overturned. Numerous   |          |                            |                           |                          |                      |   |                     |   |                         |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## MICHIGAN Cont'd

trees and power lines were downed too. One of the barns was moved 10 feet from its foundation where it was mashed back down onto the ground, killing the \$25,000 horse inside. Several hundred bales of hay fell from the barn loft onto the prized Shire stallion while the barn was being smashed by the tornado. Some cows were also injured on the farm as the tornado moved through. The cows were not in the barn at the time.

## MINNESOTA

Pope County  
3 NE Cyrus  
9 S Starbuck

02 1405CST-1440CST 14.0 30 0 0 ? ? Tornado (F1)

A small tornado developed near Cyrus and skipped along a 14-mile path to south of Starbuck. Several outbuildings were damaged and a barn was destroyed.

Swift and  
Kandiyohi Counties  
5 N Benson  
5 S Sunburg

02 1442CST-1505CST 19.0 10 0 0 ? ? Tornado (F0)

A small tornado developed north of Benson and traveled along an intermittent path into Kandiyohi County before dissipating. Several trees were blown down and several outbuildings on area farmsites were damaged.

Kerkhoven  
Pennock

02 1500CST-1525CST 7.0 10 0 0 0 1 Tornado (F0)

A small tornado followed along an intermittent path from Kerkhoven to Pennock doing very little damage.

Stearns County  
Brooten

02 1500CST Short Narrow 0 0 0 ? Tornado (F0)

A small tornado touched down briefly near Brooten and did little damage.

Kandiyohi County  
Spicer

02 1530CST 0 0 0 ? Funnel Cloud  
Hail (0.75)

5 SE Willmar

02 1550CST 0 0 ? ? Thunderstorm Winds (G52)

Thunderstorm winds gusted to 60 mph southeast of Willmar and leveled 10 trees and damaged several buildings.

Meeker County  
Grove City  
Cosmos

02 1620CST 0 0 ? ? Hail (0.75)

Renville County  
1 N Hector

02 1630CST-1640CST 0 0 ? ? Hail (0.75)

Brown County  
New Ulm

02 1720CST 0 0 3 ? Thunderstorm Winds

Strong thunderstorm winds downed a large tree onto a car causing an estimated \$2,000 in damage.

Hennepin and  
Dakota Counties  
Bloomington  
Eagan

04 0530CST-0610CST 0 0 ? ? Hail (1.50)

Thunderstorms dropped large hail and damaged several automobiles in southeast portions of Hennepin and northern sections of Dakota Counties.

Rice County  
5 NW Faribault  
Goodhue County  
Kenyon

04 0635CST 0 0 ? ? Hail (1.75)

04 0725CST 0 0 ? ? Hail (0.88)

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed | Injured | Estimated<br>Damage<br>Property | Crops | Character of Storm                |
|---|------|----------------------------|---------------------------|--------------------------|--------------------------------|---------|---------------------------------|-------|-----------------------------------|
| <b>MINNESOTA Cont'd</b>   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Jackson County<br>Jackson<br>Alpha  | 14   | 0340CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Hail (1.75)                       |
| Martin County<br>Sherburne  | 14   | 0355CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Hail (1.75)                       |
| Thunderstorms dropped hail the size of golf balls and did significant damage to property and crops.   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Rice County<br>Lonsdale   | 15   | 1820CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Hail (1.75)                       |
| Northfield  | 15   | 1940CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Thunderstorm Winds                |
| Strong thunderstorm winds broke large branches from trees and downed several power lines.   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Sibley, Scott,<br>Dakota, Goodhue,<br>Northern Rice and<br>Lesueur Counties   | 15   | 2030CST-                   |                           |                          |                                |         |                                 |       |                                   |
|   | 16   | 0300CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Flash Flood                       |
| Thunderstorms developed and moved over the same area dropping torrential rain from the evening of the 15th into the early morning hours on the 16th. Rainfall totals in excess of seven inches occurred in a 5- to 10-mile-wide swath from Belle Plaine, New Prague, New Market, Farmington and Hastings. A total of nine inches was reported in New Prague and 11.50 inches in New Market. Many basements were flooded across Scott, Dakota, Goodhue, and Sibley Counties. The most significant damage occurred in the Rosemount, Farmington and New Market areas in Dakota County and in Jordan in Scott County. A bridge collapsed in extreme northern Le Sueur County and a 40-foot-long basement wall caved in northern Goodhue County. A portion of Interstate 35E was closed for a time in Dakota and Rice Counties because of the high water. Flooded roads also occurred near Cannon Falls in Goodhue County. The Vermillion River (Goodhue County) crested about 5 feet above flood stage on the early morning hours of the 16th and caused some crop damage. |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Ramsey County<br>New Brighton   | 15   | 2130CST                    |                           |                          | 0                              | 0       | ?                               | 0     | Lightning                         |
| Lightning struck a small business and the resultant fire destroyed the establishment.   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Sibley County<br>Arlington  | 15   | 2200CST                    |                           |                          | 0                              | 0       | 3                               | 0     | Lightning                         |
| Lightning struck a home and the resultant fire caused \$2,000 in damage.  |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Olmsted County<br>Fillmore County<br>25 SE Rochester  | 16   | 0240CST                    |                           |                          | 0                              | 0       | 0                               | 0     | Thunderstorm Winds (G56)          |
|   | 16   | 0245CST                    |                           |                          | 0                              | 0       | 0                               | 4     | Thunderstorm Winds                |
| Strong thunderstorm winds flattened three acres of corn and ten large trees.  |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Clay County<br>Glyndon  | 16   | 1215CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Thunderstorm Winds                |
| Strong thunderstorms winds knocked down trees and power lines within a three block area in Glyndon.   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Beltrami County<br>Bemidji  | 16   | 1305CST-<br>1320CST        |                           |                          | 0                              | 0       | ?                               | ?     | Thunderstorm Winds<br>Hail (1.75) |
| A number of trees were blown down and power was knocked out in and around Bemidji.  |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Hubbard County<br>Becida  | 16   | 1320CST                    | Short                     | Narrow                   | 0                              | 0       | 0                               | ?     | Tornado (F0)                      |
| A small tornado briefly touched down and blew down several trees.   |      |                            |                           |                          |                                |         |                                 |       |                                   |
| Itasca County<br>18 NE Deer River   | 16   | 1345CST                    |                           |                          | 0                              | 0       | ?                               | ?     | Hail (0.75)                       |
| Grand Rapids  | 16   | 1355CST-<br>1410CST        |                           |                          | 0                              | 0       | 5                               | ?     | Thunderstorm Winds                |



# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992   |      |                            |                           |                          |                      |   |                     |   |                    |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|--------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm |
| MINNESOTA Cont'd   |      |                            |                           |                          |                      |   |                     |   |                    |
| Thunderstorm winds took part of the roof off of a community college and several trees were blown down.                           |      |                            |                           |                          |                      |   |                     |   |                    |
| Deer River   | 16   | 1402CST                    |                           |                          | 0                    | 0 | ?                   | 0 | Hail (0.75)        |
| 2 S Nashwauk   | 16   | 1410CST                    | Short                     | Narrow                   | 0                    | 0 | 0                   | 4 | Tornado (F0)       |
| A tornado touched down briefly and uprooted or snapped in half several trees. Damage was estimated between \$5,000 and \$6,000.  |      |                            |                           |                          |                      |   |                     |   |                    |
| 3 SSE Nashwauk   | 16   | 1411CST                    |                           |                          | 0                    | 0 | 3                   | ? | Thunderstorm Winds |
| Thunderstorm winds blew the roof from a mobile home causing an estimated \$1,000 damage. A few large trees were also blown over. |      |                            |                           |                          |                      |   |                     |   |                    |
| 5 N Grand Rapids   | 16   | 1411CST                    |                           |                          | 0                    | 0 | ?                   | ? | Hail (1.75)        |
| St. Louis County   |      |                            |                           |                          |                      |   |                     |   |                    |
| Hibbing  | 16   | 1450CST-                   |                           |                          |                      |   |                     |   |                    |
| Aurora   |      | 1524CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds |
| Strong thunderstorm downburst winds knocked down numerous trees in a 30-mile-wide swath from near Hibbing to Aurora.             |      |                            |                           |                          |                      |   |                     |   |                    |
| 22 NE Hibbing  | 16   | 1510CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Hail (0.75)        |
| 24 E Virginia  | 16   | 1515CST                    | 8.0                       | 100                      | 0                    | 0 | ?                   | ? | Tornado (F0)       |
| A tornado skipped along an 8-mile-path damaging several trees.   |      |                            |                           |                          |                      |   |                     |   |                    |
| Brimson  | 16   | 1520CST                    | 3.0                       | 40                       | 0                    | 0 | 4                   | ? | Tornado (F0)       |
| 3 SE Brimson   |      |                            |                           |                          |                      |   |                     |   |                    |
| A tornado skipped along a 3-mile-path damaging cabins and trees in the area.   |      |                            |                           |                          |                      |   |                     |   |                    |
| 10 N Duluth  | 16   | 1614CST                    |                           |                          | 0                    | 0 | 0                   | 3 | Thunderstorm Winds |
| Strong thunderstorm winds knocked down numerous trees between Island Lake and Boulder Lake.                                      |      |                            |                           |                          |                      |   |                     |   |                    |
| Lake County  |      |                            |                           |                          |                      |   |                     |   |                    |
| 3 NE Highland  | 16   | 1630CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds |
| Finland  |      |                            |                           |                          |                      |   |                     |   |                    |
| Several trees were downed by strong thunderstorm winds.  |      |                            |                           |                          |                      |   |                     |   |                    |
| Cook County  |      |                            |                           |                          |                      |   |                     |   |                    |
| Gunflint Trail   | 16   | 1640CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds |
| Strong thunderstorm winds downed several large trees.  |      |                            |                           |                          |                      |   |                     |   |                    |
| 3 W Grand Marais   | 16   | 1643CST                    | 1.0                       | 70                       | 0                    | 0 | 0                   | ? | Tornado (F0)       |
| A tornado caused damage to trees near Grand Marais.  |      |                            |                           |                          |                      |   |                     |   |                    |
| Carlton County   |      |                            |                           |                          |                      |   |                     |   |                    |
| Mahtowa  | 16   | 1645CST                    |                           |                          | 0                    | 0 | 0                   | 0 | Hail (0.75)        |
| Aitkin County  |      |                            |                           |                          |                      |   |                     |   |                    |
| 2 E Waukenebo  | 17   | 1625CST                    |                           |                          | 0                    | 0 | ?                   | 2 | Thunderstorm Winds |
| Several trees were blown down by strong thunderstorm winds.  |      |                            |                           |                          |                      |   |                     |   |                    |
| MISSISSIPPI  |      |                            |                           |                          |                      |   |                     |   |                    |
| Lafayette County   |      |                            |                           |                          |                      |   |                     |   |                    |
| Oxford   | 02   | 1505CST                    |                           |                          | 0                    | 0 | 3                   | 0 | Thunderstorm Winds |
| Several trees and power lines were blown down throughout the city. One tree fell and caused minor damage to a house.             |      |                            |                           |                          |                      |   |                     |   |                    |
| Tippah County  |      |                            |                           |                          |                      |   |                     |   |                    |
| 2 W Ripley   | 02   | 1540CST                    |                           |                          | 0                    | 0 | 2                   | 0 | Thunderstorm Winds |
| Several trees and power lines were blown down.   |      |                            |                           |                          |                      |   |                     |   |                    |
| Sharkey County   | 02   | 1707CST                    |                           |                          | 0                    | 0 | 2                   | 0 | Thunderstorm Winds |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage | Character of Storm |  |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|--------------------|--|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops              |  |
| <b>MISSISSIPPI Cont'd</b>                                |      |                            |                           |                          |                      |         |                     |                    |  |
|  |      |                            |                           |                          |                      |         |                     |                    | Several trees were blown down in the southern part of Sharkey County and were blocking county roads.   |
| Yazoo County<br>5 W Bentonia                             | 02   | 1730CST                    |                           |                          | 0                    | 0       | 2                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Several trees and numerous large limbs were blown down along Highway 433.  |
| Attala County<br>1 S Kosciusko                           | 02   | 1845CST                    |                           |                          | 0                    | 0       | 4                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Shingles were blown off the roof of a store. Numerous large limbs and a few trees were blown down.   |
| Leake County<br>Renfro                                   | 02   | 1900CST                    |                           |                          | 0                    | 0       | 4                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Strong winds caused minor roof damage to several houses. Large limbs and several trees were blown down.  |
| Walnut Grove   | 02   | 1900CST                    |                           |                          | 0                    | 0       | 4                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Minor damage was down to several roofs of houses. Numerous large limbs were blown down.  |
| Neshoba County<br>1 W Philadelphia                       | 02   | 1915CST                    |                           |                          | 0                    | 0       | 3                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | One billboard as well as several trees were blown down at the intersection of Highways 15 and 16.  |
| Lee County<br>2 SW Shannon                               | 10   | 1330CST                    |                           |                          | 0                    | 0       | 4                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Two mobile homes were blown off their foundations and sustained roof damage.   |
| Warren County<br>Vicksburg                               | 21   | 1615CST                    |                           |                          | 0                    | 0       | 2                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Several power lines were blown down on Marshall Street in Vicksburg.   |
| Vicksburg  | 21   | 1715CST                    |                           |                          | 0                    | 0       | 5                   | 0                  | Flash Flood  |
|  |      |                            |                           |                          |                      |         |                     |                    | Nearly 3.50 inches of rain fell over Vicksburg in about an hours time causing widespread flooding over the southern part of the city. Flood waters got into several houses, one had as much as 3 feet. |
| <b>MISSOURI</b>  |      |                            |                           |                          |                      |         |                     |                    |  |
| Nodaway County<br>5 NW Maryville                         | 01   | 2145CST                    |                           |                          | 0                    | 0       | 4                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | A farm house was pushed off its foundation and several out-buildings were destroyed.   |
| Platte County<br>Bean Lake                               | 05   | 1800CST                    |                           |                          | 0                    | 0       | 3                   | 0                  | Thunderstorm Winds   |
|  |      |                            |                           |                          |                      |         |                     |                    | Large trees were blown down damaging several homes.  |
| Platte County<br>Kansas City<br>International<br>Airport | 05   | 1814CST                    |                           |                          | 0                    | 0       | 1                   | 0                  | Hail (1.25)  |
|  |      |                            |                           |                          |                      |         |                     |                    | Hail measuring 1.25 inches in diameter was observed at the National Weather Service office (MCI).  |
| Clay County<br>3 SW Smithville                           | 05   | 1830CST                    |                           |                          | 0                    | 0       | 1                   | 2                  | Hail (1.00)  |
| Clay County<br>Gladstone                                 | 05   | 1910CST                    | 0.1                       | 20                       | 0                    | 0       | 2                   | 0                  | Tornado (F0)   |
|  |      |                            |                           |                          |                      |         |                     |                    | A tornado touched down briefly knocking down several large trees.  |
| Platte County<br>Weston                                  | 05   | 2200CST                    |                           |                          | 0                    | 0       | 3                   | 0                  | Thunderstorm Winds   |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------------|
| <b>MISSOURI Cont'd</b>  |      |                            |                           |                          |  |                                       |                          |
| Large trees were blown down damaging some homes.  |      |                            |                           |                          |  |                                       |                          |
| Bates County<br>10 NW Butler  | 05   | 2230CST                    |                           |                          | 0 0                                    | 3 2                                   | Thunderstorm Winds       |
| A pole barn was destroyed and large tree branches fell damaging a car.  |      |                            |                           |                          |  |                                       |                          |
| Barton County<br>Golden City  | 05   | 2328CST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds (G52) |
| Jasper County<br>Joplin   | 05   | 2328CST                    |                           |                          | 0 0                                    | 4 0                                   | Thunderstorm Winds (G60) |
| Clay County<br>Liberty  | 07   | 1450CST                    |                           |                          | 0 0                                    | 1 1                                   | Hail (0.75)              |
| Excelsior<br>Springs  | 07   | 1520CST                    |                           |                          | 0 0                                    | 1 1                                   | Hail (0.75)              |
| Jackson County<br>Sibley  | 07   | 1540CST                    |                           |                          | 0 0                                    | 4 0                                   | Thunderstorm Winds (G73) |
| A gust to 84 mph blew an empty rail car over, broke windows, damaged a coal conveyor and moved four rail cars four yards. The wind speed was measured with on-site instruments.   |      |                            |                           |                          |  |                                       |                          |
| Ray County<br>3 S Richmond  | 07   | 1607CST                    |                           |                          | 0 0                                    | 1 1                                   | Hail (1.75)              |
| Lafayette County<br>Lexington   | 07   | 1630CST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds       |
| Power lines were knocked down with some roof damage to homes and commercial buildings at Lexington.   |      |                            |                           |                          |  |                                       |                          |
| Saline County<br>Blackburn  | 07   | 1700CST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds (G74) |
| The County Emergency Manager reported wind damage to a shed and several outbuildings. Wind gusts were estimated at 85 mph.  |      |                            |                           |                          |  |                                       |                          |
| Lafayette County<br>Odessa  | 07   | 1735CST                    |                           |                          | 0 0                                    | 1 1                                   | Hail (0.75)              |
| Chariton County<br>5 NE Keytesville   | 07   | 1745CST                    | 0.5                       | 45                       | 0 0                                    | 5 3                                   | Tornado (F1)             |
| A pole barn was destroyed, power poles were broken, and large trees were downed. A roof was torn off of another barn shortly before lifting.  |      |                            |                           |                          |  |                                       |                          |
| Boone County<br>2 NE Columbia   | 07   | 1805CST                    |                           |                          | 0 0                                    | 0 0                                   | Funnel Cloud             |
| Sheriff deputies and spotters watched and followed a funnel cloud along Mt. Zion Church Road.   |      |                            |                           |                          |  |                                       |                          |
| Cooper County<br>Pilot Grove<br>Lone Elm  | 07   | 1840CST                    | 10.2                      | 60                       | 0 0                                    | 5 0                                   | Tornado (F2)             |
| This tornado touched down intermittently doing only scattered damage. The county sheriff reported power poles were blown down and a brick chimney was blown off a house in Pilot Grove. A pole barn was destroyed near Pilot Grove which also knocked down several power lines. Numerous large trees were blown over blocking area roads. A work trailer was also blown over near Speed. A large grain bin was smashed near Lone Elm while identical bins immediately adjacent to it and several smaller tanks nearby were untouched. About 0.5 mile southeast of the bin damage, tops of two, 100-foot silos were blown off. Also near the silos, several outbuildings were destroyed and about 10 acres of milo and corn were flattened. Two large maple trees were snapped off near Lone Elm and just missed falling on a house. The house was pelted by hail as the tornado passed. |      |                            |                           |                          |  |                                       |                          |
| Moniteau County<br>Jamestown  | 07   | 1934CST                    |                           |                          | 0 0                                    | 3 0                                   | Hail (1.00)              |
| Tipton  | 07   | 1936CST                    |                           |                          | 0 0                                    | 3 0                                   | Hail (0.75)              |
| Boone County<br>Ashland   | 07   | 2004CST                    |                           |                          | 0 0                                    | 3 0                                   | Hail (0.75)              |
| Miller County<br>Olean  | 07   | 2005CST                    |                           |                          | 0 1                                    | 4 0                                   | Thunderstorm Winds       |

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|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>MISSOURI Cont'd</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Power lines and tree limbs were blown down. A woman was knocked down by strong wind when she went outside to roll up the windows of her car.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Callaway County</b>   | 07   | 2020CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.00)              |
| <b>Holts Summit</b>  | 07   | 2030CST                    | 0.2                       | 20                       | 0                    | 0       | 3                   | 0     | Tornado (F0)             |
| <b>New Bloomfield</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| A garage was flattened with many large trees and power lines broke off.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Holts Summit</b>  | 07   | 2030CST                    | 0.3                       | 20                       | 0                    | 0       | 4                   | 0     | Tornado (F1)             |
| A mobile home was picked up, dropped, and flattened with large trees and power poles also knocked down.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>1 N Jefferson City</b>  | 07   | 2040CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G50) |
| Winds to 58 mph were reported at Jefferson City Airport.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Lincoln County</b>  | 07   | 2040CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52) |
| <b>Troy</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Power lines and trees were knocked down. The county sheriff estimated wind gusts to 60 mph.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Warren County</b>   | 07   | 2045CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| <b>5 N Warrenton</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| The county sheriff reported several large trees down along Highway 47.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Osage County</b>  | 07   | 2057CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52) |
| <b>Linn</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| A wind gust to 60 mph was reported.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>St. Charles County</b>  | 07   | 2100CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| <b>Wentzville</b>  | 07   | 2105CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| <b>O'Fallon</b>  | 07   | 2110CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds       |
| <b>Weldon Spring</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| A line of thunderstorms knocked down numerous trees and power lines across much of the county. Some minor building damage was reported by the Wentzville Police Department. The O'Fallon Police Department reported a blown transformer. Ham Radio spotters reported a cinder-block wall blown down at a local high school which damaged construction equipment. |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Camden County</b>   | 07   | 2115CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52) |
| <b>Osage Beach</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Winds to 60 mph were recorded at the police station.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>St. Louis County</b>  | 07   | 2120CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| <b>Hazelwood</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| The public reported 60 mph wind gusts at the intersection of Interstate 270 and Lindbergh Road.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>St. Louis City</b>  | 07   | 2145CST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds       |
| Union Electric reported many tree limbs and power lines down across the city. Roofing was blown off of the St. Louis Science Center walkway over Interstate 64.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Franklin County</b>   | 07   | 2145CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| <b>St. Clair</b>   | 07   | 2149CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| <b>Washington</b>  | 07   | 2155CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| <b>Labadie</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| The Franklin County Emergency Operations Center reported many downed trees in St. Clair. Ham radio spotters later reported power lines down in Washington and Labadie.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Jefferson County</b>  | 07   | 2218CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| <b>De Soto</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| Ham radio spotters reported 60 mph wind gusts.   |      |                            |                           |                          |                      |         |                     |       |                          |



# Storm Data and Unusual Weather Phenomena

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| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>MISSOURI Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Jasper County<br>4 E Joplin   | 08   | 0948CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52) |
| Barry County<br>Southwestern<br>Portion   | 08   | 1600CST-<br>2350CST        |                           |                          | 1                    | 0       | 2                   | 0     | Flash Flood              |
| A 65-year-old woman was killed trying to cross a low-water bridge over Little Sugar Creek in southwestern Barry County. (F65O)  |      |                            |                           |                          |                      |         |                     |       |                          |
| Jackson County<br>Independence  | 09   | 0010CST                    |                           |                          | 0                    | 0       | 3                   | 1     | Hail (0.75)              |
| Buchanan County<br>Rushville  | 09   | 0310CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Hail (0.75)              |
| Adair County<br>5 NW Kirksville   | 09   | 1416CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.00)              |
| No damage was reported.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Knox County<br>Hurdland   | 09   | 1430CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| A sheriff deputy reported 0.75-inch-diameter hail.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Lewis County<br>La Grange   | 09   | 1505CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dime-size hail was reported at city hall.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Saline County<br>2 E Slater   | 09   | 1510CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.00)              |
| Pettis County<br>Longwood   | 09   | 1532CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (0.75)              |
| Shelby County<br>Shelbina   | 09   | 1535CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)              |
| Golf ball-size hail was reported.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Cooper County<br>Pilot Grove  | 09   | 1555CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.00)              |
| Pettis County<br>1 NE Ionia   | 09   | 1608CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (0.75)              |
| Monroe County<br>Paris  | 09   | 1615CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dime-size hail was reported by the county sheriff.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Marion County<br>8 S Palmyra  | 09   | 1615CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| Hannibal  | 09   | 1635CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| A county sheriff deputy reported wind gusts to 60 mph and marble-size hail at Highways 24 and 36 south of Palmyra. Emergency Management personnel reported several large trees down in Hannibal. Numerous power outages were also reported. |      |                            |                           |                          |                      |         |                     |       |                          |
| Cooper County<br>1 E Bunceton   | 09   | 1635CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Benton County<br>Lincoln  | 09   | 1640CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.75)              |
| St. Clair County<br>Osceola   | 09   | 1651CST                    |                           |                          | 0                    | 0       | 2                   | 2     | Hail (1.75)              |
| Morgan County<br>Stover   | 09   | 1724CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.75)              |
| Moniteau County<br>1 S Latham   | 09   | 1730CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Vernon County<br>Nevada   | 09   | 1750CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (0.75)              |
| Lincoln County<br>7 E Troy  | 09   | 1800CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992  |      |                            |                           |                          |                      |         |                     |       |                          |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>MISSOURI Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| The public reported wind gusts to 60 mph.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Cole County<br>Jefferson City   | 09   | 1813CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Vernon County<br>Nevada   | 09   | 1815CST                    |                           |                          | 0                    | 1       | 3                   | 0     | Lightning                |
| A 16-year-old boy was struck by lightning while pushing a shopping cart back to a store after helping a customer load groceries. The boy was slightly injured but received minimal hospital care. Many street and stop lights were blown out as well. |      |                            |                           |                          |                      |         |                     |       |                          |
| St. Charles County<br>Foristell   | 09   | 1815CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)              |
| New Melle   | 09   | 1819CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| Golf ball-size hail was reported by the Missouri Highway Patrol on the St. Charles side of the county line. Ham radio spotters reported a wind gust to 60 mph a few minutes later.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Warren County<br>Wright City  | 09   | 1829CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dade County<br>Arcola   | 09   | 1840CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds (G52) |
| Barton County<br>Lamar  | 09   | 1847CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (0.75)              |
| Jasper County<br>Joplin   | 09   | 1909CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G61) |
| Wind gusts to 61 knots were recorded at the Joplin Airport.   |      |                            |                           |                          |                      |         |                     |       |                          |
| St. Louis County<br>Western Portion   | 09   | 1909CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| The public reported wind gusts to 60 mph.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Polk County<br>5 SE Flemington  | 09   | 1910CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (0.75)              |
| Barton County<br>Lamar  | 09   | 1910CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (0.75)              |
| St. Louis County<br>Southern Portion  | 09   | 1912CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds       |
| The public reported wind gusts to 60 mph with several large trees blown down.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Jasper County<br>Joplin   | 09   | 1913CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)              |
| St. Louis County  | 09   | 1919CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Ham radio spotters reported 0.75-inch-diameter hail.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Greene County<br>3 N Walnut Grove   | 09   | 1925CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (0.75)              |
| Franklin County<br>Washington   | 09   | 1933CST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds       |
| Several large trees were knocked down.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Lawrence County<br>Mt. Vernon   | 09   | 2005CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (1.00)              |
| Greene County<br>Stratford  | 09   | 2010CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (0.75)              |
| Springfield   | 09   | 2010CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G53) |
| Newton County<br>Neosho   | 09   | 2027CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Hail (0.75)              |
| Stone County<br>Crane   | 09   | 2030CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G52) |
| Kimberling City   | 09   | 2030CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G55) |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location                                    | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm  |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|---|
|   |          |                            |                           |                          | Killed               | Injured | Property            | Crops |   |
| <b>MISSOURI Cont'd</b>                      |          |                            |                           |                          |                      |         |                     |       |   |
| <b>Newton County<br/>Neosho</b>             | 09       | 2043CST-<br>0245CST        |                           |                          | 0                    | 0       | 2                   | 0     | Flash Flood   |
|   |          |                            |                           |                          |                      |         |                     |       | Numerous streets were under water.  |
| <b>Jasper County<br/>Carthage</b>           | 10       | 0000CST-<br>0300CST        |                           |                          | 0                    | 0       | 3                   | 0     | Flash Flood   |
|   |          |                            |                           |                          |                      |         |                     |       | Highway 16 and Highway FF were closed due to high water. Elm Road was also closed.  |
| <b>Jackson County<br/>Independence</b>      | 20       | 1730CST-<br>1750CST        |                           |                          | 0                    | 0       | 1                   | 1     | Heavy Rain  |
|   |          |                            |                           |                          |                      |         |                     |       | In independence, 1.50 inches of rain fell in 20 minutes.  |
| <b>Raytown</b>                              | 20       | 1755CST-<br>1800CST        | 2.0                       | 100                      | 0                    | 1       | 4                   | 1     | Tornado (F1)  |
|   |          |                            |                           |                          |                      |         |                     |       | The tornado caused intermittent damage along a path. An adult male was cut from glass from a broken window. Trees were uprooted or snapped at the base and many homes had some sort of roof damage. Several vehicles were damaged or moved. |
| <b>Lee's Summit</b>                         | 20       | 1812CST                    | 0.6                       | 50                       | 0                    | 0       | 3                   | 2     | Tornado (F0)  |
|   |          |                            |                           |                          |                      |         |                     |       | Damage was mainly to trees near the intersection of Interstate 470 and U.S. Highway 50.   |
| <b>Pettis County<br/>1 S Houstonia</b>      | 20       | 1830CST                    | 0.6                       | 35                       | 0                    | 0       | 4                   | 0     | Tornado (F1)  |
|   |          |                            |                           |                          |                      |         |                     |       | A tornado touched down and severely damaged a large barn near Houstonia.  |
| <b>Howard County<br/>1 N Glasgow</b>        | 20       | 2105CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds  |
|   |          |                            |                           |                          |                      |         |                     |       | Large tree limbs were broken off and damaged a roof, the hood of a car, and some playground equipment.  |
| <b>MONTANA</b>                              |          |                            |                           |                          |                      |         |                     |       |   |
| <b>MTZ007</b>                               | 06<br>07 | 1700MST-<br>0500MST        |                           |                          | 0                    | 0       | 0                   | 0     | Heavy Snow  |
|   |          |                            |                           |                          |                      |         |                     |       | Ten to twelve inches of snow fell in the Beartooth Mountains causing the Beartooth Highway to be closed.  |
| <b>Big Horn County<br/>Near Harden</b>      | 12       | 1600MST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds  |
|   |          |                            |                           |                          |                      |         |                     |       | Several power poles were blown down by thunderstorm winds.  |
| <b>Yellowstone County<br/>Near Billings</b> | 12       | 1630MST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds  |
|   |          |                            |                           |                          |                      |         |                     |       | Several trees were blown down.  |
| <b>Fallon County<br/>Baker</b>              | 12       | 1908MST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G61)  |
|   |          |                            |                           |                          |                      |         |                     |       | A garage was blown down and several buildings received damage.  |
| <b>MTZ003</b>                               | 26       | 1400MST-<br>1800MST        |                           |                          | 0                    | 0       | 4                   | 0     | High Winds (G77)  |
|   |          |                            |                           |                          |                      |         |                     |       | Strong winds whipped the Rocky Mountain Front. A pickup and mobile home was turned over near Browning on Highway 89. Dupuyer reported winds gusting to 89 mph, Choteau 81 mph and Cut Bank 65 mph.  |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992  |           |                             |                           |                          |                      |          |                     |          |  |
|---|-----------|-----------------------------|---------------------------|--------------------------|----------------------|----------|---------------------|----------|--|
| Location  | Date      | Time<br>Local/<br>Standard  | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |          | Estimated<br>Damage |          | Character of Storm   |
|   |           |                             |                           |                          | Killed               | Injured  | Property            | Crops    |  |
| <b>NEBRASKA</b>   |           |                             |                           |                          |                      |          |                     |          |  |
| <b>Lancaster County</b><br><b>4 S Lincoln</b>                     | <b>01</b> | <b>1845CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>4</b>            | <b>0</b> | <b>Lightning</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Lightning in south Lincoln started a house fire that caused \$30,000 damage to the house and \$5,000 to its contents.  |
| <b>2 NW Raymond</b>   | <b>02</b> | <b>0100CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>5</b>            | <b>0</b> | <b>Lightning</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Lightning started a fire that destroyed a barn, equipment, a saddle, and several thousand bales of hay on a farm 1.5 miles east of Branched Oak Lake.  |
| <b>Douglas County</b><br><b>9 NW Omaha</b>                        | <b>05</b> | <b>1500CST</b>              |                           |                          | <b>0</b>             | <b>1</b> | <b>0</b>            | <b>0</b> | <b>Lightning</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Lightning struck a soccer field during a tournament, knocked several people to the ground, and slightly injured a referee.   |
| <b>Pawnee County</b><br><b>1 N Table Rock</b>                     | <b>05</b> | <b>1515CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (1.75)</b>   |
| <b>Cass County</b><br><b>6 SW Offutt</b><br><b>Air Force Base</b> | <b>05</b> | <b>1555CST</b>              | <b>Short</b>              | <b>10</b>                | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Tornado (F0)</b>  |
|   |           |                             |                           |                          |                      |          |                     |          | The Air Force Base weather observer reported a tornado that briefly touched down just south of the Platte River.   |
| <b>Plattsmouth</b><br><b>2 W Plattsmouth</b>                      | <b>05</b> | <b>1610CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (1.75)</b>   |
|   | <b>05</b> | <b>1612CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>0</b>            | <b>0</b> | <b>Funnel Cloud</b>  |
| <b>Nemaha County</b><br><b>Auburn</b>                             | <b>05</b> | <b>1630CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (1.00)</b>   |
| <b>Pawnee and Johnson</b><br><b>Counties</b>                      | <b>05</b> | <b>1630CST-<br/>2000CST</b> |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Flash Flood</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Thunderstorms with heavy rain produced flash flooding in northeast Pawnee and southeast Johnson counties. Several county roads and a highway were under water after six inches of rain fell. |
| <b>Dawson County</b><br><b>Lexington</b>                          | <b>06</b> | <b>2130CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Thunderstorm Winds</b>  |
|   |           |                             |                           |                          |                      |          |                     |          | Strong thunderstorm winds accompanied by pea-size hail stripped 200 acres of corn around the northwest edge of Lexington.  |
| <b>Harlan County</b><br><b>5 N Orleans</b>                        | <b>07</b> | <b>0143CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Thunderstorm Winds</b>  |
|   |           |                             |                           |                          |                      |          |                     |          | Strong winds knocked out an electrical transformer.  |
| <b>Harlan County</b><br><b>Republican City</b>                    | <b>07</b> | <b>0215CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (0.75)</b>   |
| <b>Jefferson County</b><br><b>2 SE Diller</b>                     | <b>09</b> | <b>0100CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>4</b>            | <b>?</b> | <b>Lightning</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Lightning started a fire, which completely destroyed a trailer house.  |
| <b>Gage County</b><br><b>Holmesville</b>                          | <b>09</b> | <b>0205CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Thunderstorm Winds</b>  |
|   |           |                             |                           |                          |                      |          |                     |          | Thunderstorm winds toppled a row of cedar trees, which took out a power line and crushed the top of a car in the northwest corner of Holmesville.  |
| <b>Platte County</b><br><b>5 N Columbus</b>                       | <b>14</b> | <b>0310CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (1.50)</b>   |
| <b>Douglas and Sarpy</b><br><b>Counties</b>                       | <b>14</b> | <b>0440CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>6</b>            | <b>?</b> | <b>Hail (1.75)</b>   |
|   |           |                             |                           |                          |                      |          |                     |          | Hail up to golf ball-size fell over south Omaha, Papillion, and Bellevue, causing over \$3 million in damage to cars and roofs.  |
| <b>Thayer County</b><br><b>Bruning</b>                            | <b>16</b> | <b>1740CST</b>              |                           |                          | <b>0</b>             | <b>0</b> | <b>?</b>            | <b>?</b> | <b>Hail (1.50)</b>   |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |  | Estimated<br>Damage<br>Property Crops |  | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|

