

STORM DATA



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STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1978

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS				ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	PROPERTY	CROPS	
ALABAMA Chilton County	22	2:15p	-	-	0	0	4	0			Wind/lightning
											A severe thunderstorm hit Clanton, Alabama around mid afternoon. Winds from the storm blew off the roof of spectator stands at the city park while lightning caused some fire damage to two homes. Trees and power lines were also down in the area.
Calhoun County	23	8:40p	-	-	0	0	3	0			Flash flood
											A nearly stationary thunderstorm dropped 4 inches of rain on Anniston causing flash flooding. Most of the rain fell within a 2 hour period. Numerous roads were closed by high water. The water also flooded the basement of Cobb Junior High School.
ALASKA Kenai Peninsula	14-18				0	0	3	0			Flooding
											Heavy rains over the Kenai Peninsula September 12-13 caused minor flooding on the upper Kenai River - upstream from Skilak Lake - from Sept. 14-18. Flood damage was minimal.
Northwest Coast	24-27				0	0	4	0			Coastal flooding
											A developing low moved northeast through the western Aleutians on Sept. 23 and into the northern Bering Sea late on Sept. 24. Winds to 40 miles an hour accompanied the storm. High tides and surf did minor damage on the southern Seward Peninsula Sept. 24-25. The low moved northward through outer Kotzebue Sound on Sept. 25, and caused flooding of some section of roads and several houses in Kotzebue on that day. The low continued a slow northeast track and was just west of Barrow on the 26th; moderate beach erosion occurred at Barrow on this day. The low rejuvenated about 300 miles north of Barrow on the 27th. Considerable beach erosion was observed at Barrow and the road from the Naval Arctic Research Lab south to the village of Barrow was cut on the 27th. The low weakened on the 28th.
ARIZONA			NONE REPORTED								
ARKANSAS Lake Mamelle - Western Pulaski County	3	8:00 a.			0	2	0	0			Lightning
											Two fishermen were injured when lightning struck their metal fishing boat.
Pulaski and Saline Counties	13	Morning and Afternoon			10	70	0	7			Heavy Rain/Flooding
											Heavy rain began falling a few hours before sunrise, and ceased around noon. Rainfall amounts of ten to thirteen inches were common with the largest total of fifteen and one-third inches falling at the ALCOA plant at Hauteville in Saline County. The heaviest hit areas were located along Rock and Fourche Creeks in Southwest Little Rock, and in several sections in and around Benton in Saline County. Eight of the fatalities occurred in Little Rock, and the other two occurred in Benton. Most of the fatalities were children or young adults.
											The losses included: 2 dwellings and mobile homes destroyed; 100 dwellings and mobile homes with major damage; 10 small businesses with major damage; and 908 dwellings, mobile homes, and apartments with minor damage. A total of 1,073 families suffered losses. Damage was estimated at over 25 million dollars.
Jackson, Cross, and Poinsett Counties	13	Morning and Afternoon			0	2	0	7			Heavy Rain/Flooding
											Rainfall amounts as large as fourteen inches fell on the counties. The heaviest hit areas were located in Cross County with most of the damage being confined to crops. Over 60 thousand acres of cotton and soybeans were lost. Other losses included: 2 dwellings destroyed; 2 mobile homes with major damage; and 59 dwellings with minor damage. A total of 72 families suffered losses. Damage was estimated at over 21 million dollars.
CALIFORNIA NORTHERN			NONE REPORTED								
CALIFORNIA SOUTHERN					0	0	5	0			
Inyo County	14-6	Tropical Storm Norma									caused flooding in Inyo County. Estimated damage of some \$ 300,000 to roads, bridges, channels, and private property.
Mono County	21				6	0	0	0			Winds as high as 65 mph were responsible for a boat capsizing on Mono Lake - 16 persons were drowned.
COLORADO Grand Junction	07	Afternoon			0	0	5	7			Flash flooding
											Several residents were evacuated as flood water damaged several homes. A bridge on Monument Road was swept away. A mobile home was washed 50 feet away and destroyed. Many basements were flooded and two feet of mud deposited around some homes. Several roads were damaged in Grand Valley. Considerable irrigation equipment was lost. Major damage was done to a power station, and major power and phone outages occurred. The storm was said by some people to be the worst cloudburst in 20 years.
Rio Blanco County	07	Afternoon			0	0	4	4			Flash flooding
											Flooding filled in two miles of irrigation ditches, destroyed three headgates, covered up a half mile of fence with debris, and spread debris over 35 acres of cropland. Some farm sheds were damaged.
CONNECTICUT			NONE REPORTED								
DELAWARE			NONE REPORTED								
FLORIDA Collier County	1	4:00PM EST			0	0	0	0			Waterspout
											A waterspout was observed for 10 minutes over the Gulf of Mexico 10 miles north of Naples.