## NEBRASKA Cont'd

|                  |    |         |  |  |   |   |   |   |                    |
|------------------|----|---------|--|--|---|---|---|---|--------------------|
| Holt County      |    |         |  |  |   |   |   |   |                    |
| Page             | 17 | 1844CST |  |  | 0 | 0 | ? | ? | Hail (1.75)        |
| Antelope County  |    |         |  |  |   |   |   |   |                    |
| Orchard          | 17 | 1910CST |  |  | 0 | 0 | ? | ? | Hail (1.75)        |
| Howard County    |    |         |  |  |   |   |   |   |                    |
| Elba             | 17 | 1959CST |  |  | 0 | 0 | ? | ? | Hail (0.75)        |
| 2 NW Elba        | 17 | 2000CST |  |  | 0 | 0 | ? | ? | Hail (0.75)        |
| St. Paul         | 17 | 2010CST |  |  | 0 | 0 | ? | ? | Hail (0.75)        |
| Nemaha County    |    |         |  |  |   |   |   |   |                    |
| Auburn           | 17 | 2030CST |  |  | 0 | 0 | ? | ? | Hail (1.00)        |
| Sarpy County     |    |         |  |  |   |   |   |   |                    |
| 2 N Offutt       | 17 | 2135CST |  |  | 0 | 0 | ? | ? | Hail (1.50)        |
| Air Force Base   |    |         |  |  |   |   |   |   |                    |
| Lancaster County |    |         |  |  |   |   |   |   |                    |
| 3 NE Lincoln     | 17 | 2200CST |  |  | 0 | 0 | ? | 0 | Hail (1.75)        |
| 2 SE Lincoln     | 17 | 2215CST |  |  | 0 | 0 | ? | 0 | Thunderstorm Winds |
| Gage County      |    |         |  |  |   |   |   |   |                    |
| 2 W Wymore       | 17 | 2245CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds |

Thunderstorms winds toppled a 15,000-bushel grain bin and moved it 100 yards, damaged trees, drove a tree limb through a window, destroyed an outbuilding, and twisted a garage off its foundation.

## NEVADA

None reported.

## NEW HAMPSHIRE

|                |    |                     |  |  |   |   |   |   |                    |
|----------------|----|---------------------|--|--|---|---|---|---|--------------------|
| Grafton County | 10 | 2000EST-<br>2100EST |  |  | 0 | 0 | ? | 0 | Thunderstorm Winds |
|----------------|----|---------------------|--|--|---|---|---|---|--------------------|

A line of thunderstorms produced gusty surface winds that caused several trees to fall in the Connecticut River Valley in and around the Woodsville area.

|                  |    |         |  |  |   |   |   |   |           |
|------------------|----|---------|--|--|---|---|---|---|-----------|
| Merrimack County | 19 | 0500EST |  |  | 0 | 0 | ? | 0 | Lightning |
|------------------|----|---------|--|--|---|---|---|---|-----------|

Lightning and heavy rain caused numerous power outages, hardest hit were Airport Road and Manchester Street in Concord where 1,400 homes were without power.

|                  |    |                     |  |  |   |   |   |   |                    |
|------------------|----|---------------------|--|--|---|---|---|---|--------------------|
| Strafford County | 22 | 2215EST-<br>2330EST |  |  | 0 | 0 | ? | 0 | Thunderstorm Winds |
|------------------|----|---------------------|--|--|---|---|---|---|--------------------|

Thunderstorms moving across the area produced winds of sufficient intensity to knock down trees and tree limbs. Power outages resulted as the trees and limbs fell across power lines.

## NEW JERSEY, Northern

|                |    |          |  |  |   |   |   |   |       |
|----------------|----|----------|--|--|---|---|---|---|-------|
| Bergen County  | 03 | 1840EST- |  |  |   |   |   |   |       |
|                | 04 | 0400EST  |  |  | 0 | 0 | ? | 0 | Flood |
| Passaic County | 03 | 1920EST- |  |  |   |   |   |   |       |
|                | 04 | 0400EST  |  |  | 0 | 0 | ? | 0 | Flood |
| Morris County  | 03 | 2000EST- |  |  |   |   |   |   |       |
|                | 04 | 0900EST  |  |  | 0 | 0 | ? | 0 | Flood |

Showers and thunderstorms that developed ahead of a cold front dumped heavy rains across sections of northern New Jersey. Urban flooding became a problem after two to nearly four inches fell. Runoff from these storms eventually produced flooding along the Rockaway and Saddle Rivers and along the Molly Ann, Ho-Ho-Kus, Wallace and Jackson Brooks.

|                    |    |          |  |  |   |   |   |   |               |
|--------------------|----|----------|--|--|---|---|---|---|---------------|
| NJZ005-007-015     | 25 | 0500EST- |  |  |   |   |   |   |               |
| Coastal New Jersey | 26 | 1100EST  |  |  | 2 | 2 | ? | 0 | Coastal Flood |

The combination of Tropical Storm Danielle approaching from the south and a strong high pressure system over New England, produced an extended period of onshore winds. The result was a very

## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

### NEW JERSEY, Northern Cont'd

rough surf and abnormally high tides. At times of astronomically high tides, localized coastal flooding and beach erosion was observed, however the damage was considered relatively minor. A 35-foot sailboat floundered after losing its mast and sails in the rough seas and strong winds. The 4-man crew was swept overboard as they neared the coast. Two managed to swim ashore but the other two drown. (M480) (M520)

### NEW JERSEY, Southern

|                                   |          |                    |   |   |   |   |                         |
|-----------------------------------|----------|--------------------|---|---|---|---|-------------------------|
| NJSOSE<br>Southeast<br>New Jersey | 25<br>26 | 1300EST<br>0300EST | 2 | 0 | 7 | 0 | Tropical Storm Danielle |
|-----------------------------------|----------|--------------------|---|---|---|---|-------------------------|

Tropical Storm Danielle moved onshore over Maryland with the remnants of the center going across the Delaware Bay and up to the west of Philadelphia. High winds buffeted coastal sections of Southern New Jersey including Coastal Delaware Bay. The highest reported wind gust was 69 mph at Atlantic City at 1900 EST on Friday the 25th. But only minor wind damage resulted. However, high tides and the strong winds caused tidal flooding along the coast and along the back bays. Tides reached 2 1/2 and 1/2 feet above normal or 7 1/2 feet above mean low water along the coast. Along the back bays it reached 2 1/2 and 1/2 to 3 feet above normal or 8 feet above mean low water. Heavy rains combined with the high tides to cause considerable roadway flooding along coastal areas. Rainfall amounts over Southern New Jersey were from 1.75 to just under three inches, 2.94 at Atlantic City. The tides and wind driven waves caused moderate beach erosion which accounts for most of the damage. A 35 foot sailboat got caught in the storm just off Island Beach State Park, went out of control and was washed up on the beach. Three of the four crewmen were washed overboard as the boat approached the beach. One of the three managed to get to shore safely. One drowned and was washed up on the beach. The third is still missing. The crewman on the boat also reached shore safely. (M480) (M520)

### NEW MEXICO

|                          |    |         |   |   |   |   |             |
|--------------------------|----|---------|---|---|---|---|-------------|
| Lea County<br>Crossroads | 01 | 0006MST | 0 | 0 | 0 | 0 | Hail (1.25) |
|--------------------------|----|---------|---|---|---|---|-------------|

A rainfall network observer reported half-dollar-size hail in Crossroads.

|     |    |         |   |   |   |   |             |
|-----|----|---------|---|---|---|---|-------------|
| Jal | 10 | 1420MST | 0 | 0 | 0 | 0 | Hail (0.75) |
|-----|----|---------|---|---|---|---|-------------|

The Jal Police Department observed dime-size hail in and around the city of Jal.

|                                 |    |         |   |   |   |   |             |
|---------------------------------|----|---------|---|---|---|---|-------------|
| Socorro County<br>45 NE Socorro | 19 | 1500MST | 0 | 1 | 4 | 0 | Hail (1.00) |
|---------------------------------|----|---------|---|---|---|---|-------------|

The National Park Service reported that a female visitor to the Gran Quivira mission of the Salinas National Monument was slightly injured when 1.00-inch-diameter hail struck her in the head. The hail dented three cars and two motorcycles, and broke a few windows/screens.

### NEW YORK, Central

|                                |    |                     |     |     |   |   |   |   |              |
|--------------------------------|----|---------------------|-----|-----|---|---|---|---|--------------|
| Oneida County<br>Cassville     | 03 | 1525EST             | 0.5 | 50  | 0 | 0 | 4 | 3 | Tornado (F0) |
| Broome County<br>Endicott      | 03 | 1555EST-<br>1605EST | 6.0 | 270 | 0 | 6 | 6 | 0 | Tornado (F1) |
| Tioga County<br>4 SE Apalachin | 03 | 1800EST             | 0.5 | 35  | 0 | 0 | 5 | 0 | Tornado (F0) |

Isolated severe thunderstorms developed ahead of a cold front which moved across central New York late on September 3, 1992. All three thunderstorms spawned tornadoes. The first tornado touched down in Cassville in Oneida County where it removed the roof of a house, knocked down at least six trees, hurled appliances into the driveway of the house, and damaged a nearby corn field. The second tornado touched down in the Endicott business district along North Sreet, 6 businesses sustained minor to major damage. At Shapiro's Uniform Rental three workers were injured when the building they were in collapsed on top of them. A gas station attendant was injured when struck by flying debris. Several homes and vehicles were damaged as well as trees and powerlines destroyed by the tornado. Damage estimates to the businesses alone exceeded \$2 million. The third tornado skipped three times along a 0.5-mile path in Apalachin destroying a garage, a camper, numerous trees and turning a car around.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location                        | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|                                 |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>NEW YORK, Central Cont'd</b> |      |                            |                           |                          |                      |         |                     |       |                    |
| Franklin County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Moria                           | 10   | 1125EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Clinton County                  |      |                            |                           |                          |                      |         |                     |       |                    |
| Chazy                           | 10   | 1406EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Cortland County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Cortland                        | 10   | 1445EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Lightning          |
| Tioga County                    |      |                            |                           |                          |                      |         |                     |       |                    |
| Tioga Center                    | 10   | 1452EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Broome County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Maine                           | 10   | 1520EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Union Center                    | 10   | 1520EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Broome County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Binghamton                      | 10   | 1545EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Chenango County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Greene                          | 10   | 1608EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Essex County                    |      |                            |                           |                          |                      |         |                     |       |                    |
| Ticonderoga                     | 10   | 1610EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Warren County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Chestertown                     | 10   | 1631EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Otsego County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Laurens                         | 10   | 1636EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Unadilla                        | 10   | 1640EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Warren County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Brant Lake                      | 10   | 1640EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Bolton Landing                  | 10   | 1640EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Diamond Point                   | 10   | 1640EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Saratoga County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Greenfield Center               | 10   | 1645EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Wilton                          | 10   | 1700EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Delaware County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Andes                           | 10   | 1714EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Andes                           | 10   | 1714EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Lightning          |
| Washington County               |      |                            |                           |                          |                      |         |                     |       |                    |
| Kingsbury                       | 10   | 1723EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Lightning          |
| Fort Edward                     | 10   | 1735EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Lightning          |
| Saratoga County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| S Glens Falls                   | 10   | 1735EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Washington County               |      |                            |                           |                          |                      |         |                     |       |                    |
| Middle Granville                | 10   | 1740EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Schenectady County              |      |                            |                           |                          |                      |         |                     |       |                    |
| Schenectady                     | 10   | 1745EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Greene County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Ashland                         | 10   | 1745EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Saratoga County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Ganesvoort                      | 10   | 1747EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Albany County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| New Salem                       | 10   | 1750EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Rensselaer County               |      |                            |                           |                          |                      |         |                     |       |                    |
| Schaghticoke                    | 10   | 1810EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Albany County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| New Scotland                    | 10   | 1811EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Ravena                          | 10   | 1820EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Columbia County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Stuyvesant                      | 10   | 1820EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Washington County               |      |                            |                           |                          |                      |         |                     |       |                    |
| Fort Ann                        | 10   | 1825EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Columbia County                 |      |                            |                           |                          |                      |         |                     |       |                    |
| Chatham                         | 10   | 1825EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Thunderstorm Winds |
| Austerlitz                      | 10   | 1830EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Niverville                      | 10   | 1830EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Spencertown                     | 10   | 1830EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |
| Ulster County                   |      |                            |                           |                          |                      |         |                     |       |                    |
| Kerhonkson                      | 10   | 1830EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW YORK, Central Cont'd

|                          |    |         |  |  |   |   |   |   |                    |
|--------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Rensselaer County</b> |    |         |  |  |   |   |   |   |                    |
| Nassau                   | 10 | 1835EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Ulster County</b>     |    |         |  |  |   |   |   |   |                    |
| Accord                   | 10 | 1840EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Columbia County</b>   |    |         |  |  |   |   |   |   |                    |
| Chatham Center           | 10 | 1840EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Ulster County</b>     |    |         |  |  |   |   |   |   |                    |
| Stone Ridge              | 10 | 1850EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Dutchess County</b>   |    |         |  |  |   |   |   |   |                    |
| Rhinebeck                | 10 | 1904EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Columbia County</b>   |    |         |  |  |   |   |   |   |                    |
| Chatham                  | 10 | 1917EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| <b>Dutchess County</b>   |    |         |  |  |   |   |   |   |                    |
| Beekman                  | 10 | 1930EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Pawling                  | 10 | 1930EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Millerton                | 10 | 2000EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Amenia                   | 10 | 2000EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |

Severe thunderstorms moved across much of eastern New York ahead of a strong cold front on the afternoon and evening of September 10th. Damage was mainly confined to trees and powerlines. The Warren County area between Diamond Point and Brant Lake appeared to be hardest hit. Route 9 North between Diamond Point and Bolton Landing was closed for a time due to downed powerlines, poles and trees. Other areas hard hit included parts of Columbia and Dutchess Counties.

|                        |    |         |  |  |   |   |   |   |     |
|------------------------|----|---------|--|--|---|---|---|---|-----|
| <b>Columbia County</b> |    |         |  |  |   |   |   |   |     |
| Greenport              | 13 | 0715EST |  |  | 5 | 1 | 4 | 0 | Fog |

Dense fog was apparently to blame for a two-vehicle accident which claimed the lives of five people at the intersection of Route 23 and Middle Road in Greenport (F12V) (M14V) (M16V) (M20V) (F59V)

|                      |    |         |  |  |   |   |   |   |     |
|----------------------|----|---------|--|--|---|---|---|---|-----|
| <b>Albany County</b> |    |         |  |  |   |   |   |   |     |
| Rensselaerville      | 14 | 0620EST |  |  | 2 | 3 | 4 | 0 | Fog |

Dense fog was apparently to blame for a one-vehicle accident which claimed the lives of two people and injured three others along Route 81 in Rensselaerville (M26V) (M26V)

|                        |    |         |  |  |   |   |   |   |                    |
|------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Delaware County</b> |    |         |  |  |   |   |   |   |                    |
| <b>Columbia County</b> |    |         |  |  |   |   |   |   |                    |
| Copake                 | 22 | 1715EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
|                        | 22 | 2000EST |  |  | 0 | 0 | 3 | 0 | Lightning          |

A severe thunderstorm downed a couple of trees in Delaware County. Lightning from a thunderstorm took out a transformer bank in the Copake area leaving 300 customers without power.

|                 |    |    |  |  |   |   |   |   |       |
|-----------------|----|----|--|--|---|---|---|---|-------|
| <b>Areawide</b> | 24 | AM |  |  | 0 | 0 | 0 | ? | Frost |
| <b>Areawide</b> | 25 | AM |  |  | 0 | 0 | 0 | ? | Frost |

A large dome of high pressure covered eastern New York on the 24th and 25th allowing for ideal radiational cooling in the early morning hours of both days resulting in widespread frost. Temperatures on the 24th dipped to at or below freezing at many places with 32 degrees at Binghamton, 31 degrees at Utica, 30 degrees at Glens Falls, 29 degrees at Johnstown, 28 degrees at Massena and 22 degrees at Piseco. On the 25th temperatures dropped to similar levels with 32 degrees at Gloversville, 30 degrees at Berlin, 29 degrees at Cooperstown and 22 degrees at Piseco.

## NEW YORK, Coastal

|                           |    |          |      |    |   |   |   |   |              |
|---------------------------|----|----------|------|----|---|---|---|---|--------------|
| <b>Westchester County</b> |    |          |      |    |   |   |   |   |              |
| Hastings-on-Hudson        | 03 | 1710EST- |      |    |   |   |   |   |              |
| to Rye Brook              |    | 1730EST  | 12.0 | 70 | 0 | 0 | ? | 0 | Tornado (F0) |

A tornado skipped across sections of lower Westchester county. Although the path length was 12 miles long, it was actually on the ground for only about 4 miles during its eastward trek across the county. Most of the damage was caused by snapped and overturned trees falling upon cars and homes. Damage was first reported at the Hastings Pioneer Boat Club. Subsequent damage occurred in Ardsley, Greenville, Scarsdale, White Plains and finally Rye Brook before it lifted for good.



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## NEW YORK, Coastal Cont'd

Westchester County 03 1900EST-2400EST 0 2 ? 0 Flood

Heavy rain began falling across sections of Westchester county during the late afternoon. Considerable street/highway and poor drainage flooding began after a couple of inches fell. Runoff from these earlier storms and continuing episodes of heavy rain finally caused some flooding along the Saw Mill and Bronx River. Several motorists were stranded on the adjacent parkways after they attempted to drive through these flooded areas. Two people pulled from their cars were taken to a local hospital.

Westchester County 10 1134EST 0 0 ? 0 Lightning  
Eastchester

Two houses caught fire when they were struck by lightning during a passing storm.

NYZ015-016-017 25 0500EST-  
Coastal New York 26 1100EST 1 0 ? 0 Coastal Flood

The combination of Tropical Storm Danielle approaching from the south and a strong high pressure system over New England, produced an extended period of onshore winds. The result was a very rough surf and abnormally high tides. At times of astronomically high tides, localized coastal flooding and beach erosion was observed, however damage was considered relatively minor. The heavy surf did contribute to the death of a body surfer on the morning of the 25th. (M62O)

## NEW YORK, Western

Oswego County 10 1145EST 0 0 4 0 Thunderstorm Winds  
Palermo

Yates County 10 1235EST 0 0 4 0 Thunderstorm Winds  
Penn Yan

Onondaga County 10 1245EST 0 0 4 0 Thunderstorm Winds  
Baldwinsville

Skaneateles 10 1245EST 0 0 4 0 Thunderstorm Winds

A cold front which crossed the area was accompanied by severe thunderstorms. The thunderstorms downed trees and power lines. A portion of County Route 35 in Oswego County was temporarily closed by large limbs. Pea-size hail was reported in Skaneateles.

Niagara County 18 1800EST 0 0 4 0 Thunderstorm Winds  
Lewiston

Erie County 18 1830EST 0 0 4 0 Thunderstorm Winds  
Elma

Athol Springs 18 1858EST 0 0 4 0 Thunderstorm Winds

A cold front crossed Western New York during the evening hours. The thunderstorms which accompanied the front produced damaging winds which downed trees and power lines.

NYZ001 27 1145EST 0 0 5 0 High Winds

A fast-moving cold front crossed the area and winds funneled along Lake Erie resulting in damaging winds during the afternoon hours. Winds gusted to 55 mph at the Buffalo Airport with sustained winds between 25 and 30 mph for 6 hours. The strong winds downed trees and power lines. Nearly 4,000 customers in the Buffalo metropolitan area were without power for nearly 2 hours.

## NORTH CAROLINA

Onslow County 02 0635EST 0 0 0 0 Waterspout  
6 E Sneads Ferry

Wake County 04 1815EST 0 0 0 0 Hail (1.00)  
3 E Raleigh

Carteret County 05 0850EST 0 0 0 0 Waterspout  
15 SW Cape

Lookout  
Brunswick County 05 0949EST 0 0 0 0 Waterspout  
1 SE Long Beach

## Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>NORTH CAROLINA Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| New Hanover County<br>5 NE Wrights-<br>ville Beach  | 05   | 0951EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Dare County<br>1 W Oregon Inlet   | 05   | 1208EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Cherokee County<br>8 SE Murphy  | 05   | 1800EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Streams overflowed their banks and caused flooding of roadways and bridges.   |      |                            |                           |                          |                      |         |                     |       |                    |
| Macon County<br>Southern Portion  | 05   | 1911EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Haywood County<br>13 S Waynesville  | 05   | 1953EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Foot bridges were washed away along the Blue Ridge Parkway.   |      |                            |                           |                          |                      |         |                     |       |                    |
| Brunswick County<br>1 SE Long Beach   | 06   | 0810EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Dare County<br>11 NE East Lake  | 06   | 1150EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Hyde County<br>1 W Duck   | 06   | 1150EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Hyde County<br>3 SE Swanquarter   | 07   | 1045EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| Madison County<br>20 NW Mars Hill   | 07   | 2030EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Flash Flood        |
| Rain falling at a rate of about two inches per hour, for a 2-hour period caused flash flooding that washed out driveways, private bridges, and a trout farm. Over 15,000 fish were lost. Total damages were estimated at \$40,000.  |      |                            |                           |                          |                      |         |                     |       |                    |
| Swain County<br>2 E Needmore  | 07   | 2100EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Flash Flood        |
| A county road and several private bridges were washed out.  |      |                            |                           |                          |                      |         |                     |       |                    |
| Cherokee Indian<br>Reservation  | 10   | 1820EST                    |                           |                          | 0                    | 0       | 6                   | 0     | Flash Flood        |
| 8 NE Cherokee   |      |                            |                           |                          |                      |         |                     |       |                    |
| An estimated eight inches of rain fell in 3 hours from thunderstorms over the headwaters of the Oconaluftee River. A wall of water 10 to 20 feet high developed as the runoff cascaded through a narrow gorge known as Big Cove. The Cherokee Indian Reservation was hardest hit by the flash flood. Property damage estimates ranged between \$2 and \$5 million. A total of 26 homes, 7 businesses, and a large trout farm suffered major damage or were destroyed. But prompt notification and quick action prevented injuries and loss of life. |      |                            |                           |                          |                      |         |                     |       |                    |
| Surry County<br>Mount Airy  | 10   | 1825EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds |
| Cleveland County<br>7 N Shelby  | 10   | 2030EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| Catawba County<br>Claremont   | 10   | 2050EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds |
| Cleveland County<br>2 S Shelby  | 10   | 2055EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)        |
| Carteret County<br>1 E Sea Level  | 11   | 1335EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Waterspout         |
| New Hanover County<br>Near Wilmington   | 14   | 1830EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Funnel Cloud       |
| Harnett County<br>Lillington  | 19   | 1355EST                    |                           |                          | 0                    | 1       | 0                   | 0     | Lightning          |
| A 28-year-old man was struck and injured at a shopping center.  |      |                            |                           |                          |                      |         |                     |       |                    |
| McDowell County<br>Old Fort   | 19   | 1400EST                    |                           |                          | 1                    | 1       | 0                   | 0     | Lightning          |

## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

### NORTH CAROLINA Cont'd

A 5-year-old girl was struck and killed and a 7-year-old boy was injured while playing outdoors near a large oak tree. (F050)

Rockingham County  
Madison  
Dare and Currituck  
Counties  
Outer Banks

19 2300EST 0 0 0 0 Thunderstorm Winds

24 1900EST-  
25 0600EST 0 0 0 0 Tropical Storm Danielle

Tropical Storm Danielle developed over the Gulf Stream of the Atlantic about 160 miles south-southeast of Cape Hatteras. The storm initially moved northeast, but suddenly turned toward land on the 24th. Danielle impacted the coastal sections of Dare and Currituck Counties, but the storm center remained about 15 miles offshore as the storm tracked northward parallel to the coast. Coastal flooding and beach erosion on the Outer Banks were the most notable effects of the storm. Three beach cottages, one in Rodanthe, two in Nags Head, all previously condemned because of erosion during the Halloween Storm in 1991, collapsed into the ocean. Highest recorded winds were 50 knots at Alligator River Bridge and 47 knots at Manteo in Dare County.

### NORTH DAKOTA

Grant County  
15 N Elgin  
Cass County

12 1710CST 0 0 4 4 Hail (1.75)

Fargo

16 1155CST 0 0 4 4 Thunderstorm Winds (G52)

Fargo (Hector I)

16 1155CST 0 0 0 0 Hail (0.75)

Winds up to 60 mph blew down some trees and power lines in the city of Fargo. Meanwhile, 0.75-inch hail was observed at the airport.

### OHIO

Erie County

05 2125EST-  
2325EST 0 0 4 0 Flash Flood

Huron County

05 2125EST-  
2325EST 0 0 4 0 Flash Flood

Heavy rain from thunderstorms resulted in street flooding.

Hancock County  
Findlay

06 0300EST-  
2000EST 0 0 2 0 Flood

The Blanchard River went into flood stage. The river crested at a stage of 11.8 feet at 1000 EST, causing minor damage. Flood stage is 10 feet.

Putnam County  
Ottawa

07 1130EST-  
08 0630EST 0 0 1 0 Flood

The Blanchard River went above the flood stage of 15 feet at Ottawa. The river crested at 15.1 feet at 0200 EST on September 8th. Virtually no damage occurred.

Ashtabula County

07 1415EST-  
1615EST 0 0 4 0 Flash Flood

Thunderstorms caused considerable road flooding.

Seneca County  
Northeastern  
Portion

09 1520EST-  
1720EST 0 0 4 0 Flash Flood

Mercer County

09 1530EST 0 0 2 0 Hail (0.75)

7 SW Rockford

Van Wert County

09 1540EST 0 0 2 0 Hail (0.75)

Ohio City

Wood County

09 1548EST 0 0 2 0 Hail (0.75)

Hoytville

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>OHIO Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                    |
| Wood County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Bowling Green   | 09   | 1553EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Allen County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Spencerville  | 09   | 1555EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)        |
| Putnam County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Eastern Portion   | 09   | 1600EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Hancock County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Vanlue  | 09   | 1620EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Summit County   |      |                            |                           |                          |                      |         |                     |       |                    |
| 6 S Akron   | 09   | 1630EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Wyandot County  |      |                            |                           |                          |                      |         |                     |       |                    |
| 1 W Carey   | 09   | 1630EST                    | Short                     | 10                       | 0                    | 0       | 0                   | 0     | Tornado (F0)       |
| Putnam County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Vaughnsville  | 09   | 1635EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Seneca County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Tiffin  | 09   | 1645EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)        |
| Wyandot County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Northern Portion  | 09   | 1700EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| Erie County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Huron   | 09   | 1725EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Huron   | 09   | 1725EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)        |
| Huron County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Fitchville  | 09   | 1725EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Mercer County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Mendon  | 09   | 1725EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Hail (1.75)        |
| Lorain County   | 09   | 1740EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| Stark County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Alliance  | 09   | 1754EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)        |
| Cuyahoga County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Northern Portion  | 09   | 1800EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| Medina County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Northwestern Portion  | 09   | 1800EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Allen County  | 09   | 1812EST-2015EST            |                           |                          | 0                    | 0       | 5                   | 4     | Flash Flood        |
| Mercer County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Rockford  | 09   | 1820EST-2020EST            |                           |                          | 0                    | 0       | 5                   | 4     | Flash Flood        |
| Van Wert County   | 09   | 1830EST-                   |                           |                          |                      |         |                     |       |                    |
| Geauga County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Newbury   | 09   | 1845EST                    |                           |                          | 0                    | 0       | 5                   | 4     | Flash Flood        |
| Newbury   | 09   | 1845EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Lake County   | 09   | 1845EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Mahoning County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Eastern Portion   | 09   | 1900EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Trumbull County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Northern Portion  | 09   | 1900EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Fulton County   |      |                            |                           |                          |                      |         |                     |       |                    |
| 2 SW Wauseon  | 09   | 2020EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Fulton County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Lyons   | 09   | 2036EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| Lucas County  |      |                            |                           |                          |                      |         |                     |       |                    |
| Toledo  | 09   | 2100EST                    |                           |                          | 1                    | 0       | 6                   | 0     | Thunderstorm Winds |
| Thunderstorms in northern Ohio produced high winds, large hail, flooding rains, and even a small tornado. The worst damage was in the city of Toledo, where thousands of trees were destroyed. A 53-year-old man in Toledo was killed when a tree fell on his car. (M53V) |      |                            |                           |                          |                      |         |                     |       |                    |
| Erie County   |      |                            |                           |                          |                      |         |                     |       |                    |
| Milan   | 10   | 1030EST-1400EST            |                           |                          | 0                    | 0       | 1                   | 0     | Flood              |
| The Huron River briefly flooded at Milan. Flood stage is 14 feet, and the river crested at 14.3 feet at 1200 EST.   |      |                            |                           |                          |                      |         |                     |       |                    |



# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992  |          |                            |                           |                          |                      |         |                     |       |                    |
|---|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location  | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|   |          |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>OHIO Cont'd</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Putnam County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Ottawa  | 11       | 0000EST-<br>2200EST        |                           |                          | 0                    | 0       | 1                   | 0     | Flood              |
| A minor flood occurred along the Blanchard River. Flood stage is 15 feet, and the river crested at 15.2 feet at 0700 EST. |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Lake County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Perry   | 21       | 0755EST                    |                           |                          | 0                    | 1       | 0                   | 0     | Lightning          |
| A 35-year-old man suffered minor injuries as he was struck by lightning while digging a hole.                             |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Warren County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 1 NW S Lebanon  | 21       | 1500EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| 2 N S Lebanon   | 21       | 1515EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| <b>Madison County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| London  | 21       | 1545EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| <b>Union County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Marysville  | 21       | 1550EST                    |                           |                          | 0                    | 0       | 2                   | 0     | Hail (0.75)        |
| Marysville  | 21       | 1550EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Thunderstorms over southwestern and west-central Ohio caused damage mainly by destroying trees and power lines.           |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Columbiana County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 2 SW Salem  | 21       | 1730EST                    | 2.5                       | 20                       | 0                    | 0       | 5                   | 0     | Tornado (F1)       |
| A tornado damaged or destroyed several outbuildings.  |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>1 SW Salem</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Clermont County   | 21       | 1755EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Mahoning County   | 21       | 1800EST                    |                           |                          | 0                    | 0       | 5                   | 0     | Thunderstorm Winds |
| Poland  | 21       | 1900EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds |
| Thunderstorms felled trees and power lines.   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Sandusky County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Woodville   | 22<br>23 | 0700EST-<br>1400EST        |                           |                          | 0                    | 0       | 2                   | 0     | Flood              |
| The Portage River flooded. Flood stage is 9 feet, and the river crested at 9.5 feet at 2100 EST on September 22nd.        |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>OKLAHOMA</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| <b>Harper County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 9 S Buffalo   | 01       | 1905CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woods County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| 2 S Lookout   | 01       | 1930CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Harper County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 12 SSE Buffalo  | 01       | 1937CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woodward County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 8 N Woodward  | 01       | 2027CST                    |                           |                          | ?                    | ?       | 0                   | 0     | Hail (0.88)        |
| <b>Harper County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 10 SE Selman  | 01       | 2030CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woods County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| 2 S Lookout   | 01       | 2032CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woodward County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 5.5 NE Mooreland  | 01       | 2100CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woodward County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Mooreland   | 01       | 2106CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.88)        |
| <b>Woodward County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| 4 S Freedom   | 01       | 2215CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)        |
| <b>Woods County</b>   |          |                            |                           |                          |                      |         |                     |       |                    |
| Freedom   | 01       | 2220CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)        |
| <b>Garfield County</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Enid  | 01       | 2245CST                    |                           |                          | ?                    | ?       | 0                   | 0     | Hail (0.88)        |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OKLAHOMA Cont'd

|   |    |         |  |  |   |   |   |   |             |
|---|----|---------|--|--|---|---|---|---|-------------|
| Woods County<br>1 NE Brace Station                                | 01 | 2330CST |  |  | 0 | 0 | ? | ? | Hail (1.25) |
| Woods County<br>Dacoma  | 02 | 0000CST |  |  | 0 | 0 | ? | ? | Hail (1.75) |
| Garfield County<br>Wrn Enid                                       | 02 | 0003CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Garfield County<br>Enid, East and<br>Northeast Portion<br>of Town | 02 | 0020CST |  |  | 0 | 0 | 6 | ? | Hail (2.50) |
| Alfalfa County<br>2 W Lambert                                     | 02 | 0025CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Garfield County<br>Enid   | 02 | 0043CST |  |  | 0 | 0 | ? | ? | Hail (1.75) |
| Garfield County<br>Enid   | 02 | 0050CST |  |  | 1 | 0 | ? | ? | Flash Flood |
| Alfalfa County<br>1 S Jet   | 02 | 0100CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
| Garfield County<br>1 N Garber                                     | 02 | 0115CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Noble County<br>3 SSE Billings                                    | 02 | 0140CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
| Garfield County<br>Kremlin  | 02 | 0250CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Kingfisher County<br>1.5 E Cashion                                | 02 | 0300CST |  |  | ? | ? | 0 | 0 | Hail (0.75) |
| Logan County<br>.50 E Cashion                                     | 02 | 0300CST |  |  | ? | ? | 0 | 0 | Hail (0.75) |

Penny-size hail in Cashion at 0300CST on the 2nd and 1.5 mile east of Cashion.

|                               |    |         |  |  |   |   |   |   |             |
|-------------------------------|----|---------|--|--|---|---|---|---|-------------|
| Garfield County<br>Hunter     | 02 | 0300CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Noble County<br>Billings      | 02 | 0315CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |
| Oklahoma County<br>Deer Creek | 02 | 0430CST |  |  | 0 | 0 | 4 | ? | Lightning   |
| Payne County<br>Stillwater    | 02 | 0605CST |  |  | 0 | 0 | 5 | ? | Lightning   |

Severe thunderstorms across northwest and north central Oklahoma brought reports of hail up to quarter-size on the evening of the 1st into the morning hours of the 2nd. Insurance adjusters set up temporary claim centers in the Enid area for what was expected to be around 3,000 claims for hail damage from hail up to 2.50 inches in diameter totalling \$3,000,000. Also in Enid, a 54 year old woman was killed when she tried to drive across a flooded bridge. In Stillwater, lightning struck a home, and the resulting fire caused an estimated \$60,000 to the home and its contents. In the Deer Creek area west of Edmond lightning struck a home and the resulting fire caused an estimated \$8,000 damage. (F54V)

|                           |    |         |  |  |   |   |   |   |             |
|---------------------------|----|---------|--|--|---|---|---|---|-------------|
| Comanche County<br>Lawton | 02 | 0835CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
|---------------------------|----|---------|--|--|---|---|---|---|-------------|

An isolated severe thunderstorm in southwest Oklahoma dropped dime-size hail over downtown Lawton.

|                                    |    |         |  |  |   |   |   |   |             |
|------------------------------------|----|---------|--|--|---|---|---|---|-------------|
| Atoka County<br>Stringtown         | 02 | 1337CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Atoka County<br>Farris             | 02 | 1425CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |
| Pushmataha County<br>1.5 N Antlers | 02 | 1430CST |  |  | ? | ? | 0 | 0 | Hail (1.00) |
| Choctaw County<br>10 S Antlers     | 02 | 1430CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OKLAHOMA Cont'd

|  |    |                     |     |     |   |   |   |   |              |
|--|----|---------------------|-----|-----|---|---|---|---|--------------|
| Oklahoma County<br>Midwest City                  | 02 | 1450CST             |     |     | 0 | 1 | ? | ? | Lightning    |
| Choctaw County<br>6.5 W Frogville                | 02 | 1515CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Mc Clain County<br>2 E Cole                      | 02 | 1630CST             |     |     | 0 | 0 | ? | ? | Hail (1.00)  |
| Mc Clain County<br>2 S Goldsby                   | 02 | 1644CST             |     |     | 0 | 0 | ? | ? | Hail (2.50)  |
| Cleveland County<br>Noble                        | 02 | 1657CST             |     |     | 0 | 0 | ? | ? | Hail (1.75)  |
| Mc Clain County<br>2.5 SW Purcell<br>3 ENE Wayne | 02 | 1715CST-<br>1745CST | 8.0 | 400 | 0 | 1 | 5 | 3 | Tornado (F2) |
| Mc Clain County<br>1 S Purcell                   | 02 | 1720CST             |     |     | 0 | 0 | ? | ? | Hail (2.50)  |
| Cleveland County<br>Lexington                    | 02 | 1722CST             |     |     | 0 | 0 | ? | ? | Hail (2.75)  |
| Cleveland County<br>3 E 1 S Corbett              | 02 | 1745CST             |     |     | 0 | 0 | ? | ? | Hail (1.75)  |
| Garvin County<br>1.5 SW Stratford                | 02 | 1800CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| McClain County<br>Rosedale                       | 02 | 1803CST             |     |     | 0 | 0 | ? | ? | Hail (4.00)  |
| Pittsburg County<br>2 W Indianola                | 02 | 1827CST             |     |     | 0 | 0 | ? | ? | Hail (1.00)  |
| Pittsburg County<br>Crowder<br>Indianola         | 02 | 1835CST             |     |     | 0 | 0 | ? | ? | Hail (1.00)  |
| Garvin County<br>1 S Stratford                   | 02 | 1835CST             |     |     | 0 | 0 | ? | ? | Hail (0.88)  |
|  | 02 | 1830CST             |     |     | 0 | 0 | ? | ? | Hail (0.88)  |
| Mc Clain County<br>Wayne                         | 02 | 1852CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Pittsburg County<br>4 E Blocker                  | 02 | 1910CST             |     |     | 0 | 0 | ? | ? | Hail (1.00)  |
| Carter County<br>4 S 3 W Wilson                  | 02 | 1915CST             |     |     | 0 | 0 | ? | ? | Hail (0.88)  |
| Garvin County<br>5 E Elmore City                 | 02 | 1919CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Jefferson County<br>Ringling                     | 02 | 1925CST             |     |     | 0 | 0 | ? | ? | Hail (0.88)  |
| Murray County<br>5 W Davis                       | 02 | 1937CST             |     |     | 0 | 0 | ? | ? | Hail (0.88)  |
| Marshall County<br>3 S Madill                    | 02 | 1945CST             |     |     | 0 | 0 | ? | ? | Hail (1.75)  |
| Jefferson County<br>6 S Ringling                 | 02 | 1945CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Carter County<br>5 S Wilson                      | 02 | 1959CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Love County<br>2 E Rubottom                      | 02 | 2000CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Marshall County<br>Kingston                      | 02 | 2000CST             |     |     | 0 | 0 | ? | ? | Hail (2.00)  |
| Love County<br>11 W Marietta                     | 02 | 2035CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Marshall County<br>Kingston                      | 02 | 2045CST             |     |     | 0 | 0 | ? | ? | Hail (0.75)  |
| Jefferson County<br>15 S Ringling                | 02 | 2045CST             |     |     | 0 | 0 | ? | ? | Hail (1.00)  |
| Bryan County<br>Cartwright                       | 02 | 2116CST             |     |     | 0 | 0 | ? | ? | Hail (1.75)  |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## OKLAHOMA Cont'd

Severe thunderstorms were widespread across central and south central Oklahoma, with a few severe storms across the southeastern portion of the state.

A strong (F2) tornado developed across McClain County at 1715CST 2.5 miles southwest of Purcell. The tornado moved along an 8 mile path and dissipated 3 miles east northeast of Wayne at 1745CST. The tornado had an average path width of 300 to 500 yards. Most damage was confined to trees and crops, but 7 homes and several outbuildings received damage. One home on U.S. Route 77 lost about 80 percent of its roof. At Route 77 a pickup truck was overturned and its lone occupant was thrown from the vehicle. Other damage included downed high tension power lines, a trailer bed blown about 100 yards and a one ton propane tank blown and rolled about .25 mile. The storm producing the tornado dropped tennis ball-to softball-size hail across Mc Clain and southern Cleveland Counties. A 14 year old Midwest City boy was injured by lightning. The boy reached to turn off a television as lightning was striking the mobile home he lived in. The surge of current knocked the boy across the room and he was hospitalized for injuries.

|                                  |    |         |     |    |   |   |   |   |              |
|----------------------------------|----|---------|-----|----|---|---|---|---|--------------|
| Alfalfa County<br>Cherokee       | 05 | 1655CST |     |    | 0 | 0 | ? | ? | Hail (1.00)  |
| Alfalfa County<br>Cherokee       | 05 | 1711CST |     |    | 0 | 0 | ? | ? | Hail (0.88)  |
| Dewey County<br>1 E 3.5 S Cestos | 05 | 1730CST |     |    | 0 | 0 | ? | ? | Hail (1.75)  |
| Woods County<br>1 E Galena       | 05 | 1735CST |     |    | 0 | 0 | ? | ? | Hail (1.00)  |
| Alfalfa County<br>2 E Carmen     | 05 | 1754CST |     |    | 0 | 0 | ? | ? | Hail (0.88)  |
| Major County<br>6 NE Cedardale   | 05 | 1802CST |     |    | 0 | 0 | ? | ? | Hail (1.00)  |
| Major County<br>3 N Chester      | 05 | 1815CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Woodward County<br>4 NW Seiling  | 05 | 1850CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Major County<br>2 W Chester      | 05 | 1850CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Beckham County<br>4 NW Elk City  | 05 | 1855CST |     |    | 0 | 0 | ? | ? | Hail (0.75)  |
| Alfalfa County<br>1 SSE Helena   | 05 | 1900CST |     |    | 0 | 0 | ? | ? | Hail (0.75)  |
| Alfalfa County<br>Carmen         | 05 | 1900CST |     |    | 0 | 0 | ? | ? | Flash Flood  |
| Garfield County<br>Carrier       | 05 | 1900CST |     |    | 0 | 0 | ? | ? | Hail (1.75)  |
| Custer County<br>4 E Moorewood   | 05 | 1910CST |     |    | 0 | 0 | ? | ? | Hail (1.75)  |
| Custer County<br>2 W Clinton     | 05 | 1923CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Roger Mills County<br>Hammon     | 05 | 1925CST |     |    | ? | ? | 0 | 0 | Hail (0.75)  |
| Dewey County<br>Taloga           | 05 | 1926CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Garfield County<br>Enid          | 05 | 1930CST |     |    | 0 | 0 | 4 | ? | Flash Flood  |
| Dewey County<br>Taloga           | 05 | 1930CST |     |    | 0 | 0 | ? | ? | Hail (1.75)  |
| Dewey County<br>1 W Taloga       | 05 | 1945CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0) |
| Custer County<br>2 W Clinton     | 05 | 1950CST |     |    | 0 | 0 | ? | ? | Hail (2.75)  |
| Beckham County<br>Elk City       | 05 | 1951CST |     |    | 0 | 0 | ? | ? | Hail (3.00)  |
| Garfield County<br>Garber        | 05 | 1955CST |     |    | 0 | 0 | ? | ? | Hail (0.75)  |
| Custer County<br>8 S Taloga      | 05 | 1955CST | .25 | 40 | 0 | 0 | 3 | 3 | Tornado (F0) |



# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992                      |      |                            |                           |                          |                      |         |                     |       |                          |
|-------------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
| Location                            | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|                                     |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| OKLAHOMA Cont'd                     |      |                            |                           |                          |                      |         |                     |       |                          |
| Washita County<br>9 S 1 W Canute    | 05   | 1955CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Noble County<br>5 S Billings        | 05   | 2010CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Noble County<br>2 W 10 N Perry      | 05   | 2010CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail                     |
| Dewey County<br>Taloga              | 05   | 2014CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.75)              |
| Greer County<br>6 N Mangum          | 05   | 2030CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Noble County<br>Perry               | 05   | 2030CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Lightning                |
| Beckham County<br>0.5 SE Delhi      | 05   | 2037CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Garfield County<br>1 SE Douglas     | 05   | 2050CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
| Washita County<br>8 SE Elk City     | 05   | 2100CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Noble County<br>Perry               | 05   | 2100CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Noble County<br>Perry               | 05   | 2100CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |
| Washita County<br>2 SW Sentinel     | 05   | 2110CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.75)              |
| Logan County<br>Orlando             | 05   | 2112CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Beckham County<br>Retrop            | 05   | 2119CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Tulsa County<br>Tulsa               | 05   | 2130CST                    |                           |                          | 0                    | 1       | 3                   | ?     | Thunderstorm Winds       |
| Washita County<br>9 S 1 W Canute    | 05   | 2130CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Pawnee County<br>Maramec            | 05   | 2130CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Kiowa County<br>13 NW Lone Wolf     | 05   | 2130CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.88)              |
| Creek County<br>Oilton              | 05   | 2135CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |
| Pawnee County<br>Cleveland          | 05   | 2135CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |
| Pawnee County<br>Hallett            | 05   | 2135CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G70) |
| Greer County<br>Willow              | 05   | 2144CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.75)              |
| Greer County<br>Willow              | 05   | 2144CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Washita County<br>Rocky             | 05   | 2200CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Kiowa County<br>Lone Wolf           | 05   | 2210CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (2.00)              |
| Kiowa County<br>Lone Wolf           | 05   | 2210CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Greer County<br>6 N Mangum          | 05   | 2210CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.75)              |
| Payne County<br>Lake Blackwell      | 05   | 2213CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Tulsa County<br>Tulsa               | 05   | 2215CST-<br>2245CST        |                           |                          | ?                    | 0       | 0                   | ?     | Thunderstorm Winds       |
| Kingfisher County<br>4 W Kingfisher | 05   | 2220CST                    |                           |                          | ?                    | ?       | 0                   | 0     | Thunderstorm Winds (G61) |

# Storm Data and Unusual Weather Phenomena

September 1992

|  |      |                            |                           |                          |  |   |                                       |   | September 1992                    |
|--|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|---|-----------------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops |   | Character of Storm                |
| OKLAHOMA Cont'd  |      |                            |                           |                          |  |   |                                       |   |                                   |
| Canadian County<br>6 N Piedmont                              | 05   | 2220CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)                       |
| Logan County<br>Guthrie                                      | 05   | 2225CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)                       |
| Caddo County<br>Carnegie                                     | 05   | 2245CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.70)                       |
| Mustang  |      |                            |                           |                          |  |   |                                       |   |                                   |
| Oklahoma County<br>7 W Edmond                                | 05   | 2251CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds                |
| Canadian County<br>Mustang                                   | 05   | 2305CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds<br>Hail (0.75) |
| Craig County<br>1 W Vinita                                   | 05   | 2315CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52)          |
| Craig County<br>1 W Vinita                                   | 05   | 2315CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)                       |
| Lincoln County<br>2 N Tryon                                  | 05   | 2315CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)                       |
| Kiowa County<br>Roosevelt                                    | 05   | 2318CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.00)                       |
| Oklahoma County<br>Oklahoma City                             | 05   | 2319CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52)          |
| N.W. 60th and Portland                                       |      |                            |                           |                          |  |   |                                       |   |                                   |
| Oklahoma County<br>1 N Edmond                                | 05   | 2329CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52)          |
| Canadian County<br>Mustang                                   | 05   | 2330CST                    |                           |                          | 0                                      | 0 | 4                                     | ? | Lightning                         |
| Grady County<br>Tuttle                                       | 05   | 2330CST                    |                           |                          | 0                                      | 0 | 3                                     | ? | Thunderstorm Winds                |
| Cleveland County<br>2 NE Norman                              | 05   | 2350CST                    |                           |                          | 0                                      | 0 | 5                                     | ? | Thunderstorm Winds (G74)          |
| Cleveland County<br>2.5 NE Norman                            | 05   | 2350CST                    |                           |                          | 0                                      | 0 | 6                                     | ? | Thunderstorm Winds (G82)          |
| Caddo County<br>Cyril  | 05   | 2355CST                    |                           |                          | 0                                      | 0 | 2                                     | ? | Thunderstorm Winds                |
| Oklahoma County<br>Tinker AFB                                | 06   | 0009CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.25)                       |
| Comanche County<br>1.5 E Elgin                               | 06   | 0010CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds                |
| Caddo County<br>Apache                                       | 06   | 0025CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)                       |
| Grady County<br>5 S 3W Alex                                  | 06   | 0040CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds                |
| Lincoln County<br>Jacktown                                   | 06   | 0045CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52)          |
| Oklahoma County<br>SW Oklahoma City<br>(Will Rogers Airport) | 06   | 0050CST-<br>0205CST        |                           |                          | ?                                      | 0 | 0                                     | ? | Warm Air Burst                    |

A unusual temperature rise occurred at Will Rogers Airport during the early morning hours of the 6th. At 1250 CST the temperature was 71 degrees and a southerly wind prevailed. The warm air burst moved in on northwesterly winds and the temperature rose to 83 degrees at 0115CST, while the dew point fell to 48 degrees.

By 0205CST the burst had ended. The temperature had fallen to 66 degrees with a dew point of 61 and the winds were again southerly.

|                           |    |         |  |  |   |   |   |   |                          |
|---------------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Seminole County<br>Konawa | 06 | 0051CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G56) |
| Hughes County<br>Lamar    | 06 | 0130CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds       |
| Pontotoc County<br>Ada    | 06 | 0135CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G56) |

## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

### OKLAHOMA Cont'd

|  |    |         |  |  |   |   |   |   |             |
|--|----|---------|--|--|---|---|---|---|-------------|
| Canadian County<br>5 NE Piedmont                               | 06 | 0230CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
| Oklahoma County<br>Deer Creek                                  | 06 | 0235CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |
| Oklahoma County<br>SW Oklahoma City                            | 06 | 0252CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
| Oklahoma County<br>Oklahoma City<br>Broadway and Britton Roads | 06 | 0309CST |  |  | 0 | 0 | ? | ? | Hail (3.50) |
| Logan County<br>7 NE Edmond                                    | 06 | 0322CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |
| Oklahoma County<br>Oklahoma City                               | 06 | 0332CST |  |  | 0 | 0 | ? | ? | Hail (2.75) |
| Pottawatomie County<br>Dale                                    | 06 | 0410CST |  |  | ? | ? | 0 | 0 | Hail (0.75) |
| Pontotoc County<br>2 SE Ada                                    | 06 | 0555CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |

Severe thunderstorms developed along a cold front in northwest and north central Oklahoma during the late afternoon of the 5th. These storms spread southeastward over the northeast, central and southwest portions of the state during the late evening of the 5th and the morning hours of the 6th. These storms produced 7 tornadoes, hail to near baseball-size, flash flooding and straight line winds to near 95 mph causing an estimated \$2,700,000 in damages. In addition many storms contained frequent or continuous cloud to ground lightning which resulted in several fires and many power outages.

Tornadoes were reported 3 miles north of Chester, 4 miles northwest of Seiling, 2 miles west of Chester, 2 miles west of Clinton, near Taloga, 1 mile west of Taloga and 8 miles south of Taloga. The tornadoes were all brief F0 touchdowns and no damage was reported, except for the tornado 8 miles south of Taloga. This tornado passed close enough to a grain elevator to pull grain out of it and scatter it around.

Significant damage, however, was caused by straight line winds from severe thunderstorms in Norman. At Max Westheimer Field, winds at the National Weather Service Forecast Office were measured at 85 mph, while .50 mile to the north of the Forecast Office winds estimated at 95 mph damaged or destroyed 22 of the 42 aircraft at the airport. Roof damage was sustained to the NWS Office, while the nearby Cleveland County YMCA suffered significant window damage and some roof damage. Damage to aircraft, buildings and powerlines in the Norman area was estimated at \$2,700,000. Severe thunderstorm winds also caused roof damage and destroyed a storage building in Vinita, downed power lines in Cleveland and blew a tree onto a car in Oilton. In Tulsa, strong winds from a severe thunderstorm downed trees and powerlines and caused damage and 1 injury at a festival. An 8 year old girl suffered a broken ankle at the festival in Tulsa when a 10 foot by 10 foot tent was blown down on top of her by thunderstorm winds. Light towers and other tents at the festival were damaged by the storm. Other damage from severe thunderstorm winds was reported southeast of Douglas, where trees were downed and a roof was taken off a house. At Perry light poles were downed by the winds and power poles were downed in Edmond. Strong winds downed power poles and tore the roof off a trailer in Tuttle, trees and signs were downed in Cyril and in Lamar. Just east of Elgin, trees were also downed by the strong winds. Lightning struck a barn north-northwest of Perry causing a fire destroyed the barn and 700 bales of hay. In Perry, lightning struck a house, doing minor damage. Lightning also struck an oil tank battery in Mustang and started it on fire.