Dade County	2	9:30AM EST			1	0	0	0			Lightning
											Lightning killed a farm worker in a south Dade County potato field. The victim's brother, approximately 30 feet away, was knocked to the ground but otherwise was uninjured.
Dade County	2	9:45AM EST			0	0	0	0			Funnel cloud
											A funnel cloud was observed briefly 12 miles west southwest of Miami International Airport.
St. Petersburg, Pinellas County	2	8:16PM EST			0	0	4	0			Wind
											Thunderstorm winds that reached 92 mph damaged 4 aircraft at the St. Petersburg-Clearwater Airport.
Dade County	3	12:25PM EST			0	0	0	0			Funnel cloud
											A funnel cloud was reported west of the Palmetto Expressway in North Dade County.
Indian River County	3	5:55AM EST			0	0	0	0			Funnel cloud
											A funnel cloud was reported 15 miles west of Vero Beach.
Dade County	4	8:55AM EST			0	0	0	0			Waterspout
											A waterspout was reported east of Key Biscayne.
Palm Beach County	4	3:08PM EST			0	0	0	0			Funnel cloud
											The Boynton Beach Police Department reported a funnel cloud 10 miles west of the city.
Volusia County	4	Afternoon 2/10	20	0	0	0	3	0			Tornado
											A small tornado damaged trees in the Deltora Golf Club area. There also was some minor damage to several homes.
Monroe County	5	12:15PM EST			0	0	0	0			Waterspouts
											Two waterspouts, moving northwest, were reported 8 miles northwest of Key West International Airport.
Brevard County	10	Afternoon			0	0	0	0			Waterspout
											A waterspout was observed for 10 minutes over the ocean 8 miles north of Sebastian Inlet.
Collier County	11	10:41AM EST			0	0	0	0			Waterspouts
											Everglades National Park Rangers reported several small waterspouts over Chockolokee Bay.
Monroe County	13	4:10PM EST			0	0	0	0			Waterspout
											The Florida Highway Patrol reported a waterspout south of Craig off Indian Key. It dissipated by 4:20PM.
Miami Beach, Dade County	14	3:50PM EST			0	0	0	0			Waterspout
											A waterspout dissipated as it came ashore on Miami Beach at 21st Street. There was no damage.
Flagler County	14	6:19PM EST			0	0	0	0			Waterspout
											A waterspout, moving southward, was reported by an aircraft a half mile east of Flagler Beach.
Monroe County	17	11:03AM EST			0	0	0	0			Funnel cloud
											A funnel cloud was observed southeast of the Key West International Airport.
Monroe County	17	1:40PM EST			0	0	0	0			Waterspout
											A westward moving waterspout was reported 8 miles west of Key West.

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FLORIDA (continued)									
Broward County	18	12:18PM EST			0	0	0	0	Funnel cloud
		A short lived funnel cloud was observed 10 miles southeast of the Fort Lauderdale Executive Airport.							
Palm Beach County	20	12:18PM EST			0	0	0	0	Waterspout
		A waterspout was reported offshore from Highland Beach in southern Palm Beach County.							
Dade County	22	7:45AM EST			0	0	0	0	Waterspout
		A waterspout was observed over the coastal waters of South Dade County.							
Volusia County	22	11:30AM EST	1/10	10	0	0	1	0	Tornado
		The Volusia County Civil Defense reported a small tornado at Oak Hill. There was no significant damage.							
Hillsboro County	23	1:00PM EST			0	0	0	0	Funnel cloud
		A funnel cloud was reported by a pilot over water 6 miles west of Sun City.							
Monroe County	23	2:05PM EST			0	0	0	0	Funnel cloud
		A funnel cloud was reported 6 miles west of Key West.							
St. Lucie County	25	9:00AM EST			0	0	0	0	Waterspouts
		Two waterspouts were reported by the Coast Guard 2 miles east of St. Lucie Inlet.							
Escambia County	26	9:30AM CST			0	0	0	0	Waterspout
		A waterspout, moving toward the northwest, was observed south of the Pensacola Naval Air Station.							
Volusia County	26	2:00PM EST			0	0	0	0	Waterspout
		A waterspout was observed briefly 5 miles northeast of Ormond Beach.							
Nassau County	26	2:45PM EST			0	0	0	0	Waterspout
		A waterspout was reported 3 miles southeast of the St. Marys River entrance.							
Duval County	26	2:45PM EST			0	0	0	0	Waterspouts
		Two waterspouts occurred simultaneously over eastern Duval County waters - one at the mouth of the St. Johns River and another over the Fort George Inlet.							
Okaloosa County	26	5:20PM CST			0	0	0	0	Waterspout
		A waterspout was reported 3 miles south of Fort Walton Beach.							
Volusia County	27	3:25PM EST	1/10	10	0	0	1	0	Tornado
		A pilot reported a small tornado touched down near the New Smyrna Beach Airport. It passed over the airport as a funnel aloft and touched down in a wooded area with no appreciable damage.							