Flash flooding from the heavy rains in the thunderstorms caused road flooding in Carmen and in Enid a Sheriff's Police Car was destroyed when it was driven into flash flood waters.

|                             |    |         |  |  |   |   |   |   |             |
|-----------------------------|----|---------|--|--|---|---|---|---|-------------|
| Ellis County<br>4 S Arnett  | 07 | 1815CST |  |  | 0 | 0 | ? | ? | Hail (0.88) |
| Ellis County<br>10 S Arnett | 07 | 1850CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Roger Mills County<br>Roll  | 07 | 1906CST |  |  | ? | ? | 0 | 0 | Hail (1.50) |
| Roger Mills County<br>Roll  | 07 | 1940CST |  |  | ? | ? | 0 | 0 | Hail (1.75) |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992  |      |                            |                           |                          |  |   |                                       |   |                          |
|---|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|---|--------------------------|
| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops |   | Character of Storm       |
| OKLAHOMA Cont'd   |      |                            |                           |                          |  |   |                                       |   |                          |
| Roger Mills County<br>2 N Roll  | 07   | 1955CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (2.75)              |
| Roger Mills County<br>Roll  | 07   | 2055CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (0.88)              |
| Major County<br>3 S Cedar Springs   | 07   | 2120CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (2.00)              |
| Blaine County<br>Longdale   | 07   | 2130CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Roger Mills County<br>3 E Strong City   | 07   | 2130CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (1.75)              |
| Blaine County<br>Longdale   | 07   | 2145CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.75)              |
| Severe thunderstorms produced large hail up to baseball size in northwest Oklahoma on the evening of the 7th.                           |      |                            |                           |                          |  |   |                                       |   |                          |
| Ottawa County<br>Afton  | 08   | 0923CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Rogers County<br>Chelsea  | 08   | 1215CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Isolated severe thunderstorms in northeast Oklahoma during the morning and early afternoon dropped dime-size hail at Afton and Chelsea. |      |                            |                           |                          |  |   |                                       |   |                          |
| Rogers County<br>Claremore  | 08   | 1630CST                    |                           |                          | 0                                      | 0 | 2                                     | ? | Lightning                |
| Tulsa County<br>Owasso  | 08   | 1708CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Rogers County<br>Claremore  | 08   | 1712CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.00)              |
| Tulsa County<br>2 E Owasso  | 08   | 1715CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Rogers County<br>Nr Sequoyah  | 08   | 1756CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Rogers County<br>1 E Claremore  | 08   | 1810CST                    |                           |                          | 0                                      | 0 | 5                                     | ? | Lightning                |
| Rogers County<br>Claremore  | 08   | 1812CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Rogers County<br>1 E Claremore  | 08   | 1820CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Rogers County<br>6 ENE Claremore  | 08   | 1825CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G87) |
| Rogers County<br>1 S Sequoyah   | 08   | 1828CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.75)              |
| Rogers County<br>8 E Claremore  | 08   | 1830CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Mayes County<br>7 W Pryor   | 08   | 1830CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Rogers County<br>5 W Foyil  | 08   | 1840CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (2.75)              |
| Mayes County<br>2 W Pryor   | 08   | 1852CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Rogers County<br>2 N Inola  | 08   | 1912CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Mayes County<br>4 SW Pryor  | 08   | 1920CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Mayes County<br>1 W Pryor   | 08   | 1921CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G70) |
| Mayes County<br>Pryor   | 08   | 1927CST-<br>1958CST        |                           |                          | ?                                      | 0 | 0                                     | ? | Hail (1.75)              |
| Mayes County<br>2 N Pryor   | 08   | 1947CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.00)              |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage | Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            |       |                    |

## OKLAHOMA Cont'd

|                                |    |         |     |    |   |   |   |   |                    |
|--------------------------------|----|---------|-----|----|---|---|---|---|--------------------|
| Mayes County<br>2 SW Salina    | 08 | 1952CST |     |    | 0 | 0 | ? | ? | Hail (0.88)        |
| Rogers County<br>0.1 E Oologah | 08 | 2000CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0)       |
| Mayes County<br>2 W Salina     | 08 | 2020CST |     |    | 0 | 0 | ? | ? | Hail (1.25)        |
| Mayes County<br>4 SE Salina    | 08 | 2030CST | .01 | 30 | 0 | 0 | ? | ? | Tornado (F0)       |
| Mayes County<br>Salina         | 08 | 2030CST |     |    | 0 | 0 | 1 | ? | Thunderstorm Winds |
| Rogers County<br>2 N Chelsea   | 08 | 2050CST |     |    | 0 | 0 | ? | ? | Hail (1.00)        |

Isolated severe thunderstorms developed in northeast Oklahoma during the late afternoon and evening of September 8th. The storms mainly affected Rogers and Mayes Counties, although dime to nickel-size hail fell in and near Owasso in Tulsa County. The storms spawned six tornadoes, 3 in Rogers County and 3 in Mayes County. All were brief F0 touchdowns with tree damage being the only damage reported. Damaging winds and large hail also accompanied the storms. Thunderstorm winds gusted to 100 miles an hour 6 miles east-northeast of Claremore and to 80 miles an hour 1 mile west of Pryor. Strong thunderstorm winds blew the roof off a church 1 mile east of Claremore and blew down signs on the north side of Claremore. A window was blown out of a house in Salina. Baseball-size hail fell 5 miles west of Foyil and golf ball-size hail fell 1 mile south of Sequoyah. Hail ranging from quarter to golf ball-size fell in the town of Pryor for 31 minutes, from 1927CST to 1958CST. Half dollar-size hail fell 2 miles west of Salina. Lightning struck the Claremore Police Department, causing minor damage to the police radios and computers. Just east of Claremore, lightning struck a new home and the resulting fire destroyed the structure valued at \$95,000.

|                                   |    |         |  |  |   |   |   |   |                          |
|-----------------------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Kay County<br>Newkirk             | 09 | 1736CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Kay County<br>Nr Blackwell        | 09 | 1739CST |  |  | 0 | 0 | ? | ? | Flash Flood              |
| Kay County<br>Hardy               | 09 | 1745CST |  |  | 0 | 0 | ? | ? | Hail (2.75)              |
| Kay County<br>Newkirk             | 09 | 1757CST |  |  | 0 | 0 | ? | ? | Hail (2.75)              |
| Dewey County<br>Camargo           | 09 | 1800CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Kay County<br>2 S Hardy           | 09 | 1810CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Roger Mills County<br>Crawford    | 09 | 1810CST |  |  | ? | ? | 0 | 0 | Hail (0.88)              |
| Roger Mills County<br>2 NW Angora | 09 | 1825CST |  |  | ? | ? | 0 | 0 | Hail (0.88)              |
| Roger Mills County<br>Leedy       | 09 | 1825CST |  |  | ? | ? | 0 | 0 | Hail (0.88)              |
| Dewey County<br>7 SE Camargo      | 09 | 1830CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Osage County<br>Shidler           | 09 | 1840CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Kay County<br>1 S Tonkawa         | 09 | 1845CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Roger Mills County<br>Angora      | 09 | 1845CST |  |  | ? | ? | 0 | 0 | Hail (1.00)              |
| Osage County<br>3 S Shidler       | 09 | 1855CST |  |  | 0 | 0 | ? | ? | Hail (1.75)              |
| Garfield County<br>1 N Hayward    | 09 | 1900CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G52) |
| Roger Mills County<br>Cheyenne    | 09 | 1915CST |  |  | ? | ? | 0 | 0 | Hail (0.88)              |
| Osage County<br>2 N Pawhuska      | 09 | 1920CST |  |  | 0 | 0 | ? | ? | Hail (1.00)              |
| Noble County<br>5 E Red Rock      | 09 | 1925CST |  |  | 0 | 0 | ? | ? | Hail (1.00)              |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992                      |      |                            |                           |                          |  |   |                                       |   |                          |
|-------------------------------------|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|---|--------------------------|
| Location                            | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops |   | Character of Storm       |
| OKLAHOMA Cont'd                     |      |                            |                           |                          |  |   |                                       |   |                          |
| Osage County<br>Fairfax             | 09   | 1925CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Craig County<br>4.5 N Welch         | 09   | 1925CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Noble County<br>Perry               | 09   | 1927CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.00)              |
| Osage County<br>7 SW Bartlesville   | 09   | 1945CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.00)              |
| Roger Mills County<br>11 E Cheyenne | 09   | 1945CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Thunderstorm Winds       |
| Ottawa County<br>Quapaw             | 09   | 1952CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Ottawa County<br>Miami              | 09   | 1952CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Beckham County<br>7 NE Erick        | 09   | 2000CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G56) |
| Beckham County<br>7 NE Erick        | 09   | 2000CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Pawnee County<br>Ralston            | 09   | 2000CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Nowata County<br>3 N New Allue      | 09   | 2000CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Ottawa County<br>1 S Miami          | 09   | 2012CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Noble County<br>Perry               | 09   | 2013CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Craig County<br>7 N Vinita          | 09   | 2015CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Ottawa County<br>Narcissa           | 09   | 2018CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Ottawa County<br>Narcissa           | 09   | 2018CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Craig County<br>7 N Vinita          | 09   | 2018CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Washington County<br>3 SE Ramona    | 09   | 2025CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (1.00)              |
| Roger Mills County<br>4 W Berlin    | 09   | 2025CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (0.88)              |
| Pawnee County<br>7 W Hallett        | 09   | 2026CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G61) |
| Logan County<br>Mulhall             | 09   | 2035CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Beckham County<br>Erick             | 09   | 2115CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Pawnee County<br>5 NE Mannford      | 09   | 2123CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Osage County<br>10 W Skiatook       | 09   | 2125CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Tulsa County<br>5 W Sand Springs    | 09   | 2127CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Tulsa County<br>W Tulsa             | 09   | 2128CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G61) |
| Creek County<br>Mannford            | 09   | 2135CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Rogers County<br>1 S Chelsea        | 09   | 2142CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Mayes County<br>5 N Pryor           | 09   | 2143CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Tulsa County<br>Tulsa               | 09   | 2145CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Mayes County<br>5 N Pryor           | 09   | 2200CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |

# Storm Data and Unusual Weather Phenomena

September 1992

|                                |      |                            |                           |                          |                      |   |                     |   | September 1992           |
|--------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---|---------------------|---|--------------------------|
| Location                       | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |   | Estimated<br>Damage |   | Character of Storm       |
| OKLAHOMA Cont'd                |      |                            |                           |                          |                      |   |                     |   |                          |
| Mayes County<br>Salina         | 09   | 2215CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds       |
| Wagoner County<br>1 S Wagoner  | 09   | 2220CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds       |
| Cherokee County<br>Peggs       | 09   | 2230CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G61) |
| Cherokee County<br>Hulbert     | 09   | 2230CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G61) |
| Rogers County<br>1 E Inola     | 09   | 2230CST                    |                           |                          | 0                    | 0 | 2                   | ? | Thunderstorm Winds       |
| Cherokee County<br>Tahlequah   | 09   | 2235CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G56) |
| Cherokee County<br>Tahlequah   | 09   | 2239CST                    |                           |                          | 0                    | 0 | 6                   | ? | Lightning                |
| Muskogee County<br>Fort Gibson | 09   | 2240CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G52) |
| Delaware County<br>Oaks        | 09   | 2240CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G54) |
| Cherokee County<br>Tahlequah   | 09   | 2244CST                    |                           |                          | 0                    | 0 | ?                   | ? | Hail (0.75)              |
| Adair County<br>Stilwell       | 09   | 2300CST                    |                           |                          | 0                    | 0 | ?                   | ? | Hail (0.75)              |
| Sequoyah County<br>Muldrow     | 09   | 2350CST                    |                           |                          | 0                    | 0 | ?                   | ? | Thunderstorm Winds (G55) |

Severe thunderstorms moved across northwest, north central and northeast Oklahoma during the evening of September 9th. Dime-to quarter-size hail and 60 to 70 mile an hour wind gusts were common with these storms, with hail as large as golfball size 3 miles south of Shidler. Thunderstorm winds gusted to 80 miles an hour at Fairfax, where windows were blown out and large tree branches were downed. Thunderstorm winds downed trees and power lines at Salina and 11 miles east of Cheyenne and several power lines were downed in Tulsa and Fort Gibson. A tree was blown down across U.S. Highway 16, 1 mile south of Wagoner and large tree limbs were downed 3 miles north of New Allue and at Erick. Strong thunderstorm winds blew shingles off houses and barns and downed numerous tree limbs 1 mile east of Inola. In addition, substantial damage was reported from lightning. Lightning struck the Talequah Mill and Elevator in Talequah and the resulting fire caused damage estimated at \$1,000,000. Flash flooding in Blackwell caused water to wash over the road on U.S. Highway 11.

## Tulsa County Glenpool

10 0208CST 0 0 4 ? Lightning

Lightning struck a home in Glenpool and started a fire which resulted in \$17,500 damage to the building and contents.

## Okmulgee County Nr Morris

10 0330CST-0500CST ? 0 0 ? Flash Flood

Heavy rainfall from persistent thunderstorms caused flash flooding near the town of Morris in Okmulgee County during the early morning of September 10th. U.S. Highway 52 near Morris was flooded, with water to a depth of one foot flowing across the highway.

## Adair County 5 N Stilwell

20 0100CST 0 0 3 ? Lightning

Lightning struck a home 5 miles north of Stilwell causing \$1500 in damage.

## Rogers County Nr Chelsea Comanche County 6 S Sterling Craig County Nr White Oak Caddo County Cyril

20 1800CST 0 0 ? ? Thunderstorm Winds  
20 1810CST 0 0 ? ? Thunderstorm Winds  
20 1810CST 0 0 ? ? Thunderstorm Winds  
20 1815CST 0 0 ? ? Thunderstorm Winds (G52)

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992                       |      |                            |                           |                          |                      |         |                     |       |                          |
|--------------------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
| Location                             | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|                                      |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| OKLAHOMA Cont'd                      |      |                            |                           |                          |                      |         |                     |       |                          |
| Stephens County<br>5.5 SW Marlow     | 20   | 1820CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.50)              |
| Stephens County<br>6 SW Marlow       | 20   | 1820CST                    |                           |                          | 0                    | 0       | 4                   | ?     | Thunderstorm Winds       |
| Jefferson County<br>Ryan             | 20   | 1825CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| Grady County<br>Minco                | 20   | 1827CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
| Stephens County<br>2 N Duncan        | 20   | 1833CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G65) |
| Canadian County<br>1 SE Union City   | 20   | 1835CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Stephens County<br>5 E Bray          | 20   | 1845CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Jefferson County<br>Oscar            | 20   | 1850CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (1.00)              |
| Stephens County<br>13.5 E Marlow     | 20   | 1900CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |
| Stephens County<br>5 E Bray          | 20   | 1900CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Garvin County<br>Elmore City         | 20   | 1915CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Love County<br>2 W Rubottom          | 20   | 1915CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Murray County<br>Davis               | 20   | 1915CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Lightning                |
| Oklahoma County<br>Nrn Oklahoma City | 20   | 1924CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G53) |
| Garvin County<br>Elmore City         | 20   | 1930CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Love County<br>2 S Thackerville      | 20   | 1930CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G57) |
| Grady County<br>1 N Minco            | 20   | 1942CST                    |                           |                          | 0                    | 0       | 5                   | ?     | Thunderstorm Winds (G65) |
| Garvin County<br>5 S Elmore City     | 20   | 1945CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G56) |
| Marshall County<br>2 E Willis        | 20   | 2000CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Marshall County<br>Kingston          | 20   | 2005CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |
| Craig County<br>Vinita               | 20   | 2050CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Delaware County<br>1 W Bernice       | 20   | 2120CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |
| Rogers County<br>5 E Oologah         | 20   | 2125CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds       |

Thunderstorms moved across portions of northeast, central, south central and southeast Oklahoma on the 20th. These storms produced strong damaging winds and large hail.

The worst damage of the evening was at Minco. At 1827CST the winds from a severe thunderstorm took the roof off a barn. Then at 1940CST winds estimated in excess of 75 mph destroyed an auto repair shop. Southwest of Marlow strong winds from a severe thunderstorm blew the roof off a house. Six miles south of Sterling power poles were downed and trees were downed by the winds in Kingston and 15.50 miles east of Marlow. A telephone pole was blown down by strong winds near Oologah and strong winds also downed power lines 5 miles east of Oologah. Numerous tree limbs were blown down onto power lines near Chelsea and White Oak, resulting in power outages in these areas.

Lightning struck a tree next to a home in Davis. The lightning jumped from the tree to the home, blew a hole 5 inches in diameter in the roof, tore off siding, blew off sheetrock on the bathroom wall and burned up the phone lines.



# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992                      |      |                            |                           |                          |  |   |                                       |   |                          |
|-------------------------------------|------|----------------------------|---------------------------|--------------------------|--|---|---------------------------------------|---|--------------------------|
| Location                            | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |   | Estimated<br>Damage<br>Property Crops |   | Character of Storm       |
| OKLAHOMA Cont'd                     |      |                            |                           |                          |  |   |                                       |   |                          |
| Haskell County<br>Stigler           | 21   | 1410CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.88)              |
| Haskell County<br>4 E Stigler       | 21   | 1420CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Le Flore County<br>Le Flore Co      | 21   | 1502CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Le Flore County<br>Pocola           | 21   | 1525CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Beckham County<br>Elk City          | 21   | 1534CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.75)              |
| Alfalfa County<br>1 NW Cherokee     | 21   | 1545CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Bryan County<br>2 S Caddo           | 21   | 1555CST                    | .01                       | 30                       | 0                                      | 0 | ?                                     | ? | Tornado (F0)             |
| Alfalfa County<br>Cherokee          | 21   | 1603CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.75)              |
| Major County<br>10 W Orienta        | 21   | 1607CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.25)              |
| Bryan County<br>4 SSE Caddo         | 21   | 1620CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (1.75)              |
| Dewey County<br>6 ESE Putnam        | 21   | 1625CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Custer County<br>2 N Weatherford    | 21   | 1630CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Alfalfa County<br>Helena            | 21   | 1630CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G61) |
| Bryan County<br>7 NE Bokchito       | 21   | 1645CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Major County<br>Ringwood            | 21   | 1645CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Grant County<br>Sand Creek          | 21   | 1710CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Choctaw County<br>6 N Boswell       | 21   | 1715CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G52) |
| Kay County<br>1 N Tonkawa           | 21   | 1728CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Hail (0.75)              |
| Pushmataha County<br>Nashoba        | 21   | 1740CST                    |                           |                          | ?                                      | ? | 0                                     | 0 | Hail (0.75)              |
| Choctaw County<br>Boswell           | 21   | 1750CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| Choctaw County<br>7 SE Boswell      | 21   | 1800CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds (G61) |
| Noble County<br>Billings            | 21   | 1830CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| McCurtain County<br>2 SE Battiest   | 21   | 1815CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |
| McCurtain County<br>2 NE Broken Bow | 21   | 1915CST                    |                           |                          | 0                                      | 0 | ?                                     | ? | Thunderstorm Winds       |

Severe thunderstorms were scattered across many areas of the state. Large hail and strong winds accompanied the storms and 2 tornadoes were reported.

The first tornado was reported 1 miles north of Cherokee and the second 2 miles south of Caddo. They were both brief F0 touchdown with no damage reported.

Severe thunderstorm winds downed trees at Boswell, 2 miles southeast of Battiest and 2 miles northeast of Broken Bow.

## OREGON

Jackson County  
Rogue River

02 1500PDT 1 ? ? ? Lightning

A 21-year-old Rogue River man was killed in Rogue River when he was struck by lightning that apparently bounced off of another object and struck him while he was sitting under a tree during

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## OREGON Cont'd

a thunderstorm. The last reported lightning death in Oregon was in 1986 in Baker County. There have only been 13 lightning deaths reported in Oregon since 1979.

|   |    |                     |  |  |         |  |             |
|---|----|---------------------|--|--|---------|--|-------------|
| Central Point<br>Gold Hill<br>Lake County<br>Lakeview | 03 | 1630PDT-<br>1700PDT |  |  | ? ? ? ? |  | Hail (1.33) |
|   | 03 | 1700PDT-<br>1730PDT |  |  | ? ? ? ? |  | Hail (1.00) |

Thunderstorms rumbled through southwestern and south-central Oregon producing hail up to 1.33 inches in diameter in Gold Hill and up to 1.00 inch in diameter in Lakeview. Small tree branches were reported downed.

## PENNSYLVANIA, Eastern

|                           |    |         |  |  |         |  |                    |
|---------------------------|----|---------|--|--|---------|--|--------------------|
| Bradford County<br>Canton | 10 | 1454EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|---------------------------|----|---------|--|--|---------|--|--------------------|

Thunderstorm wind gusts brought down numerous trees in Canton. A tree was down on an automobile in Ridgeway at 1500 EST. A tree was down on a house in Canton at 1510 EST. A tree was down in Leraysville at 1537 EST. Some street flooding was also reported.

|  |    |         |  |  |         |  |                    |
|--|----|---------|--|--|---------|--|--------------------|
| Lycoming County<br>Pennsdales<br>Lairdsville | 10 | 1543EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|  | 10 | 1544EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |

Thunderstorm winds downed utility lines in Pennsdales and brought trees down on utility lines at Lairdsville. A tree was down on a mobile home in Hepburnville at 1459 EST. A tree was down on a house in Williamsport at 1508 EST.

|   |    |         |  |  |         |  |                    |
|---|----|---------|--|--|---------|--|--------------------|
| Fulton County<br>1 W MC Connells-<br>burg | 10 | 1545EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|---|----|---------|--|--|---------|--|--------------------|

Thunderstorm wind gusts downed utility lines.

|                               |    |         |  |  |         |  |                    |
|-------------------------------|----|---------|--|--|---------|--|--------------------|
| Franklin County<br>Waynesboro | 10 | 1640EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|-------------------------------|----|---------|--|--|---------|--|--------------------|

Thunderstorm wind gusts downed utility lines and at least one tree. Pea-size hail also fell.

|                                   |    |         |  |  |         |  |                    |
|-----------------------------------|----|---------|--|--|---------|--|--------------------|
| Wayne County<br>Pleasant Mountain | 10 | 1715EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|                                   | 10 | 1715EST |  |  | 0 0 ? 0 |  | Hail (1.00)        |
| 1.5 W Honesdale                   | 10 | 1731EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |

At Pleasant Mountain thunderstorm wind gusts downed numerous trees. Nickel-size hail was also reported. Wind gusts were estimated to be frequently above 50 mph. Between Waymart and Honesdale some trees were down. There was some street flooding in Waymart where over an inch of rain (1.30) was reported in one hour.

|                        |    |         |  |  |         |  |                        |
|------------------------|----|---------|--|--|---------|--|------------------------|
| Pike County<br>Paupack | 10 | 1815EST |  |  | 0 0 3 0 |  | Thunderstorm Winds(52) |
|                        | 10 | 1815EST |  |  | 0 0 ? 0 |  | Hail (1.00)            |

Thunderstorm wind gusts, estimated to be in excess of 60 mph, brought down large tree limbs. Three quarter to one inch hail was reported.

|   |    |         |  |  |         |  |                    |
|---|----|---------|--|--|---------|--|--------------------|
| Monroe County<br>10 NW Pocono<br>Summit | 10 | 1820EST |  |  | 0 0 3 0 |  | Thunderstorm Winds |
|   | 10 | 1820EST |  |  | 0 0 ? 0 |  | Hail (1.00)        |

Thunderstorm wind gusts with very strong winds brought down large tree limbs. Nickel-size hail was also reported.

|                            |    |         |  |  |         |  |          |
|----------------------------|----|---------|--|--|---------|--|----------|
| Adams County<br>Greenmount | 22 | 1645EST |  |  | 0 1 ? 0 |  | Lighting |
|----------------------------|----|---------|--|--|---------|--|----------|

A man was knocked unconscious when lightning struck near the garage he was working in.

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992   |      |                            |                           |                          |                      |         |                     |       |   |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|---|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm                      |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |   |
| <b>PENNSYLVANIA, Eastern Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| <b>York County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| Dillsburg  | 22   | 1700EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds                      |
| 1 S Wrightsville   | 22   | 1700EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds                      |
| Thunderstorm wind gusts brought down trees.  |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Berks County</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| Virginville  | 22   | 1802EST                    |                           |                          | 0                    | 0       | 3                   | 0     | Thunderstorm Winds                      |
|  | 22   | 1802EST                    |                           |                          | 0                    | 0       | ?                   | 0     | Hail (0.75)                             |
| Thunderstorm wind gusts downed several trees, some large limbs and utility lines. Dime-size hail was also reported.  |      |                            |                           |                          |                      |         |                     |       |   |
| <b>PENNSYLVANIA, Western</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Fayette County</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| Uniontown  | 08   | 1350EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Trees were downed in Uniontown by thunderstorm winds.  |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Westmoreland County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| 15 SE Greensburg   | 08   | 1356EST-<br>1459EST        |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood                             |
| Roadways were flooded in Ligonier and water was 1.5 feet deep on Route 30.   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Bedford County</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| Bedford  | 08   | 1521EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Trees were downed in Bedford by thunderstorm winds.  |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Erie County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| 20 SE Erie   | 09   | 1710EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Powerlines and large limbs were downed in West Springfield and Fairview.   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Crawford County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| 13 NW to 8 NE<br>Meadville   | 09   | 1718EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Powerlines were downed in Conneautville and Woodcock.  |      |                            |                           |                          |                      |         |                     |       |   |
| 12 NE Meadville  | 09   | 1815EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Powerlines and large tree limbs were downed east of Cambridge Springs.   |      |                            |                           |                          |                      |         |                     |       |   |
| 27 NE Meadville  | 09   | 1840EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds                      |
| Powerlines and tree limbs were downed in Spartansburg.   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Erie County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| 21 SW to 12 S<br>Erie  | 09   | 1900EST-<br>2000EST        |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood                             |
| Flooding occurred on Route 266 near Albion. The intersection of Route 19 and 77 South of Waterford was covered by 6 inches of water. Roads were closed in Erie, Edinboro, and Cherry Hill, and streams and creeks were out of their banks. |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Crawford County</b>   |      |                            |                           |                          |                      |         |                     |       |   |
| Meadville to<br>15 NW Meadville  | 09   | 1900EST-<br>2000EST        |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood                             |
| Roads were closed in Meadville, Springboro and Blooming Valley. Water was covering the streets and flooding underpasses.   |      |                            |                           |                          |                      |         |                     |       |   |
| <b>Blair County</b>  |      |                            |                           |                          |                      |         |                     |       |   |
| 5 N Altoona  | 09   | 1404EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)<br>Thunderstorm Winds (G60) |
| Hail measuring 0.75 inch in diameter was reported 5 miles north of Altoona. Thunderstorm wind gusts to 69 mph were also reported.  |      |                            |                           |                          |                      |         |                     |       |   |

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992   |          |                            |                           |                          |                      |         |                     |       |                    |
|--|----------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
| Location   | Date     | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|  |          |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>PENNSYLVANIA, Western Cont'd</b>  |          |                            |                           |                          |                      |         |                     |       |                    |
| Mercer County<br>16 NE Mercer  | 21       | 1800EST-<br>1815EST        | 4.0                       | 20                       | 0                    | 0       | 4                   | 0     | Tornado (F0)       |
| Roofs were damaged and trees uprooted. Utility poles down on Route 19. The roof was blown off the grandstand at fire department fairgrounds. A mobile home was destroyed 4 miles east of Sheakleyville.  |          |                            |                           |                          |                      |         |                     |       |                    |
| Lawrence County  | 21       | 1845EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds |
| Five large trees were blown down by thunderstorm winds.  |          |                            |                           |                          |                      |         |                     |       |                    |
| Crawford County<br>10 E Meadville  | 21       | 1918EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Route 27 was flooded and closed in Guys Mills.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Venango County<br>Franklin   | 21       | 1920EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Street flooding occurred in Franklin.  |          |                            |                           |                          |                      |         |                     |       |                    |
| Erie County<br>24 SE Erie  | 21       | 1950EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Route 77 was closed by high water in Corry.  |          |                            |                           |                          |                      |         |                     |       |                    |
| Crawford County<br>27 NE to 13 NE<br>Meadville   | 21       | 1950EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Route 77 was closed in Spartansburg by high water. Street flooding was reported in Eastwood and Townville.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Venango County<br>Franklin<br>7 NE Franklin  | 21       | 2020EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Several roads were closed in Franklin and Oil City area.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Warren County<br>21 NW to 14 NW<br>Warren  | 21       | 2038EST-<br>2053EST        |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Flooding in Bear Lake. Flooding along route 6 in Warren at 2045EST. Roads closed in sugargrove at 2053EST.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Lawrence County<br>New Castle  | 21       | 2248EST                    |                           |                          | 0                    | 0       | 4                   | 0     | Heavy Rain         |
| A car dealership building in New Castle collapsed from weight of water on roof.  |          |                            |                           |                          |                      |         |                     |       |                    |
| Butler County<br>Butler<br>15SW Butler   | 21<br>22 | 2340EST-<br>0010EST        |                           |                          | 0                    | 0       | 4                   | 0     | Flash Flood        |
| Sullivan run out of banks in butler. At 0010EST flooding in eastern part of butler. In cranberry township basement wall buckled under pressure of water overflowing from nearby culvert. Water 7 feet deep in a basement in chicora. Ten thousand dollars in damage. |          |                            |                           |                          |                      |         |                     |       |                    |
| Armstrong County<br>12NW Kittanning  | 22       | 0120EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Flooding at sugar creek with several houses surrounded by water near Kaylor.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Elk County<br>12N Ridgway  | 22       | 0400EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Road flooding in Wilcox.   |          |                            |                           |                          |                      |         |                     |       |                    |
| Warren County<br>Warren  | 22       | 0600EST                    |                           |                          | 0                    | 0       | 0                   | 0     | Flash Flood        |
| Road flooding with washouts in Warren.   |          |                            |                           |                          |                      |         |                     |       |                    |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## PENNSYLVANIA, Western Cont'd

Venango County 22 0600EST 0 0 0 0 Flash Flood

Franklin

Road flooding in Franklin with streams full and overflowing.

Erie County 22 0740EST 0 0 0 0 Flash Flood

24SE Erie

Trailer court evacuated in corry with flooding and road closings.

Elk County 22 1040EST- 0 0 0 0 Flash Flood

12N Ridgway

1200EST

Road flooding in Wilcox from East Branch Creek overflowing.

Jefferson County 22 1045EST 0 0 0 0 Flash Flood

10NW Brookville

Road flooding on route 36 in Barnett township.

## RHODE ISLAND

None reported.

## SOUTH CAROLINA

Union County 03 PM 0 0 ? 0 Lightning

3 S Santuck

The cooperative observer at Santuck reported that Gilliam's Chapel Methodist Church was set ablaze by lightning.

Greenville County 10 1900EST- 0 0 ? ? Lightning

Northern Portion

2100EST

Spartanburg County 10 1900EST- 0 0 ? ? Lightning

Northern Portion

2100EST

Thunderstorms moved from the mountains of North Carolina into the northern portions of Greenville and Spartanburg Counties. Intense lightning caused a number of power outages and damage.

Oconee County 22 1925EST 0 0 ? ? Lightning

Seneca

Westminster

Lightning caused a number of power outages around Oconee County.

Bamberg County 23 1500EST 0 0 ? ? Thunderstorm Winds

Denmark

Trees were blown down and marble-sized hail was reported.

## SOUTH DAKOTA

Pennington County 04 1725MST 0 0 4 0 Thunderstorm Winds (G56)

Rapid City

High winds and considerable lightning downed numerous power lines and caused a couple of hay bale fires and a minor timber fire.

Jackson County 04 2000MST 0 0 0 0 Hail (1.00)

7 NE Cedar Pass

One-inch-diameter hail and high winds moved through the Cactus Flats area along Interstate 90.

Dewey County 04 2105MST 0 0 0 0 Thunderstorm Winds (G52)

Eagle Butte

Timber Lake

04 2105MST

0 0 3 0

Thunderstorm Winds (G65)

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|--|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
| <b>SOUTH DAKOTA Cont'd</b>   |      |                            |                           |                          |  |                                       |                    |
| Strong thunderstorm winds caused damage to several houses.   |      |                            |                           |                          |  |                                       |                    |
| Codington County<br>1 NE Watertown   | 05   | 0215CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)        |
| Brown County<br>7 N Aberdeen   | 06   | 1531CST                    |                           |                          | 0 0                                    | 1 2                                   | Hail (1.75)        |
| 5 W Frederick  | 06   | 1536CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| 4 W Houghton   | 06   | 1610CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Houghton   | 06   | 1636CST-<br>1700CST        |                           |                          | 0 0                                    | 1 3                                   | Hail (0.75)        |
| Hail, mostly pea- to marble-size, covered the ground. Some tree branches and corn were stripped clean.   |      |                            |                           |                          |  |                                       |                    |
| Marshall County<br>7 W Britton   | 06   | 1650CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Brown County<br>15 NE Aberdeen   | 06   | 1710CST                    |                           |                          | 0 0                                    | 1 2                                   | Hail (1.00)        |
| One-inch-size hail occurred 2 miles north of Tacoma Park.  |      |                            |                           |                          |  |                                       |                    |
| Warner   | 06   | 1733CST                    |                           |                          | 0 0                                    | 1 2                                   | Hail (1.00)        |
| 5 S Aberdeen   | 06   | 1747CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| 7 W Ferney   | 06   | 1759CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)        |
| 6 NE Stratford   | 06   | 1805CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| 4 S Groton   | 06   | 1819CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Day County<br>3 S Andover  | 06   | 1854CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Potter County<br>Gettysburg  | 06   | 1925CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Hoven  | 06   | 1940CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (0.75)        |
| Brown County<br>10 NW Aberdeen   | 06   | 2040CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)        |
| Turner County<br>Viborg  | 07   | 0350CST                    |                           |                          | 0 0                                    | 3 0                                   | Lightning          |
| Lightning struck a house and damaged the roof, wiring, and appliances, but did not cause a fire.   |      |                            |                           |                          |  |                                       |                    |
| Brookings County<br>Brookings  | 09   | 1706CST                    |                           |                          | 0 0                                    | 3 0                                   | High Wind          |
| Winds gusted to over 45 mph causing a large tree to blow over and crush a car.   |      |                            |                           |                          |  |                                       |                    |
| Butte County<br>Belle Fourche  | 12   | 2030MST                    |                           |                          | 0 0                                    | 4 0                                   | High Wind          |
| A powerful wind gust, estimated at 65 mph, cut a narrow path from west to east across Belle Fourche. The wind blew a large tree onto the wing of a building which caused it to collapse. The wind blew out windows, battered trees, stripped shingles and gutters, and caused other damage to houses and cars. |      |                            |                           |                          |  |                                       |                    |
| Lincoln, Union,<br>and Clay Counties   | 14   | 0115CST-<br>0145CST        |                           |                          | 0 0                                    | 2 2                                   | Thunderstorm Winds |
| Thunderstorms brought marble-sized hail and wind gusts around 50 mph that ripped limbs from trees in southern Lincoln County and the northern parts of Clay and Union Counties.  |      |                            |                           |                          |  |                                       |                    |
| Jerauld County<br>Wessington<br>Springs  | 15   | 1000CST                    |                           |                          | 0 0                                    | 4 0                                   | Lightning          |
| A lightning bolt hit a power line in a neighborhood causing damage to the inside of a house. Many appliances in the neighborhood block area were damaged including almost every television, VCR, and cordless phone.   |      |                            |                           |                          |  |                                       |                    |
| SDZ004-005-<br>011-012<br>Northeast SD   | 24   | 0800CST-<br>1600CST        |                           |                          | 0 0                                    | 3 0                                   | High Winds         |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## SOUTH DAKOTA Cont'd

Strong southerly winds gusted to 50 to 55 mph in northeast South Dakota during much of the daytime. The warm winds toppled trees and light poles. In Aberdeen, a front window was blown out at a store.