St. Johns County	29	5:15PM EST			0	0	0	0	Waterspouts
		St. Johns County Sheriff's Office reported three waterspouts. Two occurred a half mile off St. Augustine Beach. The other was observed over the Inland waterway.							
Monroe County	30	9:09AM EST			0	0	0	0	Waterspout
		A waterspout was observed 5 miles west southwest of Key West Airport.							
Palm Beach County	30	6:00PM EST			0	0	0	0	Waterspouts
		Two waterspouts were reported over Lake Okeechobee.							
GEORGIA									
NONE REPORTED									
HAWAII									
15 mi SW of Diamond Head, Oahu	14	6:15p							Funnel clouds
		Two funnel clouds extended down 500 feet from cumulus clouds oriented in line. Showers in vicinity.							
1 mi NW of Kahuku, Oahu	24	3:00p-3:10p							Waterspout
		Waterspout extended down from towering cumulus cloud with base 2,000 feet and tops 8,000 feet. Funnel visible 500 feet down from base of cloud. Ocean surface churned. Waterspout moved towards southwest.							
IDAHO									
Blackfoot area, Bingham County	7	4:30 p.			0	0	3	0	Wind
		Strong winds knocked down trees onto power lines in three places.							
Mountain Home area, Elmore County	10	12:30 p.			0	0	2	0	Wind
		Strong winds during a thunderstorm blew picnic tables, a bench, and some roofing material from the roof of a restaurant. The bench hit an automobile parked at the restaurant causing minor damage. The tables were smashed.							
Mountain Home area, Elmore County	10	12:15 p.-1:30 p.							Funnels Aloft
		Seven funnel clouds observed in vicinity of Mountain Home. None observed to reach ground. At least 3 funnels were photographed.							
Southeast and South Central Idaho	17-18	Night			0	0	5	4	Snow and Wind
		A winter-like storm with snowfalls up to 8 inches in populated areas and up to 12 inches in the mountains damaged trees, power lines, telephone lines, and crops. The snow contributed to minor automobile accidents and vehicles were damaged by fallen tree limbs. Several schools without power on the 19th closed for the day. The heaviest damage was to power lines from fallen tree limbs, and lines weighted with snow and ice broke during strong winds. Grain fields were beaten down by the snow, and the moisture caused damage to grain and beans in the field and hay on the ground.							
ILLINOIS									
Henderson and Warren Counties	16	About 4:30am			0	0	?	?	Hailstorm
		Hail hit the Biggsville area in Henderson County and moved into Warren County. House windows were broken, roofs damaged, car windows cracked and crops slashed. The hailstones were reported by several observers to be at least as large as golf balls. Corn and soybean crops in the Biggsville-Gladstone area of Henderson County were the hardest hit.							
Northern Illinois	16-17	About 10:00pm 16th-18th- Early Morning 17th			0	2	6	6	Windstorm, Heavy Rain, Lightning
		Strong winds and heavy rains hit the northwestern part of the state beginning the night of the 16th, and continuing across north central Illinois and portions of northeastern Illinois into the early morning hours of the 17th. Wind gusts over 50 knots were recorded at Quad Cities Airport in Rock Island County, and also in Henderson and Henry Counties. Wind gusts overturned mobile homes, numerous trees and power lines. Several fires were started as the result of lightning strikes. Four parked aircraft were damaged by the high winds at the Quad Cities Airport. Another aircraft on the ground at the Warren County Airport north of Aledo was pushed by the fierce gusts and damaged. Barns were blown down, windows broken and several roofs damaged. Two residents of the Clover Leaf Mobile Home Park, Moline, Rock Island County, were treated at a hospital for injuries received when the high winds caused furniture to fall inside their mobile home. Much of the storm's fury was felt in Livingston County, where thousands of acres of corn and soybeans were washed out or flattered by the deluge of rain and high winds. Rain amounts of as high as 8 inches were reported. A major loss to property was in Campus, at the Hamilton Elevator. Three large grain storage tanks were hit by the strong winds. Four bins were a total loss and 2 others were damaged. Another hard hit area was about 4 miles north of Odell, where 2 farms suffered extensive damage. Three grain bins, a corn crib and crops were affected. Trees, a home and an auto were destroyed in Blackstone, and a trailer, auto and trees were lost in Cornell. At the Tabor Company grain elevator in Lostant, southern LaSalle County, 4 of 6 grain bins were twisted and crushed by the strong winds. In Bureau County, trees and power lines were downed and a couple was briefly trapped in a mobile home when a tree hit it during the storm. The area affected by the high winds, heavy rain and lightning included Rock Island, Mercer, Henderson, Warren, Henry, Knox, Bureau, southern LaSalle, northern Livingston, and northern Ford Counties.							
INDIANA									
Ft. Wayne Allen Co.	14	5:20 P							Funnel Cloud
		Off duty service employee sighted a funnel cloud on the north side of Ft. Wayne.							
Ft. Wayne Allen Co.	14	5:23 P							Funnel cloud
		Weather service personnel on duty sighted another funnel cloud northwest of city airport moving eastward.							

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IOWA									
Southeast Iowa	16	8-1130P			0	0	6	6	Severe Thunderstorms Hail, Wind
									Many severe thunderstorms developed over southeast Iowa. These storms produced three tornadoes (recorded separately), straight line winds of up to 80 MPH, periods of heavy rain, and hail. The winds blew the roofs off metal buildings, destroyed many old barns and outbuildings and uprooted trees which fell on power lines, houses and cars. The hail, up to size of tennis balls dented cars, broke windows and destroyed crops.
1 mile S Rhodes to 1 mile S Melbourne (Marshall County) to 3 mile S Grinnell (Poweshiek County)	16	825-903P	26	200	6	45	6	6	Tornado
									The tornado formed in southern Marshall County near Rhodes and moved east to 1 mile south of Melbourne and then moved southeast. The tornado skipped along its path destroying many farms and a mobile home which were located mainly on the top of hills. Two people were killed and another was seriously injured. The tornado passed over Rock Creek State Park, then hit more farms and finally slammed into a business area at the intersection of 180 and Route 146 3 miles south of Grinnell. Four people were killed while in their automobiles and many others injured from flying debris.
Oskaloosa Mahaska County	16	935P	1	100	0	1	5	0	Tornado
									The tornado touched down in the southwest part of town and moved northeast. Most of the damage occurred to the roofs of many businesses and houses. Many trees lost their tops. A man was injured by flying glass.
Keomah Mahaska County	16	945P	.5	100	0	0	5	0	Tornado
									Tornado touched down in the southwest section of town and moved northeast. Most of the damage occurred to roofs of businesses and homes. Many trees lost their tops.
4 mile W New Sharon Mahaska County	19	845P	---	---	---	---	---	---	Funnel Cloud
									Funnel dropped out of the clouds, lasted about one minute and then dissipated. Funnel was moving east.
KANSAS									
Douglas County	4	7-7:10P					3	3	Hail
									Thunderstorms moving northeast were accompanied by hail and heavy rain. Scattered hail to 1-3/4 inches in diameter was reported from Clinton to south part of Lawrence. Only minor tree, roof, and crop damage was reported.
Mitchell County	12	8:20 p					5	?	Hail
									Thunderstorms moving northeast produced local hail, heaviest around Beloit, with some hailstones to 2-1/2 inches in diameter. Damage was to cars, roofs, trees and utility lines. Crop damage was minor.
Marion County	13	3:00 p					4	0	Wind
									A thunderstorm moving northeast was accompanied by strong and gusty winds. Considerable damage to campers and trailers occurred at Marion Lake where winds of 85 mph were reported.
Butler County	13	6:00 p	-	-	0	0	5	0	Tornado
									A funnel cloud moving east touched down briefly at Leon damaging a school bus and several buses inside.
Osage County	13	6:02 p					6	0	Wind
									A thunderstorm moving east generated extremely strong winds. Damage was heaviest in and near Osage City. Winds struck hardest at the west part of the city damaging 2 houses, a filling station, a store roof and a mobile home park. 12 mobile homes were destroyed and 6 others were heavily damaged. Debris was strewn east for about 5 blocks. Damage to trees, utilities and roofs was almost city-wide.
Necoho County	13	9:00 p					5	0	Wind
									Strong winds of 60 mph with a thunderstorm moving southeast caused damage to trees, homes, and businesses with heaviest damage around Galeburg.
Butler County	15	3:30 a					5	0	Wind
									Wind with a thunderstorm moving northeast was measured at 70 mph. Scattered tree and utility line damage was reported in the north portion of the county and an aircraft was damaged at the Redwing airport near Augusta.
Geary County	15	6:00 p					0	0	Hail
									Thunderstorms moving northeast produced local hail with some hailstones up to 3/4 inch in diameter just west of Junction City. No significant damage was reported.
Marion County	16	3:30 p					3	0	Wind
									Thunderstorms moving southeast were accompanied by gusty winds estimated to 85 mph just west of Marion. Damage was to trees and power lines.
Sedgwick County	17	2:00 a			0	1	5	0	Lightning
									Severe lightning with a thunderstorm in south Wichita caused six trailers loaded with fireworks to explode. A Civil Defense worker was injured by the fire that followed. Two houses were damaged by lightning caused fires.

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KANSAS (continued)										
Edwards, Stafford, Parnas, and Barton Counties	17	12:30 - 2:00 p						6	0	Wind
										A squall line oriented north northeast-south southwest moved east rapidly through these counties with numerous severe thunderstorms. Damage was to buildings, trees, grain storage, and irrigation equipment.