## TENNESSEE

Wayne County  
Waynesboro

03 0635 0 0 4 0 Flash Flood

Several roads were washed out. A few people were trapped in their homes by the flood water. Several trailers were washed off their foundations.

Montgomery County

10 0220CST 0 0 2 0 Thunderstorm Winds

Several trees were knocked down in Montgomery County.

Wayne County  
Waynesboro

10 0635CST 0 0 4 0 Thunderstorm Winds

Several roads were washed out. A few people were trapped in their homes by the flood water. Several mobile homes were washed off their foundations.

Roane County  
Rockwood

10 1320CST 0 0 0 0 Hail (.75)

Dime-size hail was reported in Rockwood.

Rhea County  
Spring City

10 1340CST 0 0 3 0 Thunderstorm Winds

Several trees and power lines were knocked down.

Evansville

10 1430CST 0 0 2 0 Thunderstorm Winds

Several trees were blown down.

Knox County  
Knoxville

10 1445CST 0 0 2 0 Thunderstorm Winds

A few trees were knocked down.

Washington County  
Johnson City

10 1630CST 0 0 4 0 Thunderstorm Winds

A few trees were knocked down. Some of the trees fell on power lines, homes and a car.

Dyer County  
Newbern

18 1800CST 0 0 3 0 Thunderstorm Winds

Several trees were knocked down, damaging a fence and a house.

Haywood County  
Brownsville

18 1930CST 0 0 4 0 Thunderstorm Winds

Some trees fell on power lines and a mobile home. A storage building was destroyed. The siding to a mobile home was damaged.

## TEXAS, Panhandle

Collingsworth County  
1 N Dodson

09 2200 CST 0 0 0 0 Hail (0.75)

A thunderstorm became severe during the late night hours. The storm produced dime-size hail that was reported by the Collingsworth County Sheriff's Office.

## TEXAS, Northern

Hamilton County

01 0000CST-0200CST 0 0 ? ? Flash Flood

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## TEXAS, Northern Cont'd

Heavy rains of about three inches in one hour resulted in water rising over parts of State Highway 36 northwest of Hamilton, and U.S. Highway 281 north of Hamilton. Street flooding occurred in Hamilton.

### Wichita County 9S Electra

|    |          |  |  |  |   |   |           |
|----|----------|--|--|--|---|---|-----------|
| 01 | 1200CST- |  |  |  |   |   |           |
| 02 | 0600CST  |  |  |  | ? | 0 | 0 ? Flood |

Along Beaver Creek, minor overflows of short duration affected agricultural lands. The crest was below flood stage at Wichita Falls, where no urban areas were threatened by the Wichita River. Flood stage of 25 feet was reached by midday of September 1. The creek then crested near 27 feet during the late evening hours and ceased to flood by the following morning. No dollar loss were reported.

### Rusk County 9 W Henderson 9 W Henderson 2 E New London 6 N Henderson 4 N Henderson Oak Hill

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1610CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
| 01 | 1610CST |  |  | 0 | 0 | 3 | ? | Lightning          |
| 01 | 1620CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
| 01 | 1625CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
| 01 | 1630CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
| 01 | 1635CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |

At 9 miles west of Henderson, strong winds overturned two oil tanks, one of which was set afire by lightning. At 2 miles east of New London, strong winds uprooted several trees and removed a portion of a barn's roof. At 6 miles north of Henderson, strong winds lifted the roofs from a home and a 20- x 50-foot workshop. Trees were uprooted and power lines were blown down. At 4 miles north of Henderson, thunderstorm winds tore the roofs from two homes and a barn, blew fences down, and blew large limbs from trees. At Oak Hill, strong winds peeled roofing from a house roof.

### Gregg County 1 W Easton 6 E Kilgore

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1630CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
| 01 | 1648CST |  |  | ? | ? | ? | ? | Funnel Cloud       |

At 1 mile west of Easton, strong winds blew several trees down. At 1 mile southwest of Gregg County Airport (6 miles east of Kilgore), a funnel cloud was observed by a pilot.

### Harrison County 6 SW Hallsville

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1700CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|----|---------|--|--|---|---|---|---|--------------------|

Strong winds uprooted numerous trees.

### Marion County 5 N Kelleyville

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1705CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|----|---------|--|--|---|---|---|---|--------------------|

Strong winds caused numerous trees to be blown down.

### Cass County 1 E Avinger

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1717CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew several trees down.

### Panola County 8 WSW Carthage

|    |         |  |  |   |   |   |   |                    |
|----|---------|--|--|---|---|---|---|--------------------|
| 01 | 1720CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew numerous trees down, one of which fell on a barn, damaging its roof.

### Lamar County Pat Mayse Lake Arthur City

|    |         |  |  |   |   |   |   |                          |
|----|---------|--|--|---|---|---|---|--------------------------|
| 02 | 1500CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G52) |
| 02 | 1500CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds (G52) |

At Arthur City, strong winds blew power lines down.

### Red River County Avery 5 NW Avery

|    |         |  |  |   |   |   |   |                          |
|----|---------|--|--|---|---|---|---|--------------------------|
| 02 | 1639CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds (G50) |
| 02 | 1640CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G52) |

At Avery, strong winds blew large limbs from trees.



# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage<br>Property Crops | Character of Storm       |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------------------------|--------------------------|
|  |      |                            |                           |                          | Killed               | Injured |                                       |                          |
| <b>TEXAS, Northern Cont'd</b>  |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Franklin County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| 1 N Winnnsboro   | 02   | 1716CST                    |                           |                          | 0                    | 0       | 2 ?                                   | Thunderstorm Winds       |
| Strong winds blew down a telephone pole.   |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Bowie County</b>  |      |                            |                           |                          |                      |         |                                       |                          |
| 2 S Old Boston   | 02   | 1720CST                    |                           |                          | 0                    | 0       | 3 ?                                   | Thunderstorm Winds       |
| Strong winds blew several trees down.  |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Titus County</b>  |      |                            |                           |                          |                      |         |                                       |                          |
| Mount Pleasant   | 02   | 1730CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds (G52) |
| Mount Pleasant   | 02   | 1735CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.75)              |
| Strong winds blew trees down upon power lines.   |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Morris County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| Naples   | 02   | 1742CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.75)              |
| <b>Cass County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| 5 NE Avinger   | 02   | 1813CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.88)              |
| 3 E Avinger  | 02   | 1840CST                    |                           |                          | 0                    | 0       | 3 ?                                   | Thunderstorm Winds       |
| At 3 miles east of Avinger, strong winds blew several trees down.  |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Fannin County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| Ector  | 02   | 1835CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.75)              |
| Bonham   | 02   | 1850CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Hail (1.75)              |
| Bonham   | 02   | 1900CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.00)              |
| Edhube   | 02   | 1925CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.50)              |
| At Bonham at 1850 CST, large hail caused severe roof damage to at least two homes, allowing for subsequent water damage. |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Marion County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| 3 NE Kelleyville   | 02   | 1842CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.75)              |
| 3 S Smithland  | 02   | 1922CST                    |                           |                          | 0                    | 0       | 3 ?                                   | Thunderstorm Winds       |
| At 3 miles south of Smithland, strong winds blew several trees down.   |      |                            |                           |                          |                      |         |                                       |                          |
| <b>Harrison County</b>   |      |                            |                           |                          |                      |         |                                       |                          |
| 3 E Marshall   | 02   | 1900CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.00)              |
| 8 E Marshall   | 02   | 1905CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.50)              |
| 8 E Marshall   | 02   | 1905CST                    |                           |                          | 0                    | 0       | ? ?                                   | Thunderstorm Winds (G50) |
| 3 W Scottsville  | 02   | 1920CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.50)              |
| 3 W Scottsville  | 02   | 1920CST                    |                           |                          | 0                    | 0       | ? ?                                   | Thunderstorm Winds (G50) |
| <b>Grayson County</b>  |      |                            |                           |                          |                      |         |                                       |                          |
| Pottsboro  | 02   | 2113CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.75)              |
| Pottsboro  | 02   | 2113CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |
| Denison  | 02   | 2120CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.75)              |
| 3 NW Denison   | 02   | 2133CST                    |                           |                          | 0                    | 0       | 5 ?                                   | Thunderstorm Winds       |
| Denison  | 02   | 2133CST                    |                           |                          | 0                    | 0       | 6 ?                                   | Thunderstorm Winds       |
| 3 N Denison  | 02   | 2135CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (0.88)              |
| Denison  | 02   | 2140CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Lightning                |
| Denison  | 02   | 2145CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |
| 3 SW Denison   | 02   | 2145CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |
| Gunter   | 02   | 2145CST                    |                           |                          | 0                    | 0       | ? ?                                   | Hail (1.75)              |
| Gunter   | 02   | 2145CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |
| Sherman  | 02   | 2145CST-                   |                           |                          |                      |         |                                       |                          |
|  |      | 2215CST                    |                           |                          | 0                    | 0       | ? ?                                   | Flash Flood              |
| 3 N Sherman  | 02   | 2150CST                    |                           |                          | 0                    | 0       | 3 ?                                   | Thunderstorm Winds       |
| Sherman  | 02   | 2155CST                    |                           |                          | 0                    | 0       | 5 ?                                   | Thunderstorm Winds (G62) |
| Sherman  | 02   | 2205CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |
| 2 E Sherman  | 02   | 2210CST                    |                           |                          | 0                    | 0       | 3 ?                                   | Thunderstorm Winds       |
| Van Alstyne  | 02   | 2210CST                    |                           |                          | 0                    | 0       | 4 ?                                   | Thunderstorm Winds       |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## TEXAS, Northern Cont'd

At Pottsboro, strong winds lifted a large portion of the roof from the high school gymnasium, and the roof of a boathouse was blown away. Trees, television antennas, and signs were also blown down. At 3 miles northwest of Denison, strong winds demolished a boat storage facility containing about 150 boats, damaging several of them. A house was unroofed and one of its outside walls was pierced by a wind-blown 2 by 6 piece of lumber. A car was blown into a garage, and trees were blown down. A mobile home was blown over, and several houses had shingles blown away. On the north side of Denison strong winds overturned a parked tractor-semitrailer, and lifted a portion of a roof. In the downtown area of Denison, strong winds blew out north-facing plate glass windows from 27 businesses, and a drug store which was a converted building covering two-thirds of a city block, had a large portion of its roof and aluminum facade blown away, leading to extensive subsequent rainwater damage. Several signs and roofs were also damaged. Elsewhere in Denison, strong winds uprooted numerous trees, one of which fell into the living room of a house. Falling trees also brought down many power lines, some of which blocked roads. At 2145 CST, strong winds toppled a television transmitter tower and a microwave tower. Also in Denison, lightning struck a tree, dropping a branch, causing a gas line to rupture, setting a house fire which was brought quickly under control. At 3 miles southwest of Denison, strong winds uprooted several trees and lifted the roofs from houses. At Gunter, strong winds blew the roof from a mobile home, which severed power lines as it was carried away. At 3 miles north of Sherman, strong winds snapped trees and blew a carport away. At Sherman at 2155 CST, thunderstorm inflow winds lifted the entire metal roof from a 40- by 80-foot warehouse, and blew away a car wash bay. Many large trees and power lines were blown down. At 2205 CST in Sherman, thunderstorm outflow winds blew windows from businesses, and downed large trees and power lines. Heavy rains in Sherman resulted in street flooding. At 2 miles east of Sherman, strong winds blew trees down. At Van Alstyne, strong winds demolished a greenhouse and a barn, and peeled away part of an elementary school gymnasium roof. Trees measuring 2 to 4 feet in diameter were blown down, some of which fell upon houses.

### Cooke County

|                   |    |         |  |  |   |   |   |   |                          |
|-------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Lindsay           | 02 | 2200CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| Gainesville       | 02 | 2200CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| 10 NW Valley View | 02 | 2210CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds (G53) |

At Lindsay, strong winds unroofed the City Hall building, and blew trees and power lines down. At Gainesville, thunderstorm winds downed trees and power lines. At 10 miles northwest of Valley View, strong winds blew down trees and power lines.

### Fannin County

|              |    |         |  |  |   |   |   |   |                          |
|--------------|----|---------|--|--|---|---|---|---|--------------------------|
| Trenton      | 02 | 2230CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| 10 SW Bonham | 02 | 2245CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G52) |

At Trenton, strong winds ripped a carport from a house and carried it across the street, where it impacted with a parked pickup truck. A business had a section of its roof blown off, and large tree limbs were brought down.

### Collin County

|               |    |         |  |  |   |   |   |   |                          |
|---------------|----|---------|--|--|---|---|---|---|--------------------------|
| 4 E Celina    | 02 | 2221CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds       |
| Celina        | 02 | 2240CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| 12 N McKinney | 02 | 2245CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G61) |
| 1 SW Celina   | 02 | 2250CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| 2 S Weston    | 02 | 2300CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| Rhea Mills    | 02 | 2305CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |
| McKinney      | 02 | 2310CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds       |
| Farmersville  | 02 | 2315CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| Lucas         | 02 | 2320CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| McKinney      | 02 | 2350CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds       |

At Cottage Hill (4 miles east of Celina), strong winds lifted a 70-foot-long porch and carport cover from a house. At Celina, strong winds uprooted a tree, and blew large branches down from several others, some of which fell upon parked vehicles, including a vintage truck being restored. At 1 mile southwest of Celina, strong winds demolished a barn and two outbuildings, and blew roof sections from three others. At 2 miles south of Weston, strong winds blew trees down, one of which fell upon a house. Six houses had portions of their roofs blown away, and windows were blown in. A 65-foot-tall tree was uprooted, falling onto a house under construction. At Rhea Mills, thunderstorm winds lifted the roof from a house, and peeled roofing from a church building. At McKinney at 2310 CST, strong winds blew large tree limbs down, and blew fences over. At

# Storm Data and Unusual Weather Phenomena

September 1992

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |  | Estimated<br>Damage<br>Property Crops |  | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|

### TEXAS, Northern Cont'd

McKinney at 2350 CST, strong winds overturned a privately-owned Cessna airplane.

|                                |    |         |  |  |   |   |   |   |                    |
|--------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Denton County</b><br>Sanger | 02 | 2250CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|--------------------------------|----|---------|--|--|---|---|---|---|--------------------|

A mobile home was overturned by strong winds.

|                                 |    |         |  |  |   |   |   |   |             |
|---------------------------------|----|---------|--|--|---|---|---|---|-------------|
| <b>Montague County</b><br>Bowie | 02 | 2300CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| St. Jo                          | 02 | 2305CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
| Montague                        | 02 | 2325CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |

|                                   |    |         |  |  |   |   |   |   |                    |
|-----------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Hunt County</b><br>Caddo Mills | 02 | 2320CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|-----------------------------------|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew power lines down.

|                                    |    |         |  |  |   |   |   |   |                    |
|------------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Dallas County</b><br>3 E Sachse | 02 | 2329CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|------------------------------------|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew the porch off of a home, and brought large tree limbs down.

|                                    |    |         |  |  |   |   |   |   |                    |
|------------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Rockwall County</b><br>Rockwall | 02 | 2350CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
|------------------------------------|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew over a 28-foot windmill, and moved a 24-foot horse trailer a distance of 40 yards. Trees and power lines were downed, and signs were blown over.

|                                       |    |         |  |  |   |   |   |   |                    |
|---------------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Bowie County</b><br>6 N New Boston | 03 | 0000CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
|---------------------------------------|----|---------|--|--|---|---|---|---|--------------------|

Strong winds blew a few trees down.

|                                  |    |         |  |  |   |   |   |   |                    |
|----------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Kaufman County</b><br>Terrell | 03 | 0010CST |  |  | 0 | 0 | 4 | ? | Lightning          |
| Terrell                          | 03 | 0040CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |

Lightning struck transformers, resulting in power outages. Strong winds blew trees down, some of which fell upon power lines.

|                                      |    |         |  |  |   |   |   |   |             |
|--------------------------------------|----|---------|--|--|---|---|---|---|-------------|
| <b>Collin County</b><br>Farmersville | 03 | 0015CST |  |  | 0 | 0 | ? | ? | Hail (0.75) |
|--------------------------------------|----|---------|--|--|---|---|---|---|-------------|

|  |    |         |  |  |   |   |   |   |                          |
|--|----|---------|--|--|---|---|---|---|--------------------------|
| <b>Van Zandt County</b><br>Wills Point | 03 | 0030CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds (G50) |
|--|----|---------|--|--|---|---|---|---|--------------------------|

Strong winds blew a tree down into a power line.

|  |    |                     |  |  |   |   |   |   |             |
|--|----|---------------------|--|--|---|---|---|---|-------------|
| <b>Cherokee County</b><br>Jacksonville | 03 | 0345CST-<br>0500CST |  |  | 0 | 0 | ? | ? | Flash Flood |
|--|----|---------------------|--|--|---|---|---|---|-------------|

Heavy rains resulted in street flooding.

|                                       |    |         |  |  |   |   |   |   |                    |
|---------------------------------------|----|---------|--|--|---|---|---|---|--------------------|
| <b>Nacogdoches County</b><br>Douglass | 03 | 0410CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
| 2 N Nacogdoches                       | 03 | 0415CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |

At Douglass, strong winds downed trees and power lines. At 2 miles north of Nacogdoches, strong winds blew down large tree limbs and a television antenna.

|                                  |    |         |  |  |   |   |   |   |             |
|----------------------------------|----|---------|--|--|---|---|---|---|-------------|
| <b>Bell County</b><br>4 E Salado | 03 | 1740CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
|----------------------------------|----|---------|--|--|---|---|---|---|-------------|

|                                 |    |         |  |  |   |   |   |   |             |
|---------------------------------|----|---------|--|--|---|---|---|---|-------------|
| <b>Bosque County</b><br>Clifton | 03 | 1805CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
| 1 W Clifton                     | 03 | 1815CST |  |  | 0 | 0 | ? | ? | Hail (1.75) |

|                                   |    |         |  |  |   |   |   |   |             |
|-----------------------------------|----|---------|--|--|---|---|---|---|-------------|
| <b>Bell County</b><br>1 E Killeen | 03 | 1930CST |  |  | 0 | 0 | ? | ? | Hail (1.00) |
|-----------------------------------|----|---------|--|--|---|---|---|---|-------------|

|                                |    |         |  |  |   |   |   |   |           |
|--------------------------------|----|---------|--|--|---|---|---|---|-----------|
| <b>Denton County</b><br>Denton | 10 | 1200CST |  |  | 0 | 1 | 3 | ? | Lightning |
| 5 W Lewisville                 | 10 | 1205CST |  |  | 0 | 0 | 5 | ? | Lightning |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|---|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
|   |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>TEXAS, Northern Cont'd</b>   |      |                            |                           |                          |                      |         |                     |       |                          |
| At Denton, a man suffered minor injuries when lightning struck an automatic teller machine that he was using. At Flower Mound (5 miles west of Lewisville), lightning struck a house, setting it afire.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Erath County<br/>Stephenville</b>  | 10   | 1400CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
| Strong winds blew awnings and signs from downtown store fronts.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Hood County<br/>Granbury<br/>Countywide</b>  | 10   | 1445CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
|   | 10   | 1445CST-<br>1630CST        |                           |                          | 0                    | 0       | ?                   | ?     | Flash Flood              |
| Thunderstorm winds uprooted large trees, snapped off tree limbs, and toppled signs and television antennas. A fireworks stand was also blown over. Heavy rains resulted in street flooding in Granbury, and the flooding of several roadways near Granbury.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Tarrant County</b>   | 10   | 1600CST-<br>1645CST        |                           |                          | 0                    | 0       | ?                   | ?     | Flash Flood              |
| Heavy rains resulted in street flooding in the downtown area of Fort Worth, and just south of Fort Worth.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Bell County<br/>Fort Hood<br/>AAF</b>  | 10   | 1650CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
| Strong winds blew a large section of the tin roof from a commissary building onto four cars parked nearby.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Haskell County<br/>Rochester</b>   | 20   | 1720CST                    |                           |                          | 0                    | 2       | 5                   | ?     | Thunderstorm Winds (G56) |
| Thunderstorm winds demolished two warehouses and a barn. A porch was blown away from a house, and a carport was lifted from another. Strong winds peeled away roofing from tin sheds and outbuildings, and also downed power poles. Two minor injuries resulted from cuts made by wind-blown debris.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Wichita County<br/>Wichita Falls</b>   | 20   | 1820CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds (G61) |
| Winds to around 70 mph ripped a door off a hanger at the Wichita Falls Airport.   |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Young County<br/>2 NE Olney<br/>Loving</b>   | 20   | 1830CST                    |                           |                          | 0                    | 0       | 3                   | ?     | Thunderstorm Winds       |
|   | 20   | 1915CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Hail (0.75)              |
| At 2 miles northeast of Olney, strong winds lifted sections of roof from several farm buildings, and blew large tree limbs down.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Clay County<br/>Jolly to Dean</b>  | 20   | 1857CST                    |                           |                          | 0                    | 0       | 4                   | ?     | Thunderstorm Winds       |
| Winds estimated between 60 and 80 mph moved through the area from Jolly and Dean, causing damage to several barns and homes.  |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Montague County<br/>Nocona</b>   | 20   | 1900CST                    |                           |                          | 0                    | 0       | 5                   | ?     | Thunderstorm Winds       |
| Strong winds lifted roofs from several businesses. One section of roof collided with a power pole, shattering the pole, and breaking the 65,000-volt line it supported. Sheds, outbuildings, and porches were demolished. A massive 18- x 20-foot stained glass window was blown into a church balcony. Trees were uprooted and large tree limbs were blown down. |      |                            |                           |                          |                      |         |                     |       |                          |
| <b>Cooke County<br/>4 N Gainesville</b>   | 20   | 1930CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G56) |
| <b>Tarrant County<br/>Lake Worth<br/>Village</b>  | 20   | 2357CST                    |                           |                          | 0                    | 0       | ?                   | ?     | Thunderstorm Winds (G52) |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## TEXAS, Northern Cont'd

|            |    |                     |  |  |     |     |                          |
|------------|----|---------------------|--|--|-----|-----|--------------------------|
| Countywide | 21 | 0000CST-<br>0130CST |  |  | 0 0 | ? ? | Flash Flood              |
| Fort Worth | 21 | 0013CST             |  |  | 0 0 | ? ? | Thunderstorm Winds (G61) |
| Bedford    | 21 | 0030CST             |  |  | 0 0 | 5 ? | Lightning                |

Heavy rains of 1.40 inches in 40 minutes resulted in widespread street flooding over metropolitan Tarrant County. At Bedford, lightning struck three houses in the Mayfair Hills addition, causing fires that destroyed the top floors of two of the homes. The third house suffered the loss of its chimney.

|               |    |         |  |  |     |     |                          |
|---------------|----|---------|--|--|-----|-----|--------------------------|
| Dallas County |    |         |  |  |     |     |                          |
| Dallas        | 21 | 0100CST |  |  | 0 0 | ? ? | Thunderstorm Winds (G55) |
| Falls County  |    |         |  |  |     |     |                          |
| Golinda       | 21 | 1658CST |  |  | 0 0 | ? ? | Hail (1.75)              |
| Bell County   |    |         |  |  |     |     |                          |
| Temple        | 21 | 1710CST |  |  | 0 0 | 4 ? | Thunderstorm Winds       |
| Temple        | 21 | 1720CST |  |  | 0 0 | 3 ? | Lightning                |
| Temple        | 21 | 1730CST |  |  | 0 0 | ? ? | Hail (0.75)              |

Strong winds lifted the roof from a plumbing supply store, causing it to be hurled into a church across the street. Lightning struck two trees, breaking the upper trunk from each.

|              |    |         |  |  |     |     |                    |
|--------------|----|---------|--|--|-----|-----|--------------------|
| Ellis County |    |         |  |  |     |     |                    |
| Ennis        | 21 | 1745CST |  |  | 0 0 | ? ? | Hail (0.88)        |
| 2 SE Ennis   | 21 | 1820CST |  |  | 0 0 | 3 ? | Thunderstorm Winds |
| Ennis        | 21 | 1830CST |  |  | 0 0 | ? ? | Hail (0.88)        |

At 2 miles southeast of Ennis, strong winds blew a barn down, and broke house windows.

|                |    |         |  |  |     |     |                    |
|----------------|----|---------|--|--|-----|-----|--------------------|
| Kaufman County |    |         |  |  |     |     |                    |
| Terrell        | 21 | 1815CST |  |  | 0 0 | ? ? | Hail (1.25)        |
| Terrell        | 21 | 1835CST |  |  | 0 0 | 2 ? | Hail (2.00)        |
|                |    |         |  |  | 0 0 | 3 ? | Thunderstorm Winds |

At 1835 CST, large hail broke taillights from parked vehicles. Strong winds blew part of a construction sign off its mounting, causing it to collide with a pickup truck being driven. Trees were blown down.

|                |    |         |  |  |     |     |                          |
|----------------|----|---------|--|--|-----|-----|--------------------------|
| Navarro County |    |         |  |  |     |     |                          |
| Corsicana      | 21 | 1840CST |  |  | 0 0 | 3 ? | Thunderstorm Winds       |
| Corsicana      | 21 | 1920CST |  |  | 0 0 | ? ? | Thunderstorm Winds (G60) |

At 1840 CST, strong winds overturned a trailer parked at a loading dock. Trees were blown down, some of which fell upon houses.

|              |    |         |  |  |     |     |                    |
|--------------|----|---------|--|--|-----|-----|--------------------|
| Rains County |    |         |  |  |     |     |                    |
| Emory        | 21 | 1912CST |  |  | 0 0 | ? ? | Hail (1.75)        |
| Emory        | 21 | 1912CST |  |  | 0 0 | 5 ? | Thunderstorm Winds |

Strong winds uprooted several trees, and caused large limbs to fall upon houses and vehicles. Windows were broken and fences were damaged. Shingles were stripped from a church roof, a roof was blown from a barn, and a small storage building was displaced four feet.

|              |    |                     |  |  |     |     |                    |
|--------------|----|---------------------|--|--|-----|-----|--------------------|
| Lamar County |    |                     |  |  |     |     |                    |
| Countywide   | 21 | 1910CST-<br>1930CST |  |  | 0 0 | ? ? | Hail (0.75)        |
| Powderly     | 21 | 1920CST             |  |  | 0 0 | 4 ? | Thunderstorm Winds |
| Blossom      | 21 | 1925CST             |  |  | 0 0 | 3 ? | Thunderstorm Winds |

Marble- to dime-sized hail fell in an area extending northwest from Paris to the Red River. At Powderly, strong winds damaged a hangar at the airport, blew a tree down upon a building, and damaged awnings. At Blossom, strong winds peeled roofing from garages and patios, and downed large tree limbs.

|              |    |         |  |  |     |     |                    |
|--------------|----|---------|--|--|-----|-----|--------------------|
| Delta County |    |         |  |  |     |     |                    |
| 2 S Cooper   | 21 | 2010CST |  |  | 0 0 | 3 ? | Thunderstorm Winds |

Strong winds downed power lines.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## TEXAS, Northern Cont'd

|                   |    |         |  |  |   |   |   |   |                          |
|-------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Cass County       |    |         |  |  |   |   |   |   |                          |
| 7 W Douglassville | 21 | 2110CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G56) |
| 2 N Marietta      | 21 | 2110CST |  |  | 0 | 0 | ? | ? | Hail (0.75)              |
| 5 W Linden        | 21 | 2235CST |  |  | 0 | 0 | ? | ? | Hail (0.88)              |
|                   |    |         |  |  | 0 | 0 | ? | ? | Thunderstorm Winds (G56) |

At 7 miles west of Douglassville, strong winds blew a truck off of State Highway 77.