Clay and Dickinson Counties	17	2:00 - 4:30 p						5	0	Lightning
										Thunderstorms moving east produced considerable cloud to ground lightning. A hardware store in Clay Center was struck and destroyed by a resultant fire. A hayshed near Abilene containing 4,000 bales and equipment was struck and destroyed by fire.
Reno County	17	5:35 p			1	0	0	0	0	Wind
										Thunderstorms moving northeast caused strong gusty winds. One person was drowned at Cheney Reservoir when a boat was overturned by winds estimated to 70 mph.
Greenwood County	17	8:15 p	2	7	0	0	4	0	Tornado	
										Apparent small tornado or damaging wind caused damage along a narrow path just east of Virgil on east. Trees were uprooted and damage was to fences, barn, and feed bunks.
Jefferson County	29	Afternoon			0	1	0	0	0	Lightning
										A man sowing wheat near Oskaloosa was knocked from his tractor by lightning. Although hospitalized, his injuries were found to be minor.
KENTUCKY										NONE REPORTED
LOUISIANA										
Cameron Parish	3	2:50 PM	Brief	15	0	0	0	0	0	Tornado
										Tornado reported by Air Logistics helicopter pilot near Creole
Vernon Parish	14	5:45 AM	5	75	0	2	5	4	Tornado	
										Damage extended from about 5 miles southeast of Toledo Bend Dam across LA Hwy 111 to about 10 miles west of Anacoco. Two men were injured at Coins Service Station when roof was ripped away. Two mobile homes were knocked off foundations; several barns destroyed; cars and tractors damaged by falling debris; a grocery damaged. Extensive tree damage occurred along a narrow path that skipped and jumped for about five miles through the forest.
Northwestern Parishes	13-14	Night-Morning			0	0	4	4		Excessive rains & flash floods
										Excessive rains over parts of east Texas extended into southwestern DeSoto and northwestern part of Sabine Parishes with 8-10 inches total rainfall. Flooding occurred in Logansport and surrounding rural areas with most of damage to roads.
Northeastern Parishes	14-15	Night-Morning			0	?	7	6		Excessive rains & flash flooding
										The same system that caused heavy rains earlier in northwest Louisiana and east Texas redeveloped during the night of Sept. 14 over northeast Louisiana. Rains over 10 inches in Monroe resulted in serious flooding in Ouachita and Richland Parishes.
										Damages were estimated at \$25,000,000 in the more than 3000 homes and businesses that were flooded by water that reached the ceiling of buildings in some cases around Ouachita Parish. A nursing home in West Monroe, the state police headquarters, plus many homes in Monroe had to be evacuated. A TV station suffered heavy damage. Six bridges and numerous roads were washed out or damaged. A pilot of a police helicopter was injured in a crash while attempting to lift off from a flooded area.
										About 175 homes in Richland and Madison Parishes, including towns of Start and Rayville, were flooded.
MAINE										NONE REPORTED
MARYLAND & D.C.										
North Central	12	8:00 p-10:00 p			0	0	3	0		Lightning, Rain
										Series of heavy thunderstorms moved thru the area in advance of a southward-moving cold front. An estimated 8,000 homes had power outages during the storm, and some minor flooding was also reported. In an indirectly-related incident, four workers of pigment plant in Baltimore were treated for mild chlorine gas inhalation. Gas had apparently built up in pipeline due to loss of power, and then leaked into room where men were working to relieve pressure in the line. Estimated damage to power facilities from lightning: \$800.
Madonna (nr), Harford County	12	10:00 p			0	0	3	0		Lightning
										Lightning-caused fire did heavy damage to one side of unoccupied one-and-a-half story home. Estimated damage around \$3,000.
Eastern Shore	18	Early Morning			0	0	0	0		Fog
										Very thick fog blanketed much of the area and was partially responsible for several traffic accidents.

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MASSACHUSETTS									
Eastern portions	9	All day			0	0	5	0	Wind
									Strong northerly winds gusting to 50 knots caused the sinking of numerous pleasure and commercial boats.
Whitman	11	Afternoon			1	16	0	0	Lightning
									A bolt of lightning struck a field where football practice was being held. As the storm approached the team and coaches ran for shelter, but while running a young coach was hit in the head by lightning and killed. Sixteen other players were stunned and some were knocked to the ground.
MICHIGAN									
An area East and South of Adrian, Brinton, Bay City and Forestville	1-11	Entire Period			0	0	0	0	Drought
									Below normal rains of July and August continued into mid-September causing extensive damage to many field crops. Corn, Soybeans, Dry Beans, Sugar Beets and Hay crops were hardest hit. Some specialized crops such as tomatoes and sod farms also suffered damage.