## TEXAS, Southern

|  |    |         |  |  |   |   |   |   |                          |
|--|----|---------|--|--|---|---|---|---|--------------------------|
| Grimes County  |    |         |  |  |   |   |   |   |                          |
| Richard  | 03 | 1330CST |  |  | 0 | 0 | 3 | 3 | Hail (1.00)              |
| The Grimes County Sheriff's Office reported quarter-size hail. Cars dented and car windows broken. Trees reported damaged.   |    |         |  |  |   |   |   |   |                          |
| Montgomery County  |    |         |  |  |   |   |   |   |                          |
| 10 S Dobbins   | 03 | 1325CST |  |  | 0 | 0 | 3 | 3 | Thunderstorm Winds       |
| Montgomery County Sheriff's Department reported trees down on FM 1486 and on Jackson Road 10 miles South of Dobbins.   |    |         |  |  |   |   |   |   |                          |
| Plantersville  | 03 | 1440CST |  |  | 0 | 0 | 4 | 4 | Hail (1.50)              |
| Golf ball-size hail and trees reported blown down. Cars damaged and home windows broken.   |    |         |  |  |   |   |   |   |                          |
| Harris County  |    |         |  |  |   |   |   |   |                          |
| Hockley  | 03 | 1500CST |  |  | 0 | 0 | 3 | 3 | Thunderstorm Winds       |
| Public reports trees broken and several cattle sheds destroyed between Hockley and Waller.   |    |         |  |  |   |   |   |   |                          |
| Waller County  |    |         |  |  |   |   |   |   |                          |
| Hempstead  | 03 | 1515CST |  |  | 0 | 0 | 5 | 5 | Thunderstorm Winds       |
| The Waller County Sheriff's Office reported numerous trees and power lines down, carports blown down and a gas leak. The sheriff's office estimates thunderstorm wind gusts between 60 and 90 mph. |    |         |  |  |   |   |   |   |                          |
| Milam County   |    |         |  |  |   |   |   |   |                          |
| Thorndale  | 03 | 1640CST |  |  | 0 | 0 | 0 | 0 | Hail (1.00)              |
| Quarter-size hail was reported in Thorndale by the sheriff's office and a weather observer.  |    |         |  |  |   |   |   |   |                          |
| Lee County   |    |         |  |  |   |   |   |   |                          |
| Blue   | 03 | 1700CST |  |  | 0 | 0 | 0 | 0 | Hail (1.25)              |
| Half dollar-size hail was reported by a store clerk in Blue.   |    |         |  |  |   |   |   |   |                          |
| Williamson County  |    |         |  |  |   |   |   |   |                          |
| 5 S Thrall   | 03 | 1715CST |  |  | 0 | 0 | 0 | 4 | Hail (1.75)              |
| 5 S Thrall   | 03 | 1715CST |  |  | 0 | 0 | 5 | 0 | Thunderstorm Winds (G52) |
| Golf ball-size hail and wind gusts to 60 mph were reported at Noack. Several small barns in the area were blown down. Significant crop damage was reported in a few fields.                        |    |         |  |  |   |   |   |   |                          |
| Wharton County   |    |         |  |  |   |   |   |   |                          |
| Wharton  | 03 | 1730CST |  |  | 0 | 0 | 4 | 4 | Thunderstorm Winds (G70) |
| Wharton  | 03 | 1730CST |  |  | 0 | 0 | 3 | 0 | Lightning                |
| Wharton County Emergency management reported trees and power lines reported blown down near Wharton. Lightning exploded an oil tank.   |    |         |  |  |   |   |   |   |                          |
| Matagorda County   |    |         |  |  |   |   |   |   |                          |
| Van Vleck  | 03 | 1750CST |  |  | 0 | 0 | 0 | 3 | Thunderstorm Winds       |
| Sheriff reported large tree limbs down east of Van Vleck.  |    |         |  |  |   |   |   |   |                          |
| Bastrop County   |    |         |  |  |   |   |   |   |                          |
| Elgin  | 03 | 1810CST |  |  | 0 | 0 | 0 | 0 | Hail (0.75)              |

# Storm Data and Unusual Weather Phenomena

September 1992

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |  | Estimated<br>Damage<br>Property Crops |  | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|--|---------------------------------------|--|--------------------|

# TEXAS, Southern Cont'd

Dime-size hail was reported in Elgin by the police department.

**Montgomery County**  
10 S Dobbins

|    |         |  |  |  |   |   |   |   |                    |
|----|---------|--|--|--|---|---|---|---|--------------------|
| 03 | 1825CST |  |  |  | 0 | 0 | 3 | 3 | Thunderstorm Winds |
|----|---------|--|--|--|---|---|---|---|--------------------|

The Montgomery County Sheriff's Office reported trees down on Farm-to-Market Road 1486 and on Jackson Road 10 miles South of Dobbins.

**Williamson County**  
Round Rock

|    |         |  |  |  |   |   |   |   |             |
|----|---------|--|--|--|---|---|---|---|-------------|
| 03 | 1840CST |  |  |  | 0 | 0 | 0 | 0 | Hail (0.75) |
|----|---------|--|--|--|---|---|---|---|-------------|

The Round Rock Police Department reported dime-size hail on the east side of town.

**Travis County**  
Pflugerville  
N Austin  
Austin  
Southwestern  
Portion

|    |         |  |  |  |   |   |   |   |                          |
|----|---------|--|--|--|---|---|---|---|--------------------------|
| 03 | 1840CST |  |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds       |
| 03 | 1847CST |  |  |  | ? | ? | ? | ? | Hail (1.00)              |
| 03 | 1907CST |  |  |  | ? | ? | ? | ? | Hail (0.75)              |
| 03 | 1910CST |  |  |  | ? | ? | ? | ? | Thunderstorm Winds (G52) |

Thunderstorm winds tore the roofs off of several mobile homes in Pflugerville. Up to 1.00 inch hail was reported by HAM radio operators in the north part of Austin. Dime-size hail was reported by a Television 24 weather watcher in Lago Vista. Wind gusts to 60 mph were recorded at Bergstorm Air Force Base.

**Hays County**  
San Marcos  
1 E San Marcos

|    |         |  |  |  |   |   |   |   |                          |
|----|---------|--|--|--|---|---|---|---|--------------------------|
| 03 | 1945CST |  |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds (G50) |
| 03 | 2035CST |  |  |  | 0 | 0 | 3 | 3 | Thunderstorm Winds (G50) |

The San Marcos Police Department reported wind gusts to 58 mph in the city. These winds blew down power transformers and lines. The winds blew down an 80-foot pecan tree and damaged a garage on the Hays Caldwell County line.

**Caldwell County**  
Martindale

|    |         |  |  |  |   |   |   |   |                    |
|----|---------|--|--|--|---|---|---|---|--------------------|
| 03 | 2045CST |  |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
|----|---------|--|--|--|---|---|---|---|--------------------|

A mobile home had its roof blown off by thunderstorm winds along Highway 80 in Martindale.

**Gillespie County**  
16 W Fredericks-  
burg

|    |         |  |  |  |   |   |   |   |                    |
|----|---------|--|--|--|---|---|---|---|--------------------|
| 03 | 2100CST |  |  |  | 0 | 0 | 4 | 3 | Thunderstorm Winds |
|----|---------|--|--|--|---|---|---|---|--------------------|

Several large trees were uprooted and a few barns sustained roof damage. A few cattle were also injured.

**Kerr County**  
Kerrville

|    |         |  |  |  |   |   |   |   |                    |
|----|---------|--|--|--|---|---|---|---|--------------------|
| 03 | 2319CST |  |  |  | 0 | 0 | 3 | 3 | Thunderstorm Winds |
|----|---------|--|--|--|---|---|---|---|--------------------|

Several trees in the Kerrville area were damaged by high winds. A few power lines in the city were downed.

**Burnet County**  
1 N Bertram  
1 N Bertram

|    |         |  |  |  |   |   |   |   |                    |
|----|---------|--|--|--|---|---|---|---|--------------------|
| 10 | 1725CST |  |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| 10 | 1725CST |  |  |  | 0 | 0 | 0 | 3 | Lightning          |

Power lines were downed north of Bertram and several fields were set on fire by lightning.

**Atascosa County**  
15 S Jourdanton

|    |         |     |    |  |   |   |   |   |              |
|----|---------|-----|----|--|---|---|---|---|--------------|
| 11 | 1520CST | 0.3 | 30 |  | 0 | 0 | 4 | 0 | Tornado (F1) |
|----|---------|-----|----|--|---|---|---|---|--------------|

A tornado damaged 14 vehicle and a building at the Atascosa Mining Company complex southeast of Christine. Most of the cars had windows shattered and dents from flying debris. Several automobile were blown into each other in the parking lot. All the windows on one side of a building were blown out. a flagpole was wrapped over the top of a building. Power and telephone lines were down in the area. A few workers watched the tornado from the mining pit a mile away.

**Harris County**  
Houston

|    |         |  |  |  |   |   |   |   |           |
|----|---------|--|--|--|---|---|---|---|-----------|
| 11 | 1530CST |  |  |  | 1 | 3 | 0 | 0 | Lightning |
|----|---------|--|--|--|---|---|---|---|-----------|

# Storm Data and Unusual Weather Phenomena

September 1992

| September 1992   |      |                            |                           |                          |                      |         |                     |       |                          |
|--|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------------|
| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm       |
|  |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                          |
| <b>TEXAS, Southern Cont'd</b>  |      |                            |                           |                          |                      |         |                     |       |                          |
| Lightning struck four construction workers. One was critically injured and later died (M390).  |      |                            |                           |                          |                      |         |                     |       |                          |
| Lee County<br>Gidding  | 13   | 1415CST                    |                           |                          | 0                    | 0       | 3                   | 0     | Lightning                |
| Lightning hit a water tank destroying it. The tank was thrown over 360 feet from its pad sight.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Jackson County<br>Vanderbilt   | 16   | 1603CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds       |
| Jackson County emergency management officials reported a roof blown off of a grocery store and power lines down in the Vanderbilt area.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Val Verde County<br>Langtry  | 20   | 1710CST                    |                           |                          | 0                    | 0       | 4                   | 0     | Thunderstorm Winds (G61) |
| 8 NNW Del Rio  | 20   | 1750CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G52) |
| The County Sheriff's Office reported wind gusts to 70 mph in Langtry. Minor roof damage was reported to a home and a service station. A National Park Ranger recorded a wind gust to 60 mph at San Pedro Canyon Estates north northwest of Del Rio.  |      |                            |                           |                          |                      |         |                     |       |                          |
| Burnet County<br>2 SE Buchanan Dam   | 21   | 1530CST                    | 0.3                       | 40                       | 0                    | 0       | 4                   | 3     | Tornado (F1)             |
| A tornado briefly touched down on the north shore of Inks Lake near the Colorado River. A restaurant was heavily damaged, several trees in the area were uprooted. Parts of a mobile home park were also damaged.                                    |      |                            |                           |                          |                      |         |                     |       |                          |
| Williamson County<br>1 W Georgetown  | 21   | 1729CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| HAM radio operators reported dime-size hail at the intersection of Farm-to-Market Road 1431 and Interstate 35.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Travis County<br>NW Austin   | 21   | 1735CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G61) |
| Wind gusts to 70 mph were recorded at television station 24 in the northwest part of Austin.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Williamson County<br>Round Rock  | 21   | 1804CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.50)              |
| Round Rock   | 21   | 1804CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Thunderstorm Winds (G64) |
| Wind gusts to 73 mph were reported in Round Rock along with 1.5 inch hail.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Travis County<br>Austin  | 21   | 1838CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Dime-size hail was reported at Highway 183 and Loop 360 in Austin.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Milam County<br>4 SE Buckholts   | 21   | 1840CST                    | 0.3                       | 40                       | 0                    | 3       | 4                   | 3     | Tornado (F1)             |
| A tornado briefly touched down on Farm-to-Market Road 486 and Highway 190. It took the roof off a local club, several trees were uprooted and a barn was destroyed. The sheriff's office reported a few people injured in a car that a tree fell on. |      |                            |                           |                          |                      |         |                     |       |                          |
| Travis County<br>Austin  | 21   | 1858CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (1.75)              |
| Oak Hill   | 21   | 1918CST                    |                           |                          | 0                    | 0       | 0                   | 0     | Hail (0.75)              |
| Austin City Police reported golf ball-size hail at the intersection of interstate 35 and 51st Street. HAM radio operators reported dime-size hail in Oak Hill.   |      |                            |                           |                          |                      |         |                     |       |                          |
| Burleson County<br>Caldwell  | 21   | 1930CST                    |                           |                          | 0                    | 0       | 5                   | 3     | Thunderstorm Winds       |
| The County Sheriff's Office reported large cedar trees down, several windows broken out of downtown stores. Roof damage was reported to several buildings and power were lines down in   |      |                            |                           |                          |                      |         |                     |       |                          |



# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|---|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
| <b>TEXAS, Southern Cont'd</b>   |      |                            |                           |                          |  |                                       |                    |
| Caldwell.   |      |                            |                           |                          |  |                                       |                    |
| Bastrop County<br>6 SE Bastrop  | 22   | 0015CST                    |                           |                          | 0 0                                    | 3 3                                   | Thunderstorm Winds |
| Emergency management officials reported trees and power lines down along Highway 71 southeast of Bastrop.                                     |      |                            |                           |                          |  |                                       |                    |
| Colorado County<br>Rock Island  | 22   | 0255CST                    |                           |                          | 0 0                                    | 0 3                                   | Thunderstorm Winds |
| The sheriff's office reported trees blown down in Rock Island.  |      |                            |                           |                          |  |                                       |                    |
| Wharton County<br>Wharton   | 22   | 0315CST                    |                           |                          | 0 0                                    | 3 3                                   | Thunderstorm Winds |
| The Wharton County Sheriff's Office reported limbs and signs blown down in Wharton.   |      |                            |                           |                          |  |                                       |                    |
| Zapata County<br>8 NW Guerra  | 22   | 1320CST                    |                           |                          | 0 0                                    | 0 2                                   | Thunderstorm Winds |
| Jim Hogg County<br>6 N Guerra   | 22   | 1330CST                    |                           |                          | 0 0                                    | 0 2                                   | Thunderstorm Winds |
| Several mesquite trees were damaged along the Zapata, Jim Hogg County line.   |      |                            |                           |                          |  |                                       |                    |
| Kleberg and Central<br>Counties   | 22   | 2227CST                    |                           |                          | 0 0                                    | 3 0                                   | Flash Flood        |
| The sheriff's office reported several roads closed due to flooding. The Kingsville Navel Air Station reported 3.50 inches of rain.            |      |                            |                           |                          |  |                                       |                    |
| <b>TEXAS, Western</b>   |      |                            |                           |                          |  |                                       |                    |
| Crane County<br>Crane   | 01   | 0000CST-<br>0034CST        |                           |                          | 0 0                                    | 3 0                                   | Flash Flood        |
| Flash flooding continued in Crane from late the previous evening. The flooding was reported by the Chief of Police.                           |      |                            |                           |                          |  |                                       |                    |
| Lubbock County<br>4 S Lubbock   | 01   | 0320CST                    |                           |                          | 0 0                                    | 4 0                                   | Lightning          |
| Lightning from an isolated thunderstorm struck and damaged a house in south-central Lubbock County.   |      |                            |                           |                          |  |                                       |                    |
| Gaines County<br>Seminole   | 01   | 0545CST-<br>0630CST        |                           |                          | 0 0                                    | 2 0                                   | Flash Flood        |
| The Seminole Police Department reported that U.S. Highway 385 was closed on the north side of Seminole because of flash flooding.             |      |                            |                           |                          |  |                                       |                    |
| Gaines County<br>Seagraves  | 01   | 1805CST                    |                           |                          | 0 0                                    | 1 3                                   | Hail (2.50)        |
| Up to tennis ball-size hail fell in and east of Seagraves, according to the Seagraves Police Department. Minor damage resulted from the hail. |      |                            |                           |                          |  |                                       |                    |
| Ector County<br>Goldsmith   | 01   | 1940CST                    |                           |                          | 0 0                                    | 0 1                                   | Hail (1.25)        |
| Goldsmith   | 01   | 1949CST                    |                           |                          | 0 0                                    | 0 2                                   | Hail (1.25)        |
| SKYWARN spotters reported half-dollar-size hail near Goldsmith. Only minor damage resulted.   |      |                            |                           |                          |  |                                       |                    |
| Midland County<br>10 W Midland  | 01   | 2019CST                    |                           |                          | 0 0                                    | 0 2                                   | Hail (1.75)        |
| A SKYWARN spotter observed golf ball-size hail in extreme northwestern Midland County.  |      |                            |                           |                          |  |                                       |                    |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location   | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm       |
|--|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------------|
| <b>TEXAS, Western Cont'd</b>   |      |                            |                           |                          |  |                                       |                          |
| <b>Lubbock County</b><br>4 NW Slaton   | 01   | 2218CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.75)              |
| The Lubbock County Sheriff's Office reported golf ball-size hail near the Posey community. No damage was observed.   |      |                            |                           |                          |  |                                       |                          |
| <b>Tom Green County</b><br>3 E San Angelo  | 02   | 1655CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.00)              |
| 3 E San Angelo   | 02   | 1655CST                    |                           |                          | 0 0                                    | 4 0                                   | Thunderstorm Winds (G52) |
| 16 SE San Angelo   | 02   | 1735CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.00)              |
| Amateur radio spotters reported quarter-size hail and downburst winds to 60 mph east of San Angelo. Spotters also reported quarter-size hail in southeastern Tom Green County. The downburst damaged cotton equipment in Wall, while no damage resulted from the hail. |      |                            |                           |                          |  |                                       |                          |
| <b>Ector County</b><br>W Odessa  | 03   | 1735CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.75)              |
| W Odessa   | 03   | 1801CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.25)              |
| Half-dollar- to golf ball-size hail was reported by the public and the West Odessa Volunteer Fire Department on the west side of Odessa. No damage resulted.   |      |                            |                           |                          |  |                                       |                          |
| <b>Pecos County</b><br>Fort Stockton   | 05   | 1730CST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds       |
| Fort Stockton  | 05   | 1730CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)              |
| The Fort Stockton Police Department reported downed power lines and dime-size hail in Fort Stockton.   |      |                            |                           |                          |  |                                       |                          |
| <b>Martin County</b><br>2 NE Tarzan  | 05   | 1855CST                    |                           |                          | 0 0                                    | 0 3                                   | Hail (1.75)              |
| The public reported golf ball-size hail northeast of Tarzan. Minor crop damage resulted.   |      |                            |                           |                          |  |                                       |                          |
| <b>Martin County</b><br>1 W Lenorah  | 05   | 1933CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (1.75)              |
| Golf ball-size hail fell just west of Lenorah, according to the Martin County Sheriff's Office. No damage was reported.  |      |                            |                           |                          |  |                                       |                          |
| <b>Ward County</b><br>Grandfalls   | 06   | 1733CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)              |
| A cooperative observer reported dime-size hail in Grandfalls.  |      |                            |                           |                          |  |                                       |                          |
| <b>Dawson County</b><br>3 N Patricia   | 06   | 1754CST                    |                           |                          | 0 0                                    | 0 3                                   | Hail (1.75)              |
| 12 SW Lamesa   | 06   | 1815CST                    | 0.2                       | 15                       | 0 0                                    | 0 2                                   | Tornado (F0)             |
| The Dawson County Sheriff's Office reported golf ball-size hail north of Patricia. The public reported a small tornado in southwestern Dawson County. Minor crop damage resulted from the hail and the tornado.  |      |                            |                           |                          |  |                                       |                          |
| <b>Midland County</b><br>8 ENE Midland   | 10   | 1532CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)              |
| 13 SW Midland  | 10   | 1544CST                    |                           |                          | 0 0                                    | 3 0                                   | Thunderstorm Winds       |
| The public observed dime-size hail in northeastern Midland County. In the southwestern part of the county, downburst winds unroofed a storage building.  |      |                            |                           |                          |  |                                       |                          |
| <b>Ector County</b><br>5 S Goldsmith   | 10   | 1707CST                    |                           |                          | 0 0                                    | 0 0                                   | Hail (0.75)              |
| W Odessa   | 10   | 1710CST                    |                           |                          | 0 0                                    | 2 0                                   | Hail (1.75)              |
| The Goldsmith Fire Department reported dime-size hail south of Goldsmith. No damage resulted. Golf ball-size hail was reported on the west side of Odessa. Minor damage to cars was noted.   |      |                            |                           |                          |  |                                       |                          |
| <b>Reeves County</b><br>Balmorhea  | 10   | 1831CST                    |                           |                          | 0 0                                    | 5 0                                   | Thunderstorm Winds       |
| Pecos  | 10   | 1842CST                    |                           |                          | 0 0                                    | 4 0                                   | Thunderstorm Winds       |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property Crops      |                    |

## TEXAS, Western Cont'd

A strong downburst destroyed one building and damaged several homes in Balmorhea. Another strong downburst damaged a stadium pressbox and damaged the roofs of two businesses in Pecos. The downbursts were reported by the Texas Department of Public Safety.

### Presidio County Marfa

10 2254CST 0 0 0 0 Thunderstorm Winds (G53)

Downburst winds to 62 mph were reported at Marfa Municipal Airport. No damage resulted.

## UTAH

### Salt Lake County Sandy Utah County Alpine

04 0700MST 0 0 3 0 Lightning

04 0700MST 0 3 2 0 Lightning

An upper level low, an associated cold front, and a moist air mass combined to cause thunderstorms over northwestern Utah. These thunderstorms produced small hail, heavy rain, and frequent lightning. Hail covered the ground in a few areas. Approximately at the same time, lightning struck two separate structures. One bolt struck the chimney of a house in Sandy. The electric current followed an electrical wire and a television cable into the house. Damage to the house was about \$1,500. Most of the damage entailed burned out electrical wire with the rest of the damage going to the chimney. In Alpine, the lightning struck a candy manufacturing plant. The lightning apparently hit a metal vent on the roof that sent a current down the building into a metal table. Three women inside the building received minor injuries. One woman was holding onto the metal table, and another was leaning against it when the lightning struck. The third woman was upstairs near where the lightning struck. One woman was in the hospital for a short time. Only minor damage was done to the building.

### Wasatch County Midway

12 1600MST 0 1 0 0 Lightning

Widely scattered thunderstorms developed over the northwest portion of the state. Lightning struck the ground near a group of four men playing golf. One man, 42-years-old, was injured. The man received slight burns, and remained conscious the entire time. He was listed in good condition at a local hospital, and was expected to recover from his injuries.

### Utah County Orem

12 1620MST 0 0 2 0 Lightning

While a male was playing nintendo during a thunderstorm, lightning struck a 30-foot Cottonwood tree in his yard. The lightning arced to a water meter on the side of the home, and traveled through pipes into the living room. The electrical charge started a small fire in the carpet. That was the only damage caused, and the person was not injured by the incident.

### Tooele County Lakeside

23 1650MST 0 0 0 0 Thunderstorm Winds (G75)

### Juab County 20 S Callao

23 1700MST 2 0 0 0 Lightning

### Tooele County Grantsville

23 1725MST 0 0 0 0 Thunderstorm Winds (G58)

### Davis County Syracuse

23 1730MST 2.0 25 0 0 3 0 Tornado (F1)

### Tooele County Wendover

23 1734MST 0 0 0 0 Thunderstorm Winds (G58)

### Davis County Bountiful

23 1745MST 0 0 2 0 Thunderstorm Winds (G70)

### Tooele County Wendover

23 1754MST 0 0 0 0 Thunderstorm Winds (G58)

### Salt Lake County

Salt Lake City 23 1756MST 0 0 3 0 Thunderstorm Winds (G61)

Salt Lake City 23 1756MST 0 0 3 0 Thunderstorm Winds (G74)

Salt Lake City 23 1800MST 0 0 2 0 Thunderstorm Winds (G69)

Salt Lake City 23 1805MST 0 0 2 0 Thunderstorm Winds (G59)

Salt Lake City 23 1810MST 0 0 2 0 Thunderstorm Winds (G70)

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|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## UTAH Cont'd

|               |    |         |  |  |   |   |   |   |                          |
|---------------|----|---------|--|--|---|---|---|---|--------------------------|
| Tooele County |    |         |  |  |   |   |   |   |                          |
| Wendover      | 23 | 1814MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G76) |
| 1 E Wendover  | 23 | 1830MST |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds (G70) |

A squall line formed in a moist southwest flow ahead of an approaching cold front. This line formed in eastern Nevada on the afternoon of the 23rd, and then moved into northwestern Utah later that afternoon and early evening. The main affect from the winds in Tooele County was reduced visibilities in blowing dust. However, a camper pulled by a pickup was blown over one mile east of Wendover.

Lightning from these storms struck two men in a remote area of extreme western Utah. These two men were geologists conducting research in a mountainous region. The last these two individuals was in contact with the outside world was on the 21st. Because this was the first thunderstorm activity in 1.5 weeks, and they were supposed to be at a nearby town on the 23rd, it can be reasonably assumed that it was the 23rd when the two men were killed. The time of day this occurred also has been assumed, and was based on surrounding observations during the time the squall line went through that area. (M370) (M420)

In Salt Lake County, the strong winds caused numerous power outages and widespread broken tree limbs. In the suburb of Rose Park, a tree fell on a car. In downtown Salt Lake City, a billboard was blown down.

The event of the day was a tornado in Syracuse. The tornado was witnessed by several people. It was on the ground for about ten minutes. On one house, it tore a 8- by 4-foot section from a roof, twisted a porch frame, and broke the picture window. Shingles were torn off of houses surrounding the house that suffered the main damage. Flying debris broke windows in three vehicles. Two trees were also uprooted. Precipitation amounts were light.

|                    |    |                     |  |  |   |   |   |   |            |
|--------------------|----|---------------------|--|--|---|---|---|---|------------|
| UTZ001-002-003,010 | 24 | 1545MST-<br>2000MST |  |  | 0 | 0 | 4 | 0 | High Winds |
|--------------------|----|---------------------|--|--|---|---|---|---|------------|

The cold front mentioned in the previous narrative moved into northwestern Utah late on the afternoon of the 24th. Behind the front, numerous gusts of 50 mph or greater were reported through the evening. The highest gusts were in the 58- to 62-mph range. These winds caused numerous power outages, and visibilities were reduced in blowing dust to nearly zero in many areas. Major power structures were knocked down in Lehi in Utah County.

## VERMONT

|                   |    |         |  |  |   |   |   |   |                    |
|-------------------|----|---------|--|--|---|---|---|---|--------------------|
| Grand Isle County |    |         |  |  |   |   |   |   |                    |
| North Hero        | 10 | 1415EST |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds |
| South Alburg      | 10 | 1427EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Isle La Motte     | 10 | 1432EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Franklin County   |    |         |  |  |   |   |   |   |                    |
| St. Albans        | 10 | 1445EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Swanton           | 10 | 1520EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Sheldon           | 10 | 1520EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Fairfax           | 10 | 1520EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Highgate          | 10 | 1525EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Franklin          | 10 | 1541EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Franklin          | 10 | 1541EST |  |  | 0 | 0 | 4 | 0 | Lightning          |
| Chittenden County |    |         |  |  |   |   |   |   |                    |
| Burlington        | 10 | 1548EST |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds |
| Shelburne         | 10 | 1548EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Colchester        | 10 | 1548EST |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds |
| Charlotte         | 10 | 1550EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Rutland County    |    |         |  |  |   |   |   |   |                    |
| Brandon           | 10 | 1555EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Chittenden County |    |         |  |  |   |   |   |   |                    |
| Hinesburg         | 10 | 1558EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |
| Addison County    |    |         |  |  |   |   |   |   |                    |
| Middlebury        | 10 | 1615EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| Shoreham          | 10 | 1615EST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds |
| New Haven         | 10 | 1643EST |  |  | 0 | 0 | 3 | 0 | Thunderstorm Winds |



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|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## VERMONT Cont'd

|                  |    |         |  |  |     |     |                    |
|------------------|----|---------|--|--|-----|-----|--------------------|
| Orleans County   |    |         |  |  |     |     |                    |
| Albany           | 10 | 1652EST |  |  | 0 0 | 4 0 | Thunderstorm Winds |
| Orange County    |    |         |  |  |     |     |                    |
| Turnbridge       | 10 | 1721EST |  |  | 0 0 | 3 0 | Thunderstorm Winds |
| Randolph         | 10 | 1721EST |  |  | 0 0 | 3 0 | Thunderstorm Winds |
| Bradford         | 10 | 1748EST |  |  | 0 0 | 4 0 | Thunderstorm Winds |
| Wells River      | 10 | 1800EST |  |  | 0 0 | 3 0 | Thunderstorm Winds |
| Caledonia County |    |         |  |  |     |     |                    |
| Ryegate          | 10 | 1800EST |  |  | 0 0 | 3 0 | Thunderstorm Winds |

Severe thunderstorms moved across much of Vermont ahead of a strong cold front on the afternoon and evening of September 10th. Hardest hit was the Albany area where a 40-foot by 24-foot garage was lifted off its foundation and thrown 60 feet, a barn had a 40-foot section of its roof removed and a pick-up truck was damaged. Other areas hard hit were parts of Franklin County where thunderstorm winds downed trees and powerlines and removed the roof of a mobile home and pushed it off its foundation in Highgate. In Franklin eight cows were killed by electrocution after lightning struck the tree under which they were standing.

## VTZ003-005 Northeast and Southern Vermont

|    |    |  |  |   |   |   |   |       |
|----|----|--|--|---|---|---|---|-------|
| 13 | AM |  |  | 0 | 0 | 0 | ? | Frost |
|----|----|--|--|---|---|---|---|-------|

Scattered frost was reported on the morning of the 13th across northeastern and southern Vermont. Temperatures dipped to at or below freezing in places with 32 degrees at Dorset, 31 degrees at West Dover, Island Pond and West Barnet, 29 degrees at East Haven and West Burke, and 28 degrees at Sunderland.

## Statewide Statewide

|    |    |  |  |   |   |   |   |       |
|----|----|--|--|---|---|---|---|-------|
| 24 | AM |  |  | 0 | 0 | 0 | ? | Frost |
| 25 | AM |  |  | 0 | 0 | 0 | ? | Frost |

A large dome of high pressure covered Vermont on the 24th and 25th allowing for ideal radiational cooling in the early morning hours of both days resulting in widespread frost. Temperatures on the 24th dipped below freezing at many locations with 31 degrees at Burlington, 29 degrees at Rutland and Saint Johnsbury, 27 degrees at Montpelier and Newport, and 19 degrees at Wallingford. On the 25th temperatures dropped to similar levels with 31 degrees at Saint Johnsbury, 29 degrees at Montpelier and Newport, and 20 degrees at Jay Peak.

## VIRGINIA

|  |    |                     |  |  |   |   |   |   |              |
|--|----|---------------------|--|--|---|---|---|---|--------------|
| Hanover County   | 02 | 1811EST             |  |  | 0 | 0 | 0 | 0 | Flash Flood  |
| Thunderstorms produced very heavy rain which led to flash flooding. Numerous roads were closed due to the flooding in the western part of the county.  |    |                     |  |  |   |   |   |   |              |
| Virginia Beach   | 04 | 1400EST             |  |  | 0 | 0 | 0 | 0 | Funnel Cloud |
| A funnel cloud was sighted over the City near the Princess Anne park area.   |    |                     |  |  |   |   |   |   |              |
| Norfolk  | 04 | 1545EST             |  |  | 0 | 0 | 0 | 0 | Funnel Cloud |
| A funnel cloud was sighted in the western part of the City.  |    |                     |  |  |   |   |   |   |              |
| Warren County  | 06 | 0300EST             |  |  | 0 | 0 | 2 | 0 | Flash Flood  |
| Roads and low bridges had water flowing over them after two to five inches of rain fell. The southern part of the county had the most flooding.  |    |                     |  |  |   |   |   |   |              |
| Frederick County<br>Winchester   | 06 | 0300EST-<br>0500EST |  |  | 0 | 0 | 0 | 0 | Flash Flood  |
| Thunderstorms moving over this areas produced very heavy rain that caused flash flooding. Roads in several rural areas as well as streets in the city of Winchester were closed due to flooding. |    |                     |  |  |   |   |   |   |              |
| Shenandoah County<br>Strasbury   | 06 | 0300EST             |  |  | 0 | 0 | 0 | 0 | Flash Flood  |

Approximately six inches of rain fell from 9 PM EDT Saturday night into the early morning hours Sunday morning causing flash flooding. Nearly two feet of water was flowing down Virginia Street at 4 AM EDT, and flooded several basements.