New Baltimore, St. Clair	10	1:00 PM			0	2			Lightning
									Struck two men while they were golfing in the rain.
2 1/2 SSN Battle Creek, Calhoun	10	Afternoon			0	2			Lightning
									Two men struck while positioning a sail boat under an electric hoist on Gouac Lake. Both men were knocked into the water with one suffering temporary numbness in both legs.
An area south of Iron River and Escanaba	10-11	Afternoon Early Morning			0	0	4		Thunderstorms
									Several storms moved through the area downing trees and power lines. A tree damaged a car in Mendon and a trailer in Kingsford. Also in Kingsford, a warehouse lost a 90x30 foot section of roof. Scattered power and telephone outages occurred throughout the area.
Houghton and Extreme northern Baraga counties.	11	1-8 AM			0	0	5	0	Flash Flood
									Several thunderstorms developed over the area and remained about stationary throughout the period, resulting in 3 to 5 inch rains. Extensive damage was done to culverts, small bridges, roads, and one railroad bed. Some first floor and basement flooding occurred in downtown Houghton and L'Anse. Numerous cars were reported floating in a college parking lot in Hancock. U.S. Highway 41 and Michigan Highway 26 had to be closed after high water began stalling out car engines. Houghton, Hancock, and Rabbit Bay areas hardest hit.
2 West Frankfort, Lake Michigan	11	7:30 PM							Waterspout
									Sighted numerous times by the Coast Guard.
An area south of Muskegon & Detroit.	12	Early Morning			0	0	5		Lightning
									Numerous bolts struck throughout the area shattering tree limbs, knocking out line poles, and setting fire to homes in Grand Rapids, and Hubbardston and a barn in Oshtemo. A cable TV tower was hit in South Haven destroying a TV set and knocking the station off the air. Three homes in Monroe also suffered minor fire damage after a bolt struck a nearby utility pole.
Kalamazoo, St. Joseph counties.	17	3-5 AM			0	0	5		Lightning
									Lightning set fires heavily damaged a home in Kalamazoo and did 45,000 damage to a barn and two silos in Centreville.
Berrien, Grand Traverse counties	17-18	Evening & Early Morning			0	0	4		Heavy Rains
									Rain water collecting on flat roof surfaces caused a warehouse roof in Traverse City and a business building roof in Benton Harbor to collapse. Both structures were heavily damaged along with their contents.
Vassar, Tuscola	20	4:00 PM							Funnel Cloud
									Sighted by a Deputy Sheriff.
5 SW Sandusky, Sanilac	20	5:00 PM							Funnel Cloud
									Sighted by the Deputy Sheriff of Sanilac County. The funnel was moving northeast at approximately 40 MPH.
MINNESOTA									
2S Milaca, Mille Lacs County	5	2:40A			0	0	4	0	Lightning
									Barn and contents completely destroyed by Fire from lightning strike.
New London, Kandiyohi County	11	9:00A			0	0	4	0	Wind
									Winds in excess of 70 mph ripped part of roof and caved in a wall of mobile home. A second mobile home moved off foundation.
Janesville, Waseca County	12	8:00A			0	0	4	0	Wind
									Winds exceeding 70 mph associated with thunderstorm caused considerable damage north and east of town. Wall blown out of cement block shed. Mobile home destroyed. Two barns heavily damaged.
MINNESOTA (continued)									
Rochester, Olmsted County	12				0	0	5	0	Heavy rain
									Heavy rainfall of 5.98 inches resulted in some flooding of roads, and forced some small creeks out of their banks. Zumbro River crested at 13.1 feet at 4PM on the 15th. Many streets flooded due plugged storm sewers with traffic backed up for blocks. Some power outages reported.
Alexandria, Douglas C.	12	11:30A			0	0	5	0	Lightning
									Lightning struck a gasoline storage tank with 210,000 gallons of gasoline. Nearby community fire rigs and volunteer help control the fire. Three inches of rain in the storm help firemen as did a brisk west wind help keep flames away from a storage tank nearby.
NE Kittson County	13	1:00AM			0	0	4	5	Hail
									Hail the size of golfballs hit scattered areas of northeast Kittson County. Windows in homes and cars broken and much damage to roofs and siding. Crop damage will be extensive but difficult to estimate at this time.
Sherburne County	16	10:00AM			0	0	4	4	Strong Winds, Hail
									A brief wind and hail storm cut a path five miles long and one and a half mile wide between Elk Lake and Zimmerman. Winds of 65 mph or more along with hail of 3/4 inch in diameter. Trees and power line poles down on homes and cars. Windshield wiper blades ripped from squad car as storm struck. Crop damage unknown at this time.
St. Cloud, E. Stearns County	16	10:29A			0	0	6	0	Strong wind
									Winds of 59 mph or more collapsed a hangar in 17 aircraft... Five had heavy damage, 4 moderate damage and 8 received light damage. Trees blown down and Radio Station WJLD off the air for short time. Pea size hail covered the ground for a time during the storm. Unusual fact was wind in south part of town was from the North while wind at Airport was from the South.
MINNESOTA									
Ortonville	11	7:40PM							Funnel cloud
MISSISSIPPI									
Hinds County	13	1:00 p.			2	0	0	0	Thunderstorm, high winds.
									Two persons were drowned in Whites Lake 4 miles north of Bolton when their boat capsized during a thunderstorm. Other fishing boats on the lake made it to shore before the storm struck.
MISSOURI									
Odessa, Clay County	2	7 am	?	?	1	0	0	0	Lightning
									An 18-year-old man was killed when struck by three bolts of lightning as he worked at a construction site on Route F where his company was preparing for highway construction.
Jackson County	13	9 pm	?	?	0	0	4	0	Lightning
									Lightning struck a cattle barn owned by Matthew Johnston on U. S. 24. 500 bales of hay and straw and 12 of the 14 Holstein calves in the barn were lost. The loss was estimated at \$5000 just for the contents of the barn.
Buchanan and Clinton Counties	16	5:30 pm	?	?	0	0	4	3	Severe Thunderstorm
									Severe thunderstorms in northwest Missouri produced torrential rains, large hail, and damaging winds. Hail about an inch in diameter pelted the News-Press building in St. Joseph about 6 pm, while even larger hail was reported in the north part of St. Joseph and in the Agency area southeast of St. Joseph. Wind demolished a large barn on the Virgil Babcock farm northeast of Faucett. Lightning struck the Babcocks' other barn, but Fire Department volunteers' quick action minimized the damage to the building. Worst hit was the town of Gower. There, a large tree crashed through the northwest corner of the Witt house and landed on a bed. The house suffered extensive damage. A relatively new metal building at the Gower Lumber Company was destroyed, and the roof was torn off the office of the Gower Swim Club. Many trees were uprooted and limbs torn off, in turn downing power lines and damaging cars. Many roofs were damaged by wind and hail, and there was much other general property damage. The rain, although badly needed for the soybean crop, came so fast that it caused many fields to be badly washed, and most low-lying river bottom crops were covered with water.
Schuyler County	16	pm	?	?	0	0	0	3	Heavy Rain
									Creeks were out and crops badly washed after the county received over 5 inches of rain that evening.
Amazonia, Andrew County	17	12 am	?	?	0	0	3	0	Flesh Flood
									Heavy thunderstorms dumped almost five inches of rain in Buchanan County, forcing several families to flee from their homes in high water from Dillon Creek. One home belonging to the Sisk family suffered heavy damage when linoleum floors buckled, rushing waters washed the front porch 10 feet to the left of the front door, both of their cars and motorcycle were submerged, and the inside of the TV set on the coffee table was left with a coat of mud after the waters receded.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1978

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
MONTANA									NO REPORT RECEIVED
NEBRASKA									
Lincoln County	1	1:00 AM			0	0	3	0	Lightning
									Fire started by lightning destroyed school roofs of a church at Sutherland.
Hall, Merrick, Hamilton, Clay, and Fillmore Counties	1	6:05 PM - 8:30 PM			0	0	5	7	Damaging Winds and Hail
									Strong winds and hail to 1 1/2 inches in diameter in thunderstorms caused damage in a three to six mile swath from Grand Island southeast to an area northwest of Geneva. Corn and milo crops were heavily damaged. Windows were broken on cars and homes, and roofs and siding sustained damage. Some farm outbuildings were blown down and a number of livestock were killed.
Burt County	1	7:10 PM			0	0	3	0	Lightning
									Fire started by lightning heavily damaged the second floor of a home 5 miles west of Tekamah.
Burt County	1	7:20 PM			0	0	0	0	Funnel Cloud
									A funnel cloud was sighted 4 miles south of Decatur.
Lancaster and Cass Counties	2	1:00 AM - 2:30 AM			0	0	5	6	Hail
									Hail up to 1 and 3/4 inches in diameter in severe thunderstorms and gusty winds caused damage in an area from Malcom eastward to South Bend. Corn and milo crops were heavily damaged. Autos were dented and had windshields broken and homes sustained roof, window and siding damage. The hail drifted to a depth of 6 inches at Malcom.
Johnson County	2	2:40 AM			0	0	3	0	Lightning
									Lightning set fire to the attic of a home at Tecumseh causing moderate damage.
Frontier, Gosper, Custer and Dawson Counties	11	3:00 PM - 4:30 PM			0	0	4	6	Damaging Winds and Hail
									Winds to 70 m.p.h. and hail upwards to 1 1/2 inches in thunderstorms damaged crops and buildings, and uprooted trees in an area from Eastis through Cozad, Lexington to Mason City. The wind toppled a tower of KRWN Radio at Lexington.