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|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## VIRGINIA Cont'd

|                   |    |          |  |  |   |   |   |   |                    |
|-------------------|----|----------|--|--|---|---|---|---|--------------------|
| Rockingham County | 10 | 1758EST- |  |  |   |   |   |   |                    |
|                   |    | 1815EST  |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds |
| Page County       | 10 | 1800EST  |  |  | 0 | 0 | 0 | 0 | Flash Flood        |
|                   | 10 | 1847EST  |  |  | 0 | 0 | 2 | 0 | Thunderstorm Winds |
|                   | 10 | 1850EST  |  |  | 0 | 0 | 0 | 0 | Flash Flood        |

Thunderstorms produced damaging winds in these two counties as they moved through. Trees were knocked down in various locations. Power lines were also knocked down about six miles southwest of Harrisonburg, near Broadway, in the towns of Shenandoah and Luray. These thunderstorms also produced very heavy rain that caused flash flooding in several rural areas closing roads for a short period of time.

|  |           |  |  |  |   |   |   |   |                            |
|--|-----------|--|--|--|---|---|---|---|----------------------------|
| VAZ001>004<br>Southeastern<br>Virginia | 24-<br>26 |  |  |  | 0 | 0 | 4 | 0 | Tropical Storm<br>Danielle |
|--|-----------|--|--|--|---|---|---|---|----------------------------|

Tropical Storm Danielle was centered about 100 miles southeast of Cape Hatteras North Carolina late Thursday afternoon, while strong high pressure was over New England. The circulation around both of these systems caused strong winds and heavy surf in the Delaware, Maryland and Virginia coastal areas ahead of Danielle as the storm moved North-Northwest. Danielle's center reached the Wallops Island, Virginia area around 6 PM Friday the 25th, and passed about 25 miles east of Baltimore, MD around 2 AM Saturday morning the 26th. It continued to weaken and move north as it crossed Delaware and moved into eastern Pennsylvania around 4 AM. Damage was fairly minor as the Storm passed by this area. The main damage was beach erosion along the coast. There was widespread flooding of low lying areas, especially in the cities of Suffolk, Virginia Beach and Norfolk. In Sandfiddler, three to four houses sustained heavy damage to lower floors from flooding. Norfolk was left with debris and dead mussels and crabs to clean up.

## WASHINGTON

|  |    |                     |  |  |   |   |   |   |            |
|--|----|---------------------|--|--|---|---|---|---|------------|
| Central Basin<br>Northeast<br>Washington<br>WAZ006,009 | 04 | 1000PST-<br>2000PST |  |  | 0 | ? | ? | 0 | Dust Storm |
|--|----|---------------------|--|--|---|---|---|---|------------|

Westerly winds in the wake of a cold front combined with existing dry conditions causing blowing dust which reduced visibilities. The poor visibilities were responsible for several minor injury car accidents in northern Grant and Lincoln counties. Local roads in the area were closed during the afternoon and evening hours. Gusty winds to 35 mph at Spokane caused power outages when tree branches fell and knocked down about a dozen different power lines.

|                                      |    |                     |  |  |   |   |   |   |            |
|--------------------------------------|----|---------------------|--|--|---|---|---|---|------------|
| Eastern Washington<br>WAZ007-009,013 | 12 | 1430PST-<br>2030PST |  |  | 2 | 7 | 5 | 0 | Dust Storm |
|--------------------------------------|----|---------------------|--|--|---|---|---|---|------------|

Winds of 25 to 35 mph were common as a vigorous cold front moved across eastern Washington. Wind gusts to 56 mph were recorded at Waterville in Douglas County. Winds picked up dust from newly harvested fields creating large areas of near zero visibilities. The blowing dust caused numerous traffic accidents. At 1630 PST a chain-reaction accident involving five vehicles occurred due to poor visibilities on Highway 2 near Waterville. Two people were injured and one person died. A two-car collision at approximately the same time left two people injured and one dead on Highway 262, 9 miles south of Moses Lake. Sections of six highways in central Washington were closed due to the dust storm. (M44V) (M34V)

|                                |    |         |  |  |   |   |   |   |              |
|--------------------------------|----|---------|--|--|---|---|---|---|--------------|
| Adams and Franklin<br>Counties | 15 | 1200PST |  |  | 0 | 0 | 0 | 0 | Funnel Cloud |
|--------------------------------|----|---------|--|--|---|---|---|---|--------------|

Funnel clouds were seen by the public near Pasco and 5 miles north of Ritzville. The funnel clouds dissipated without causing damage or injuries.

|                                      |    |                     |  |  |   |   |   |   |            |
|--------------------------------------|----|---------------------|--|--|---|---|---|---|------------|
| Eastern Washington<br>WAZ006-009,013 | 26 | 1330PST-<br>2000PST |  |  | 0 | 1 | 4 | 0 | Dust Storm |
|--------------------------------------|----|---------------------|--|--|---|---|---|---|------------|

Strong winds with gusts to 51 mph at Ephrata and 50 mph in East Wenatchee created areas of reduced visibilities in blowing dust. Visibilities near zero forced the closure of numerous roads including sections of Highways 2, 17 and 172. One person was injured in an accident in Douglas County.

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| September 1992  |          |                             |                           |                          |  |        |                                       |        |                                 |
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| Location  | Date     | Time<br>Local/<br>Standard  | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured |        | Estimated<br>Damage<br>Property Crops |        | Character of Storm              |
| WEST VIRGINIA   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Raleigh County<br>1 NW Glen Daniel  | 10       | 1430EST                     |                           |                          | 0                                      | 0      | 0                                     | 0      | Hail (0.88)                     |
| Berkeley County<br>Hedgesville  | 10       | 1615EST                     |                           |                          | 0                                      | 0      | 0                                     | 0      | Thunderstorm Winds              |
| Trees and power lines were blown down.  |          |                             |                           |                          |  |        |                                       |        |                                 |
| WISCONSIN   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Walworth County<br>1.5 N Delavan  | 02       | 1725CST                     | 0.5                       | 25                       | 0                                      | 0      | 4                                     | ?      | Tornado (F1)                    |
| A tornado briefly set down just north of Delavan moving a 30- by 60-foot barn off its foundation and damaging trees and power lines.  |          |                             |                           |                          |  |        |                                       |        |                                 |
| Marathon County<br>Wausau<br>Unity  | 05<br>05 | 2040CST<br>2045CST          |                           |                          | 0<br>0                                 | 0<br>0 | 4<br>5                                | 5<br>0 | Thunderstorm Winds<br>Lightning |
| Severe thunderstorm winds caused \$70,000 damage to a ginseng garden and damaged a restaurant in Wausau. Lightning started a fire that destroyed a house in Unity.  |          |                             |                           |                          |  |        |                                       |        |                                 |
| Marquette County<br>3 NE Montello   | 07       | 1800CST                     | 0.1                       | 25                       | 0                                      | 0      | 0                                     | ?      | Tornado (F0)                    |
| Green Lake County<br>6 SW Berlin to<br>Berlin to<br>2 E Berlin  | 07       | 1820CST-<br>1840CST         | 8.5                       | 400                      | 0                                      | 1      | 6                                     | ?      | Tornado (F2)                    |
| A tornado touched down in an open field near Montello (Marquette County) and damaged 20 trees. A strong tornado tracked over 8 miles across Green Lake County and hit the town of Berlin. Along the path around \$1 million in damage occurred to 63 homes, 5 businesses, and 2 factories. Numerous power lines and hundreds of trees were downed. A woman received a minor head injury from the storm. |          |                             |                           |                          |  |        |                                       |        |                                 |
| WIZ007-010-014-015<br>West Central and<br>Southwest Wisconsin   | 14<br>23 | Early Morning-<br>Afternoon |                           |                          | 0                                      | 0      | 6                                     | 7      | Flood                           |
| Vernon County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Coon Valley   | 14       | Morning                     |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Hillsboro   | 14       | Morning                     |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Viola   | 14       | Morning                     |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| La Farge  | 14       | Early Afternoon             |                           |                          | 0                                      | 0      | 5                                     | ?      | Flash Flood                     |
| Juneau County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Mauston   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Union   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Wonewoc   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Lyndon Station  | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Columbia County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Portage   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Sauk County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| LaValle   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 5                                     | ?      | Flash Flood                     |
| Reedsburg   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Rock Springs  | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Wisconsin Dells   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Richland County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Viola   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Excelsior   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Boaz  | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Richland Center   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 5                                     | ?      | Flash Flood                     |
| Yuba  | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Rockbridge  | 14       | Late Morning                |                           |                          | 0                                      | 0      | 4                                     | ?      | Flash Flood                     |
| Monroe County   |          |                             |                           |                          |  |        |                                       |        |                                 |
| Warrens   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Tomah   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |
| Oakdale   | 14       | Late Morning                |                           |                          | 0                                      | 0      | 3                                     | ?      | Flash Flood                     |

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|-------------------------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|                         |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |
| <b>WISCONSIN Cont'd</b> |      |                            |                           |                          |                      |         |                     |       |                    |
| 5 NW Sparta             | 14   | Late Morning               |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Crawford County         |      |                            |                           |                          |                      |         |                     |       |                    |
| Soldiers Grove          | 14   | Early Afternoon            |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Gays Mills              | 14   | Early Afternoon            |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Pierce County           |      |                            |                           |                          |                      |         |                     |       |                    |
| River Falls             | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Plum City               | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Hager City              | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Maiden Rock             | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Buffalo County          |      |                            |                           |                          |                      |         |                     |       |                    |
| Mondovi                 | 16   | Early Morning              |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Montana                 | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Trempealeau County      |      |                            |                           |                          |                      |         |                     |       |                    |
| Independence            | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Sturm                   | 16   | Early Morning              |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Whitehall               | 16   | Early Morning              |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Arcadia                 | 16   | Early Morning              |                           |                          | 0                    | 0       | 6                   | ?     | Flash Flood        |
| Blair                   | 16   | Early Morning              |                           |                          | 0                    | 0       | 6                   | ?     | Flash Flood        |
| Dodge                   | 16   | Early Morning              |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Jackson County          |      |                            |                           |                          |                      |         |                     |       |                    |
| Black River Falls       | 16   | Early Morning              |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Monroe County           |      |                            |                           |                          |                      |         |                     |       |                    |
| Oakdale                 | 16   | Early Morning              |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Clifton                 | 16   | Early Morning              |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Clark County            |      |                            |                           |                          |                      |         |                     |       |                    |
| 5 S Neilsville          | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Shortville              | 16   | Early Morning              |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Wausara County          |      |                            |                           |                          |                      |         |                     |       |                    |
| Coloma                  | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Wautoma                 | 16   | Morning                    |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Vernon County           |      |                            |                           |                          |                      |         |                     |       |                    |
| Hillsboro               | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Liberty                 | 16   | Morning                    |                           |                          | 0                    | 0       | 6                   | ?     | Flash Flood        |
| Viroqua                 | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Coon Valley             | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| La Farge                | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Readstown               | 16   | Morning                    |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| La Crosse County        |      |                            |                           |                          |                      |         |                     |       |                    |
| Midway                  | 16   | Morning                    |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Crawford County         |      |                            |                           |                          |                      |         |                     |       |                    |
| Gays Mills              | 16   | Late Morning               |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Soldiers Grove          | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Columbia County         |      |                            |                           |                          |                      |         |                     |       |                    |
| Portage                 | 16   | Late Morning               |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Juneau County           |      |                            |                           |                          |                      |         |                     |       |                    |
| Mauston                 | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Union Center            | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Adams County            |      |                            |                           |                          |                      |         |                     |       |                    |
| 2 S Brooks              | 16   | Late Morning               |                           |                          | 0                    | 0       | 3                   | ?     | Flash Flood        |
| Sauk County             |      |                            |                           |                          |                      |         |                     |       |                    |
| Reedsburg               | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Rock Springs            | 16   | Late Morning               |                           |                          | 0                    | 0       | 5                   | ?     | Flash Flood        |
| Lime Ridge              | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Baraboo                 | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |
| Loganville              | 16   | Late Morning               |                           |                          | 0                    | 0       | 4                   | ?     | Flash Flood        |

Heavy rains over a 3-day period brought flooding and flash flooding to west-central and southwest portions of Wisconsin. Numerous communities were affected by the flooding with several towns being hit more than once with a combination of flash flooding and river flooding. The first rain event was from the night of the 13th through the morning of the 14th. A second episode of heavy rain fell on the 16th. The greatest amounts of rainfall measured over the 3-day period were from 14 to 17 inches across Sauk county with surrounding areas receiving from seven to ten inches. Major flooding occurred on the Baraboo, Trempealeau, and Pine Rivers; moderate flooding took



# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## WISCONSIN Cont'd

place on the Kickapoo River; and minor flooding was noted on the Black and Yellow Rivers. A record river crest was measured at Baraboo on the Baraboo River. Over \$11 million in damage took place to crops with another \$3 million in damage to property. Along the Trempealeau river the hardest hit communities were Arcadia and Blair. In Arcadia 58 homes and 13 businesses were damaged, while in Blair 5 homes were destroyed and another 200 sustained damage by the flood waters. Richland Center, along the Pine river, endured two separate river crests which caused evacuation of 400 people from 80 homes. Along the Kickapoo river, waters flooded Gays Mills washing out a bridge and damaging 40 homes and 4 businesses. Across the flooded region, tens of thousands of acres of farmland were inundated, numerous roads were washed out, schools were closed and basements in low-lying areas were flooded. Total damages by county include Richland \$5.4 million, Sauk \$3.7 million, Trempealeau \$1.6 million, Vernon \$650,000, Columbia \$342,000 and Pierce \$200,000.

|                                   |    |         |     |    |   |   |   |   |                    |
|-----------------------------------|----|---------|-----|----|---|---|---|---|--------------------|
| Douglas County                    |    |         |     |    |   |   |   |   |                    |
| 4 W Patzau                        | 16 | 1700CST |     |    | 0 | 0 | ? | ? | Hail (1.75)        |
| Bayfield County                   |    |         |     |    |   |   |   |   |                    |
| Drummond                          | 16 | 1750CST |     |    | 0 | 0 | ? | ? | Hail (1.00)        |
| Mason                             | 16 | 1800CST |     |    | 0 | 0 | ? | ? | Thunderstorm Winds |
| Ashland County                    |    |         |     |    |   |   |   |   |                    |
| 3 SE Highbridge<br>to 6 NE Mellen | 16 | 1820CST | 6.5 | 75 | 0 | 0 | 4 | 0 | Tornado (F0)       |

Scattered severe thunderstorms struck northwest Wisconsin with hail up to the size of golf balls and intense winds which knocked down many trees. A tornado tracked easterly along a 6.5-mile path from 3 miles southeast of Highbridge to 6 miles northeast of Mellen in Ashland County. The tornado damaged a barn roof and lean-to as well as numerous trees and power lines.

|                       |    |         |  |  |   |   |   |   |                    |
|-----------------------|----|---------|--|--|---|---|---|---|--------------------|
| St. Croix County      |    |         |  |  |   |   |   |   |                    |
| North Hudson          | 17 | 1630CST |  |  | 0 | 2 | 3 | 0 | Lightning          |
| Trempealeau County    |    |         |  |  |   |   |   |   |                    |
| Pleasantville         | 17 | 2150CST |  |  | 0 | 0 | ? | ? | Hail (1.75)        |
| Clark County          |    |         |  |  |   |   |   |   |                    |
| Greenwood             | 17 | 2230CST |  |  | 0 | 0 | ? | ? | Hail (0.75)        |
| 1 S Greenwood         | 17 | 2230CST |  |  | 0 | 0 | 5 | ? | Thunderstorm Winds |
| Wood County           |    |         |  |  |   |   |   |   |                    |
| Bakerville            | 17 | 2245CST |  |  | 0 | 0 | ? | ? | Hail (0.88)        |
| Marathon County       |    |         |  |  |   |   |   |   |                    |
| Mosinee               | 17 | 2325CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds |
| Portage County        |    |         |  |  |   |   |   |   |                    |
| 5 NW Stevens<br>Point | 17 | 2340CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds |
| Juneau County         |    |         |  |  |   |   |   |   |                    |
| 2 N Necedah           | 18 | 0000CST |  |  | 0 | 0 | ? | ? | Hail (1.00)        |
| Adams County          |    |         |  |  |   |   |   |   |                    |
| 2 N Friendship        | 18 | 0020CST |  |  | 0 | 0 | ? | ? | Hail (1.00)        |
| Rock County           |    |         |  |  |   |   |   |   |                    |
| Janesville            | 18 | 0300CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
| Fond du Lac County    |    |         |  |  |   |   |   |   |                    |
| Campbellsport         | 18 | 0315CST |  |  | 0 | 0 | 4 | ? | Thunderstorm Winds |
| Sheboygan County      |    |         |  |  |   |   |   |   |                    |
| Cedar Grove           | 18 | 0340CST |  |  | 0 | 0 | 3 | ? | Thunderstorm Winds |
| Oostburg              | 18 | 0340CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds |
| Sheboygan             | 18 | 0345CST |  |  | 0 | 0 | ? | ? | Thunderstorm Winds |

Severe thunderstorms spread across Wisconsin producing hail up to golf ball size and damaging winds. The winds destroyed a barn and corn crib near Greenwood (Clark County) and a garage in Campbellsport (Fond du Lac County). Many trees were toppled by intense winds in Janesville (Rock County) and Cedar Grove (Sheboygan County). A father and son were injured by lightning when it struck their home in North Hudson (St. Croix County) while they were taking down a metal basketball hoop.

|                  |    |         |     |    |   |   |   |   |              |
|------------------|----|---------|-----|----|---|---|---|---|--------------|
| Marquette County |    |         |     |    |   |   |   |   |              |
| 4.5 S Endeavor   | 26 | 1651CST | 0.5 | 25 | 0 | 0 | 2 | ? | Tornado (F0) |
| Neshkoro         | 26 | 1710CST | 0.5 | 25 | 0 | 0 | 2 | ? | Tornado (F0) |
| Briggsville      | 26 | 1730CST |     |    | 0 | 0 | 0 | 0 | Funnel Cloud |

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

## WISCONSIN Cont'd

### Green Lake County

|                  |    |         |     |    |   |   |   |   |              |
|------------------|----|---------|-----|----|---|---|---|---|--------------|
| 1 E Berlin       | 26 | 1722CST | 0.3 | 25 | 0 | 0 | 0 | 0 | Tornado (F0) |
| 1 W Berlin       | 26 | 1734CST |     |    | 0 | 0 | 0 | 0 | Funnel Cloud |
| Green Lake       | 26 | 1735CST |     |    | 0 | 0 | 0 | 0 | Funnel Cloud |
| Winnebago County |    |         |     |    |   |   |   |   |              |
| 10 NW Oshkosh    | 26 | 1802CST |     |    | 0 | 0 | 0 | 0 | Funnel Cloud |

Three weak tornadoes and several funnel clouds were generated by thunderstorms over central and east-central Wisconsin. The first tornado briefly set down 4.5 miles south of Endeavor in Marquette County damaging some trees. A second tornado also knocked down a few trees near Neshkoro (Marquette County). A third tornado touched down in an open field just east of Berlin (Green Lake County).

## WYOMING

### Goshen County

|               |    |         |  |  |   |   |   |   |                          |
|---------------|----|---------|--|--|---|---|---|---|--------------------------|
| 10 W LaGrange | 04 | 1725MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G55) |
|---------------|----|---------|--|--|---|---|---|---|--------------------------|

An Air Force site reported gusty winds with no damage.

### Sheridan County

|                  |    |         |  |  |   |   |   |   |                          |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Sheridan Airport | 12 | 1658MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G53) |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|

Gust winds with no report of damage or injuries.

### Park County

|                  |    |         |  |  |   |   |   |   |                     |
|------------------|----|---------|--|--|---|---|---|---|---------------------|
| Yellowstone Park | 13 | 1500MST |  |  | 0 | 0 | ? | 0 | Thunderstorm Windss |
|------------------|----|---------|--|--|---|---|---|---|---------------------|

Winds gusting from 60 to 70 miles an hour ripped up trees and knocked out power in portions of Yellowstone National Park. This temporarily closed some roads and campgrounds. No injuries were reported.

### Laramie County

|                  |    |         |  |  |   |   |   |   |                          |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Cheyenne Airport | 17 | 1349MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G50) |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|

### Laramie County

|                  |    |         |  |  |   |   |   |   |                          |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Near Pine Bluffs | 17 | 1530MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G56) |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|

Thunderstorms brought gusty winds to southeast Wyoming during the afternoon. No injuries or damage were reported.

### Teton County

|                 |    |         |  |  |   |   |   |   |                          |
|-----------------|----|---------|--|--|---|---|---|---|--------------------------|
| Jackson Airport | 23 | 1753MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G56) |
|-----------------|----|---------|--|--|---|---|---|---|--------------------------|

Wind gusts to 64 miles an hour were reported from the Jackson Airport.

### Carbon County

|                 |    |         |  |  |   |   |   |   |                          |
|-----------------|----|---------|--|--|---|---|---|---|--------------------------|
| Rawlins Airport | 24 | 1230MST |  |  | 0 | 0 | 0 | 0 | Thunderstorm Winds (G50) |
|-----------------|----|---------|--|--|---|---|---|---|--------------------------|

Wind gusts to 58 miles an hour were noted at the Rawlins airport.

### Laramie County

|                  |    |         |  |  |   |   |   |   |                          |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|
| Cheyenne Airport | 25 | 0054MST |  |  | 0 | 0 | 4 | 0 | Thunderstorm Winds (G54) |
|------------------|----|---------|--|--|---|---|---|---|--------------------------|

An early morning cold front brought thunderstorms and gusty winds to the Cheyenne area. Some signs and a construction trailer were damaged with the gusty winds. No injuries were reported.

## Alaska, Northern

None reported.

## ALASKA, Southern

### Alaska

|                  |       |  |  |  |  |  |  |  |  |
|------------------|-------|--|--|--|--|--|--|--|--|
| Southern Portion | 15-17 |  |  |  |  |  |  |  |  |
|------------------|-------|--|--|--|--|--|--|--|--|

High wind  
Snow

A strong cold front moving southeastward toward the Gulf of Alaska brought heavy snow to the northern and eastern Copper River Basin. As the front passed southern portion of central Alaska

# Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons<br>Killed Injured | Estimated<br>Damage<br>Property Crops | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|
|----------|------|----------------------------|---------------------------|--------------------------|--|---------------------------------------|--------------------|

## ALASKA, Southern Cont'd

north winds 3050 mph blew down trees and caused power outages. A tree that struck an Eagle river home caused \$12000 worth of damage. At Valdez strong winds, peak gust of 84 mph, smashed windows, toppled trees onto power lines, and created general mayhem as it picked up and carried trash cans, bicycles, summer lawn furniture, even an entire boat. The wind also carried the year's first snowfall to Valdez, about 20 days earlier than normal. The half inch that fell marked the first measurable September snowfall here in over 20 years.

### Alaska

#### Southeast Portion

16 1700AST

#### Record Snowfall

Yakutat recorded their earliest snowfall ever. A 56 minute snow shower reduced visibility to 3/4 mile and dropped about an inch of snow on the ground. Before 1992 only trace amounts of snow were recorded during September.

#### Kuskokwim Valley

16-  
17

#### Record Snowfall

A slow moving arctic front dropped enough snow on McGrath to set a new 24 hr and monthly record. The 7.5 inches falling on the 16th and 17th broke the old monthly record of 6.1 inches set in 1958. The 7.0 inches recorded on the 17th broke the old 24 hour record of 3.8 inches set on the 2930 1965.

#### Copper River Basin

18

#### Record Snowfall

A 12 inch snowfall recorded at Gulkana not only set a 24 hour snowfall record but also set a monthly record for September. The old monthly record was 6.4 inches set in 1970. Heavy snows struck the Copper River Basin again on the 19th with another 612 inches falling from Palmer to Glennallen.

#### Kodiak Island

21

#### Record Cold

The 26 degrees recorded at Kodiak State Airport broke the old daily low of 31 set in 1933 and tied the record for the month set in 1968.

#### Kuskokwim Valley

22

#### Record Cold

The 15 degrees recorded at McGrath broke the old daily record of 19 set in 1957.

#### Bering Sea

22

0 ? 5 0 Rough Seas

A storm with 10 foot seas and gusty winds left the five man crew only minutes to put on survival gear before the fishing boat Majestic sank. The crewmen bobbed amid the vessel's debris Tuesday for more than six hours before they were found by a helicopter from a nearby Coast Guard cutter. The Majestic was about 75 miles from St. Paul when the boat started to list in rough seas. The schooner apparently caught a wave sideways.

### Alaska Peninsula

#### Pribilofs Kodiak Island

26-  
27

0 ? 0 0 High Wind  
Snow

A large 980 mb low tracking east along 53 N brought one to two inches of rain along with wind gusts to 50 mph to the Alaska Peninsula on the 26th. A peak gust of 56 mph was recorded at Kodiak State Airport. When the storm struck Kodiak Island late on the 26th high winds and seas during high tide snapped the mooring line of a 38 foot boat anchored at Mill Bay. The boat was then destroyed on the rocky beach. The loss was estimated at \$60,000. Cold air pouring across the Bering Sea behind this storm brought a very early first snowfall to St. Paul Island. During the evening of the 26th north winds gusting as high as 35 mph dropped the temperature to just above freezing changing rain to snow. From 8 pm ADT to midnight on the 26th snow fell and reduced visibility to less than 1 mile at times.

## ALASKA, Southeastern

None reported.

# Storm Data and Unusual Weather Phenomena

September 1992

| Location  | Date | Time Local/Standard   | Path Length (Miles) | Path Width (Yards) | Number of Persons Killed | Injured | Estimated Damage Property | Crops | Character of Storm |
|---|------|-----------------------|---------------------|--------------------|--------------------------|---------|---------------------------|-------|--------------------|
| <b>HAWAII</b>   |      |                       |                     |                    |                          |         |                           |       |                    |
| Kauai   | 11   | 1530HST               |                     |                    | 3                        | 100     | 9                         | 7     | Hurricane Iniki    |
| The most powerful hurricane to strike the Hawaiian Islands in recent history, severe hurricane Iniki with winds as high as 140 mph, moved in from the south making a direct hit on the island of Kauai during the afternoon hours on September 11th. Damage on Kauai was very extensive and has been estimated at \$1.8 billion. Damage was mostly light on the other islands of the Hawaiian chain except for the small island of Niihau where damage was moderate. The south and southwest facing shores of the islands all received localized wave damage with Oahu's Waianae coast hard hit. The hurricane struck at the time of high spring tides and storm surges of 4 to 6 feet were estimated along the devastated south shore of Kauai. The eye of the hurricane moved inland near Waimea at about 1530HST and crossed northward across the western half of Kauai. Central pressure at the point of landfall was estimated at 945 mb. One life was lost on land, a Kilauea man, 77, who was struck by flying debris. Two fishermen, aged 57 and 33, drowned at sea. About 100 injuries were reported mainly cuts and bruises. Preliminary damage figures released by the Red Cross included 1421 dwellings completely destroyed, 5152 suffering major damage, and 7178 minor damage. |      |                       |                     |                    |                          |         |                           |       |                    |
| Hawaii  | 14   | morning and afternoon |                     |                    | 0                        | 0       | 6                         | 0     | Flash Flooding     |
| Thunderstorms early in the morning and again in the afternoon and evening caused scattered flash flooding around the Big Island. Even the normally dry volcano summits above 10 thousand feet reported heavy rain and a washout of the road between the ranger station and the Mauna Kea observatories occurred as 4 inch of rain fell. Remnant moisture from dissipating tropical depression Orlene was blamed for the heavy rains.  |      |                       |                     |                    |                          |         |                           |       |                    |
| Hawaii  | 17   | 1700HST               |                     |                    | 0                        | 0       | 5                         | 0     | Flash Flooding     |
| Heavy thunderstorms along the Kona coast caused localized minor flash flooding.   |      |                       |                     |                    |                          |         |                           |       |                    |
| <b>PACIFIC</b>  |      |                       |                     |                    |                          |         |                           |       |                    |
| None reported.  |      |                       |                     |                    |                          |         |                           |       |                    |
| <b>PUERTO RICO</b>  |      |                       |                     |                    |                          |         |                           |       |                    |
| Rincon  | 13   | 1400AST               |                     |                    | 0                        | 0       | 3                         | 0     | Thunderstorm Winds |
| Strong winds blew down the zinc roofs of six houses and a farm in the Atalaya and Cruces area.  |      |                       |                     |                    |                          |         |                           |       |                    |
| Culebra   | 15   | 1425AST               |                     |                    | 0                        | 0       | 0                         | 0     | Waterspout         |
| A small craft reported a waterspout about five miles southwest of Culebra.  |      |                       |                     |                    |                          |         |                           |       |                    |
| Aguada  | 16   | 1500AST               |                     |                    | 0                        | 0       | 2                         | 0     | Flash Flood        |
| Rio Culebrinas went out of its banks near Sector Desvio blocking off the road. There were also reports of downed trees and power lines.   |      |                       |                     |                    |                          |         |                           |       |                    |
| PRZ002-003-005  | 21   | 1500AST               |                     |                    | 0                        | 0       | 2                         | 0     | Flash Flood        |
| Flooding was reported in various parts of southeastern Puerto Rico as a result of heavy rains. In Yabucoa, Bo. Calabaza, Sector Guayanes and urbanization Jaime Rodriguez were affected due to clogged drainage and creeks overflowing their banks. In Las Piedras, Naguabo and Humacao there were reports of flooding of urbanizations and minor landslides.   |      |                       |                     |                    |                          |         |                           |       |                    |
| San Sebastian   | 23   | 1400AST               |                     |                    | 0                        | 0       | 3                         | 0     | Flash Flood        |
| Near five inches of rain fell in an hour in this municipality. As a result the Salada Brook overflowed into homes and damaged several cars. Several houses were flooded of which two were total loss. Pablo Nuevo Avenue was impassable and there were downed trees and mudslides along roads. There was also a report of pea-size hail but no damages were reported.   |      |                       |                     |                    |                          |         |                           |       |                    |
| San Juan  | 30   | 1200AST               |                     |                    | 0                        | 0       | 2                         | 0     | Urban Flooding     |
| Heavy rains flooded six streets of Bo. Israel and a residence was affected in Villalba Street. Other areas that were flooded were Puerto Nuevo, Parcelas Falu and Reparto Bechara.  |      |                       |                     |                    |                          |         |                           |       |                    |
| Las Marias  | 30   | 1730AST               |                     |                    | 0                        | 0       | 1                         | 0     | Mudslide           |
| Heavy rains of around two inches produced a mudslide in Road 431 which blocked traffic for two days.  |      |                       |                     |                    |                          |         |                           |       |                    |



## Storm Data and Unusual Weather Phenomena

September 1992

| Location | Date | Time<br>Local/<br>Standard | Path<br>Length<br>(Miles) | Path<br>Width<br>(Yards) | Number of<br>Persons |         | Estimated<br>Damage |       | Character of Storm |
|----------|------|----------------------------|---------------------------|--------------------------|----------------------|---------|---------------------|-------|--------------------|
|          |      |                            |                           |                          | Killed               | Injured | Property            | Crops |                    |

### U.S. VIRGIN ISLANDS

|                  |           |                 |  |  |          |          |          |          |                    |
|------------------|-----------|-----------------|--|--|----------|----------|----------|----------|--------------------|
| <b>St. Croix</b> | <b>29</b> | <b>1000AST-</b> |  |  |          |          |          |          |                    |
|                  | <b>29</b> | <b>1500AST</b>  |  |  | <b>0</b> | <b>0</b> | <b>2</b> | <b>0</b> | <b>Flash Flood</b> |

Around four inches of rain fell in the vicinity of Estate Salt River. There were overflowing gutters in the Hess Oil area, and tree branches fell along several roads in Fredericksted.

## STORM DAMAGE CATAGORIES

## REFERENCE NOTES

- 1 Less than \$50
- 2 \$50 to \$500
- 3 \$500 to \$5,000
- 4 \$5,000 to \$50,000
- 5 \$50,000 to \$500,000
- 6 \$500,000 to \$5 Million
- 7 \$5 Million to \$50 Million
- 8 \$50 Million to \$500 Million
- 9 \$500 Million to \$5 Billion

- 0/Blank None reported.  
 \* Miles instead of yards.  
 \*\* Yards instead of miles.  
 @ Includes heavy sleet storm.  
 # Freezing drizzle and freezing rain, commonly known as glaze.  
 ≠ Report incomplete.  
 ≠# Report not received.  
 o/c Indicates Crop Damage amount is included in the value given for property damage.

When reports are not received or are incomplete, the Storm Summary National Death and Injury totals may also be incomplete.

### Definition of Fujita Tornado Scale (F scale)

(F0) Gale tornado (40-72 mph): Light damage  
 Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage sign boards.

(F1) Moderate tornado (73-112 mph): Moderate damage  
 The lower limit (73 mph) is the beginning of hurricane wind speed; peel surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads.

(F2) Significant tornado (113-157 mph): Considerable damage  
 Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.

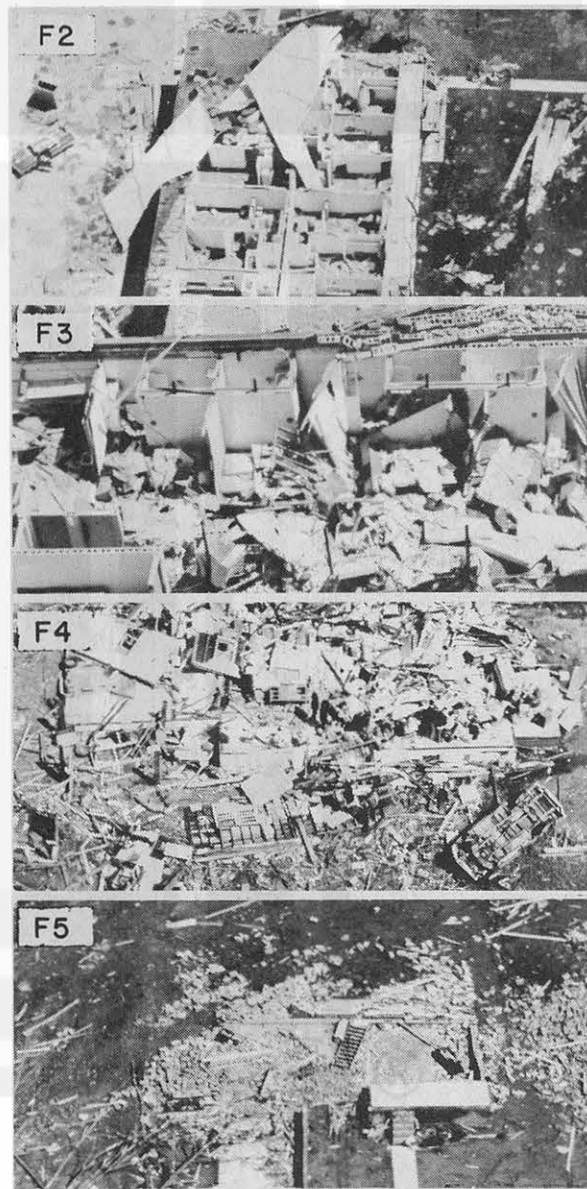
(F3) Severe tornado (158-206 mph): Severe damage  
 Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off ground and thrown.

(F4) Devastating tornado (207-260 mph): Devastating damage  
 Well-constructed houses leveled; structure with weak foundation blown off some distance; cars thrown and large missiles generated.

(F5) Incredible tornado (261-318 mph): Incredible damage  
 Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 m; trees debarked; incredible phenomena will occur.

(F6-F12) (319 mph to Mach 1, the speed of sound):  
 The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.

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



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

USCOMM-NOAA-ASHEVILLE, N.C. 1993-1750

## STORM SUMMARY

Sep 1992

| TYPE                             | ALABAMA | ARIZONA | ARKANSAS | CALIFORNIA | COLORADO | CONNECTICUT | DELAWARE | FLORIDA | GEORGIA | IDAHO | ILLINOIS | INDIANA | IOWA | KANSAS | KENTUCKY | LOUISIANA | MAINE | MARYLAND & D.C. | MASSACHUSETTS | MICHIGAN | MINNESOTA | MISSISSIPPI | MISSOURI | MONTANA | NEBRASKA | NEVADA | NEW HAMPSHIRE |
|----------------------------------|---------|---------|----------|------------|----------|-------------|----------|---------|---------|-------|----------|---------|------|--------|----------|-----------|-------|-----------------|---------------|----------|-----------|-------------|----------|---------|----------|--------|---------------|
| TORNADOES                        |         |         |          | 0          |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          | 0      |               |
| Number                           |         |         |          |            | 4        |             |          | 6       |         |       | 1        | 3       |      | 11     | 2        | 1         |       |                 |               | 2        | 2         |             | 8        |         | 1        |        |               |
| Days                             |         |         |          |            | 3        |             |          | 0       |         |       | 0        | 2       |      | 0      | 1        | 0         |       |                 |               | 2        | 2         |             | 0        |         | 1        |        |               |
| Deaths                           |         |         |          |            | 4        |             |          | 0       |         |       | 0        | 0       |      | 1      | 0        | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Injuries                         |         |         |          |            | 4        |             |          | 0       |         |       | 3        | 3       |      | 0      | 0        | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Property Damage                  |         |         |          |            | 4        |             |          | 0       |         |       | 0        | 0       |      | 0      | 0        | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Crop Damage                      |         |         |          |            | 0        |             |          | 0       |         |       | 0        | 4       |      | 3      | 0        | 0         |       |                 |               | 3        | 4         |             | 3        |         | 3        |        |               |
| HAIL                             |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               |          |           |             |          |         | 0        |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       | 3        | 3       |      | 5      |          | 2         |       |                 |               |          |           |             |          |         | 0        |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               |          |           |             |          |         | 0        |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       | 1        | 3       |      | 4      |          | 0         |       |                 |               |          |           |             |          |         | 0        |        |               |
| THUNDERSTORM WINDS               |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       | 3        | 5       |      | 5      |          | 4         |       |                 |               | 5        | 3         |             | 5        |         | 2        |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       | 3        | 6       |      | 4      |          | 0         |       |                 |               | 0        | 0         |             | 2        |         | 3        |        |               |
| HIGH WINDS                       |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| LIGHTNING                        |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               | 0        | 0         |             | 0        |         | 0        |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       | 2        | 0       |      | 5      |          | 6         |       |                 |               | 4        | 0         |             | 4        |         | 5        |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               | 0        | 0         |             | 0        |         | 1        |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       | 0        | 0       |      | 0      |          | 0         |       |                 |               | 0        | 0         |             | 0        |         | 5        |        |               |
| FLASH FLOODS                     |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| FLOODS                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| HEAVY SNOWSTORMS AND BLIZZARDS a |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| ICE STORMS #                     |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| HURRICANES AND TROPICAL STORMS   |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| ALL OTHERS                       |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Deaths                           |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Injuries                         |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Property Damage                  |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |
| Crop Damage                      |         |         |          |            |          |             |          |         |         |       |          |         |      |        |          |           |       |                 |               |          |           |             |          |         |          |        |               |

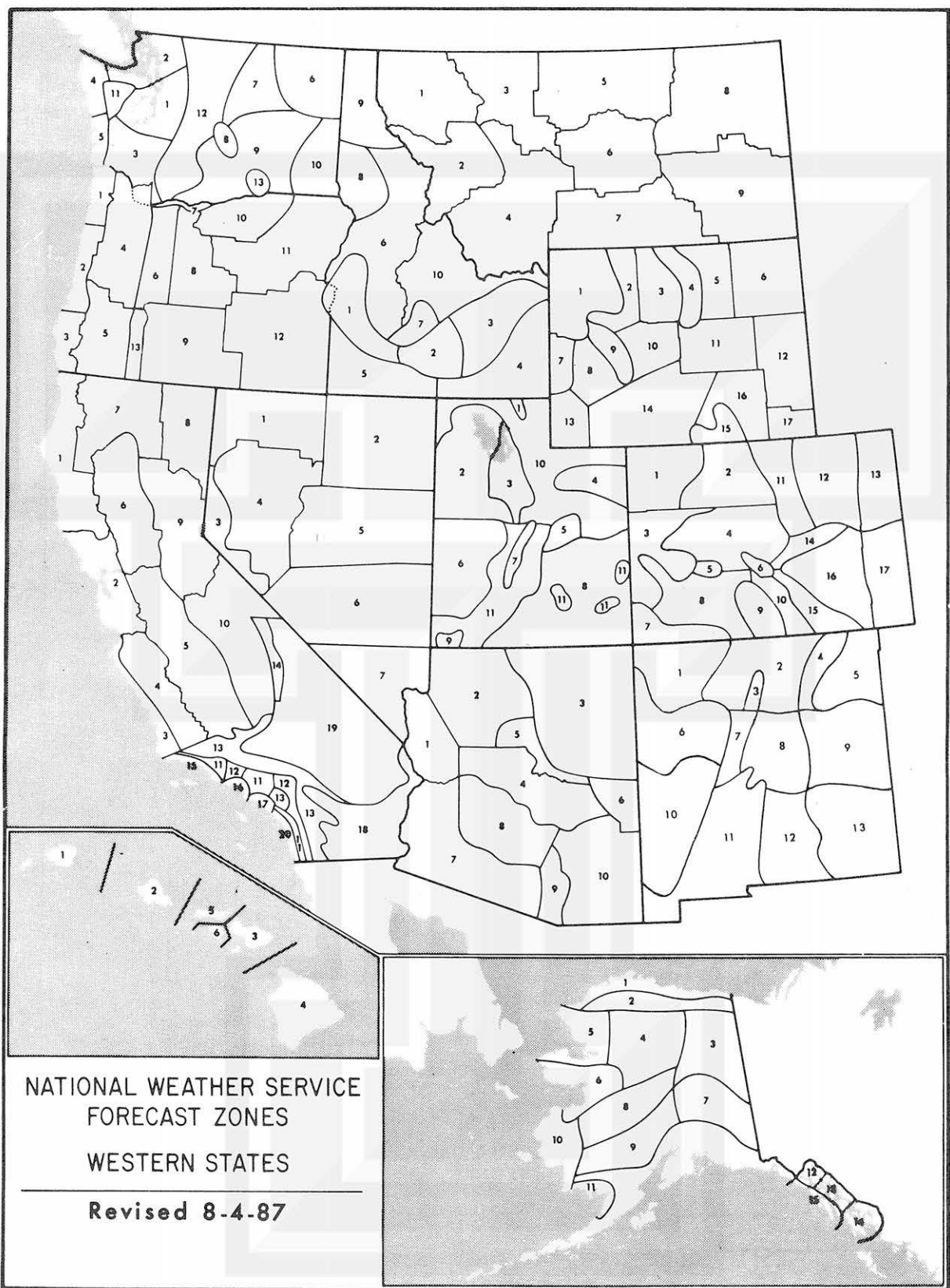
SEE REFERENCE NOTES FOR STORM DAMAGE CATEGORIES

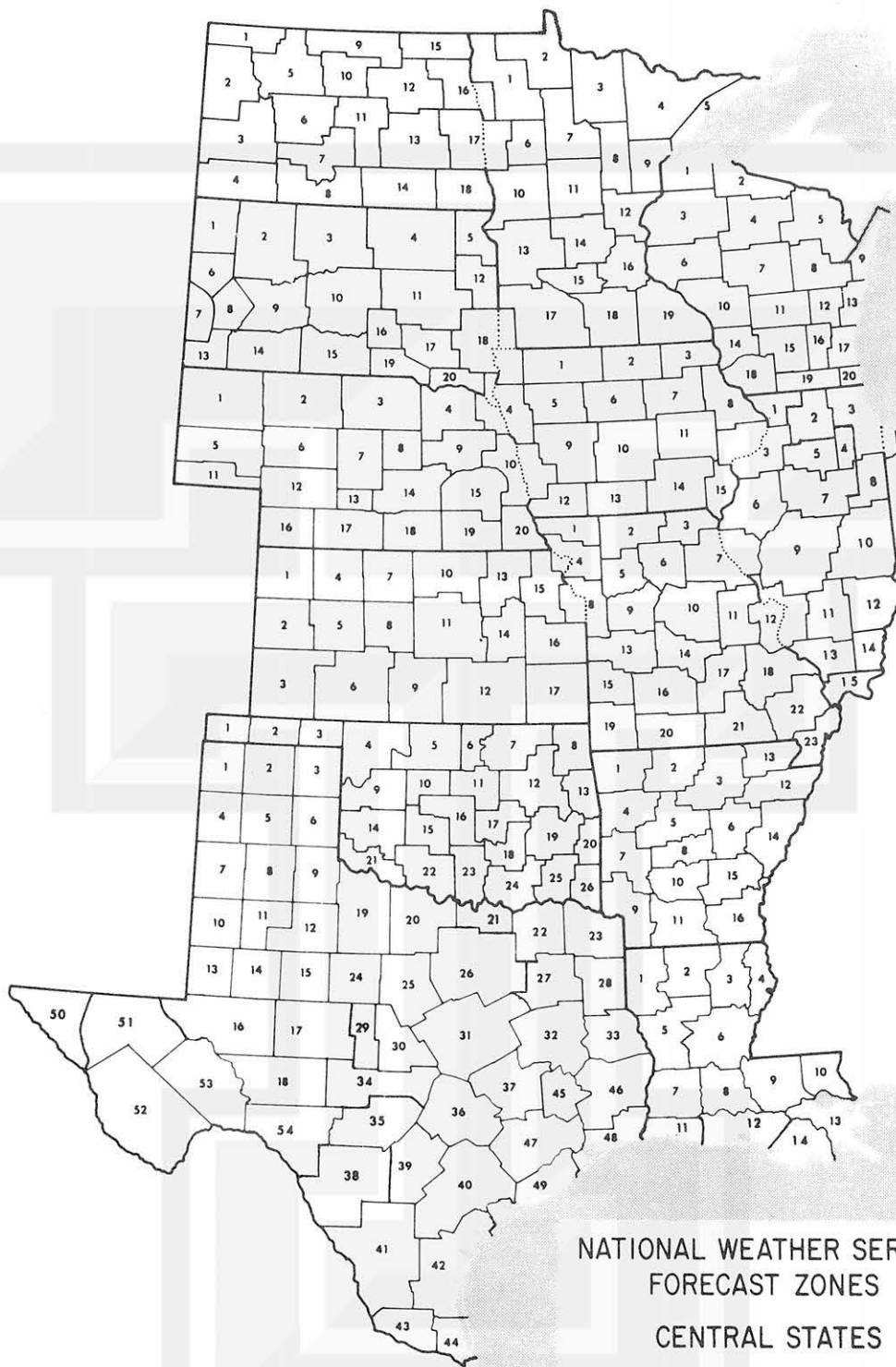
## STORM SUMMARY

Sep 1992

| TYPE                             | NEW MEXICO | NEW MEXICO | NEW YORK | NORTH CAROLINA | NORTH DAKOTA | OHIO | OKLAHOMA | OREGON | PENNSYLVANIA | RHODE ISLAND | SOUTH CAROLINA | SOUTH DAKOTA | TENNESSEE | TEXAS | UTAH | VERMONT | VIRGINIA | WASHINGTON | WEST VIRGINIA | WISCONSIN | WYOMING | ALASKA | HAWAII | PACIFIC | PURTO RICO | VIRGIN ISLANDS | NATIONAL DEATHS | & INJURY TOTALS |
|----------------------------------|------------|------------|----------|----------------|--------------|------|----------|--------|--------------|--------------|----------------|--------------|-----------|-------|------|---------|----------|------------|---------------|-----------|---------|--------|--------|---------|------------|----------------|-----------------|-----------------|
| TORNADOES                        |            |            | 4        |                |              | 2    | 16       |        | 1            | 0            |                |              |           | 4     | 1    |         |          |            | 0             | 7         |         | #      |        | 0       |            |                | 0               | 14              |
| Number                           |            |            | 4        |                |              | 2    | 16       |        | 1            | 0            |                |              |           | 4     | 1    |         |          |            | 0             | 7         |         | #      |        | 0       |            |                | 0               | 14              |
| Days                             |            |            | 1        |                |              | 0    | 1        |        | 1            | 0            |                |              |           | 0     | 1    |         |          |            | 0             | 1         |         |        |        | 0       |            |                | 0               | 1               |
| Deaths                           |            |            | 0        |                |              | 0    | 0        |        | 0            | 0            |                |              |           | 0     | 0    |         |          |            | 0             | 0         |         |        |        | 0       |            |                | 0               | 1               |
| Injuries                         |            |            | 0        |                |              | 0    | 0        |        | 0            | 0            |                |              |           | 0     | 0    |         |          |            | 0             | 0         |         |        |        | 0       |            |                | 0               | 1               |
| Property Damage                  |            |            | 0        |                |              | 0    | 0        |        | 0            | 0            |                |              |           | 0     | 0    |         |          |            | 0             | 0         |         |        |        | 0       |            |                | 0               | 1               |
| Crop Damage                      |            |            | 0        |                |              | 0    | 0        |        | 0            | 0            |                |              |           | 0     | 0    |         |          |            | 0             | 0         |         |        |        | 0       |            |                | 0               | 1               |
| HAIL                             |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| THUNDERSTORM WINDS               |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| HIGH WINDS                       |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| LIGHTNING                        |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| FLASH FLOODS                     |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| FLOODS                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| HEAVY SNOWSTORMS AND BLIZZARDS a |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| ICE STORMS #                     |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| HURRICANES AND TROPICAL STORMS   |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| ALL OTHERS                       |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Deaths                           |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Injuries                         |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Property Damage                  |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |
| Crop Damage                      |            |            |          |                |              |      |          |        |              |              |                |              |           |       |      |         |          |            |               |           |         |        |        |         |            |                |                 |                 |



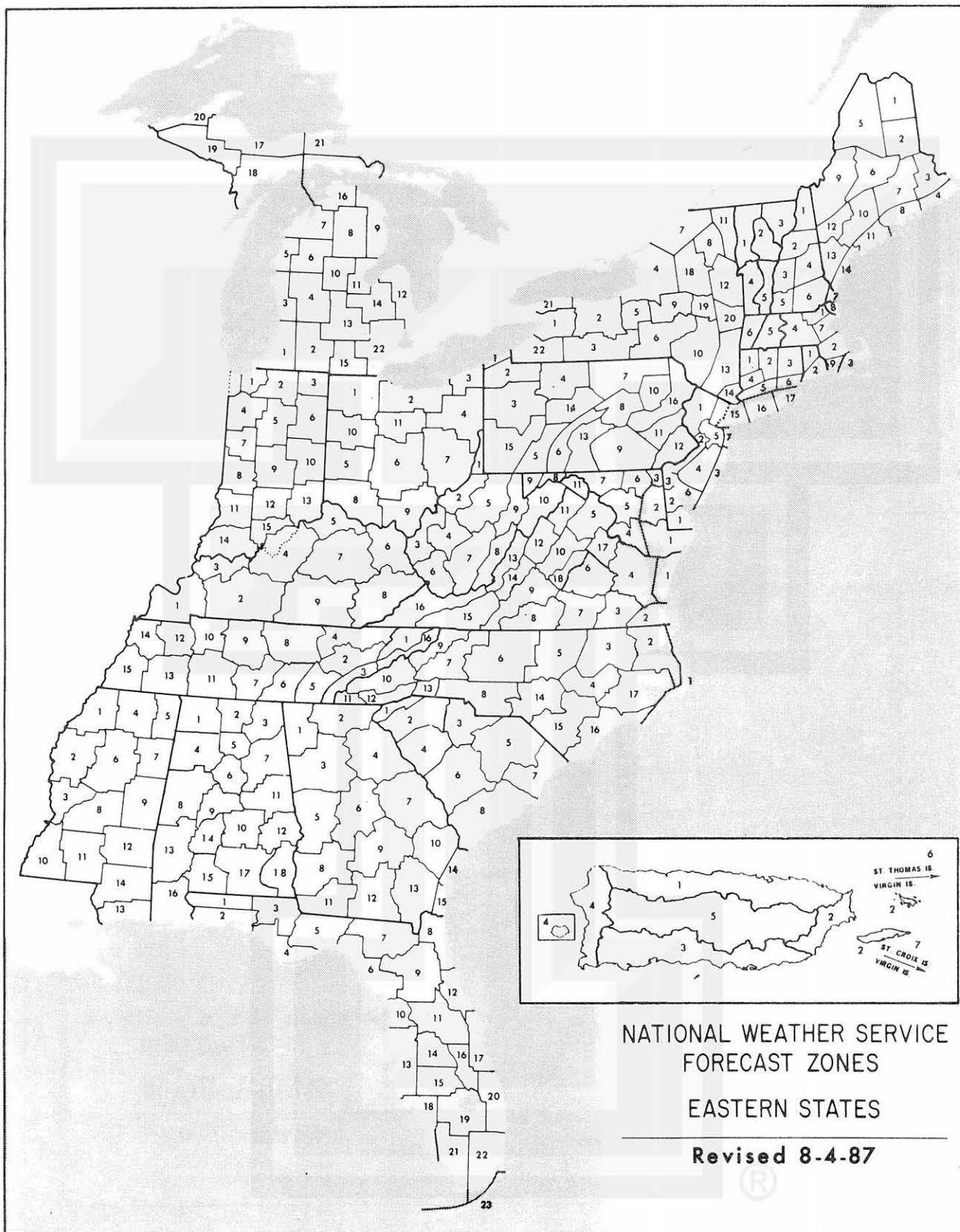




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Revised 8-4-87





# STORM DATA

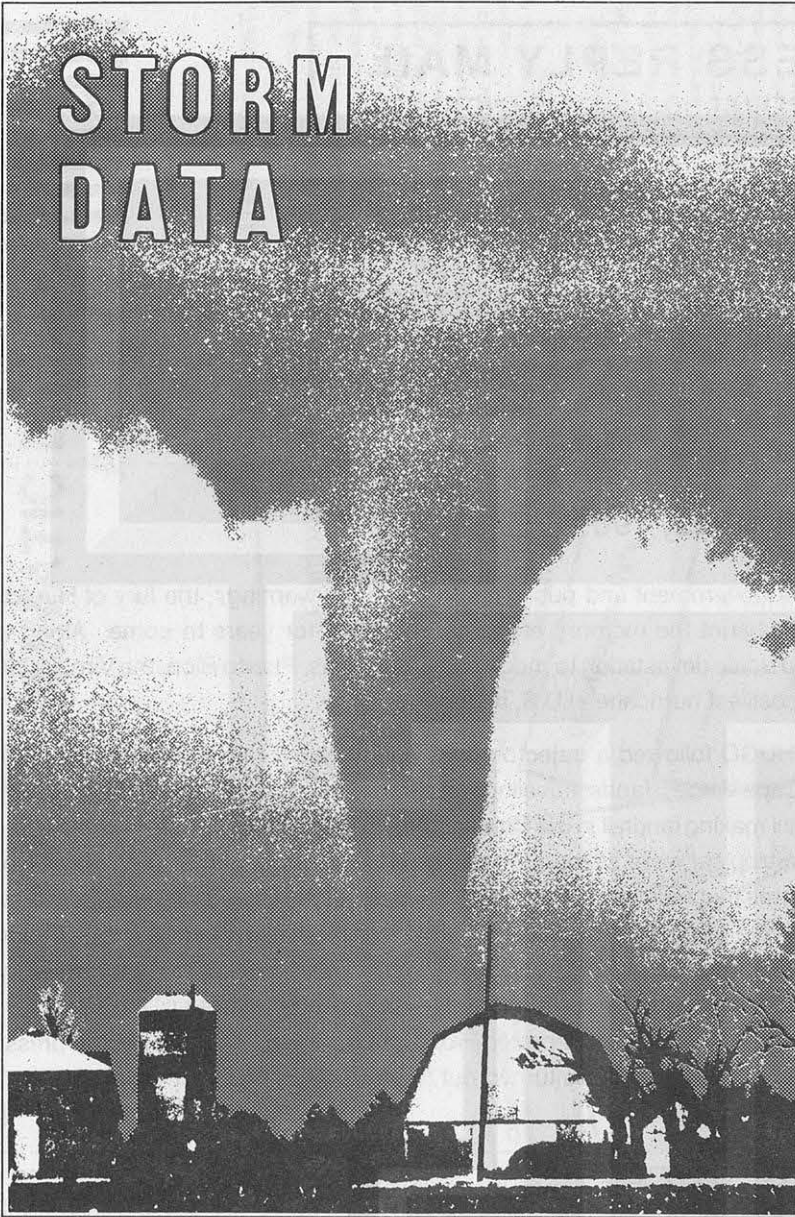


Photo courtesy: Larry Miller, Kansas Heritage Photography

STORM DATA is a monthly chronicle of significant and unusual weather events. Photographs and charts depicting storms, descriptions of extraordinary weather events occurring in each state, and summary tables of storm-related deaths, injuries, and property and crop damage are contained in this publication.

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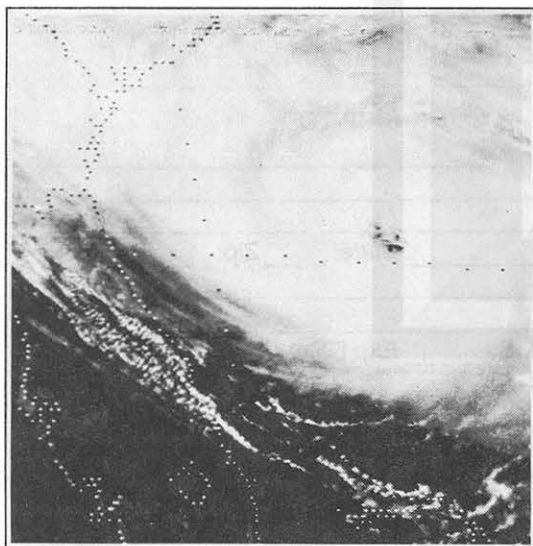
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**HURRICANE HUGO, SEPTEMBER 10-22, 1989**

Despite excellent warning lead times and excellent government and public response to the warnings, the fury of Hurricane Hugo took many by surprise and will undoubtedly haunt the memory of many Americans for years to come. Along with numerous deaths and injuries, HUGO brought large-scale devastation to much of the Carolinas, Puerto Rico, the Virgin Islands and other islands of the Caribbean, making it the costliest hurricane in U.S. history.

Over the course of slightly less than two weeks, HUGO followed a trajectory that was typical for an Atlantic Basin tropical system: originating near Africa in the vicinity of the Cape Verde Islands, traveling west across the tropical Atlantic to the Leeward Islands, turning northwest toward the U.S. coast until making landfall in the Carolinas, and once inland, turning northeast under the influence of the Westerlies and becoming extratropical while skirting the eastern U.S.-Canada border (see map below). The system originated from a cluster of thunderstorms that moved off the African coast on September 9th and organized into a tropical depression on the 10th just southeast of the Cape Verde Islands. The system moved west at 18 knots, attaining storm status on the 11th, and hurricane status on the 13th while located about 1100 nautical miles east of the Leeward Islands. HUGO gradually turned west-northwest and slowed in its translation as it headed for the Islands. While still several hundred miles east of the Islands on the 15th, the first reconnaissance aircraft reported HUGO as having a minimum central pressure of 918 mb and an estimated maximum surface wind of 140 knots. This turned out to be HUGO's maximum intensity.



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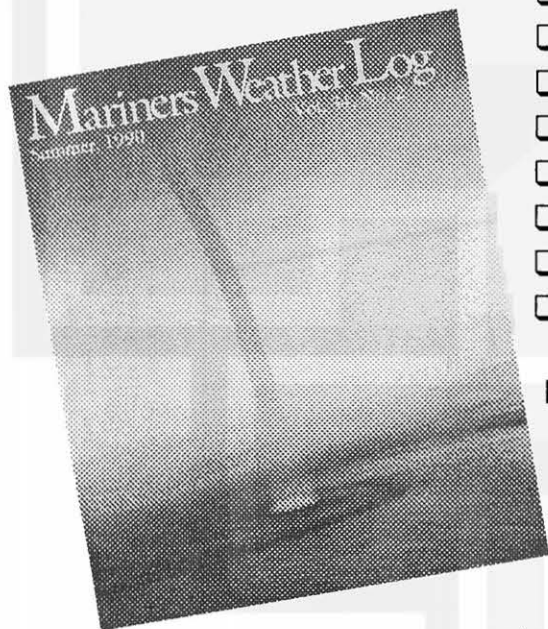
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