Frontier and Dawson Counties	11	3:10 PM - 3:45 PM	20	20	0	0	4	3	Tornado
									A tornado touched down at intervals from 5 miles southeast of Eastis to 7 miles northeast of Cozad. Path was mainly in open country but a home was heavily damaged 3 miles east of Cozad. Trees were uprooted, utility lines damaged, and irrigation units destroyed along with a few farm buildings.
Sherman, Howard, Buffalo, Hall, Phelps and Kearney Counties	11	4:30 PM - 6:45 PM			0	3	6	6	Damaging Winds and Hail
									Seventy to eighty m.p.h. winds and hail 1 to 2 inches in diameter caused extensive crop and property damage. Buildings sustained roof, window and siding damage and autos were dented and had windshields broken. Particularly hard hit was the Kearney area where a prefab school was destroyed northwest of town. A home roof was torn off and numerous trees and utility lines down. Two persons were injured at Kearney when a truck was blown over, and a person was injured at the college when the wind blew windows out. Also receiving heavy damage was the area around Ashton and Loup City where 2 1/2 inch hail fell and a number of barns were blown down.
Kearney County	11	5:30 PM			0	0	3	0	Lightning
									Lightning set fire which partially destroyed a barn northeast of Minden.
Adams and Hall Counties	12	8:25 PM			0	0	0	3	Hail
									Three quarter inch hail fell around Kenesaw and Prosser causing scattered crop damage.
Douglas County	13	1:30 PM			0	0	0	2	Hail
									One and a half inch hail fell briefly south of Elkhorn causing minor crop damage.

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
NEBRASKA (continued)									
Pawnee County	13	4:20 PM - 4:35 PM	6	10	0	0	3	1	Tornado
									A tornado observed 5 miles west and 2 miles north of Pawnee City touched down at intervals as it moved to the Table Rock area where it damaged trees, signs and a building.
Richardson County	13	5:30 PM			0	0	3	4	Damaging Winds
									Strong winds in a thunderstorm flattened corn, blew down trees and damaged outbuildings on a number of farmsteads 9 miles north of Falls City.
Pawnee County	17	Afternoon			0	1	0	0	Lightning
									A farmer was struck by lightning near Burcharth.
Gage County	17	Afternoon			0	0	0	3	Lightning
									Lightning set fire to a large stack of hay near Adams.
Jefferson County	20	Early Morning			0	0	5	0	Lightning
									Fire started by lightning completely destroyed a home near Reynolds.
Kimball County	25	Morning			0	0	3	0	Damaging Winds
									High winds blew over a semi truck south of Kimball.
NEVADA									
Las Vegas	4						4		Thunderstorm
									Local flooding--little damage.
NEW HAMPSHIRE									NONE REPORTED
NEW JERSEY									
Pennsauken and Camden	12	pm			0	0	0	0	Heavy downpour and flooding.
									A brief but heavy downpour hit causing flooding and rain-slicked roadways. There were several injuries but not due to flooding.
NEW MEXICO									
Southeast New Mexico - Mainly Eddy and Lea Counties	21-26	Continuous			0	0	5	?	Heavy Rain, Flooding
									Rain began morning of the 21st and continued with hardly a break through daylight hours of the 26th. Continuous easterly surface winds through the period with upper flow from south bringing atmospheric moisture from Mexico. Storm totals of rain ranged from 7 and 8 inches Carlsbad area to 10 inches at Carlsbad Caverns and 17 inches at McKittrick Canyon. Arroyos flooded over highway crossings at 3-foot depths. Many roads closed and fields flooded. Heaviest rain on the 25th and 26th.
NEW YORK									
COASTAL									NONE REPORTED
NEW YORK									
CENTRAL AREAWIDE	11	1P-9P			0	3	5	?	THUNDERSTORMS
									THREE PERSONS WERE INJURED WHEN STRUCK BY LIGHTNING IN THE WATERTOWN AREA (JEFFERSON COUNTY.) NUMEROUS LIGHTNING FIRES WERE REPORTED WHICH INCLUDED HOMES, BARN, SHEDS, TREES, BRUSH, ETC. NUMEROUS DOWNED TREES AND POWER LINES CAUSED WIDESPREAD POWER OUTAGES. HEAVY RAIN AND STRONG WINDS OCCURRED LOCALLY THROUGHOUT THE AREA.
NEW YORK									
WESTERN AREAWIDE	10	PM of 10th - 12 to AM 12th			2		5		Lightning, heavy rain, strong winds
									A series of intense thunderstorms passed across much of Western NY between the afternoon of the 10th and the early morning of the 12th. The most unusual characteristic of the storms was the intense lightning which caused many power outages and several fires. A Henrietta woman received 1st degree burns and was knocked down by a lightning strike as she closed a window in her home in the afternoon of the 11th. A Barre man was knocked unconscious by a lightning strike as he made a phone call during the very early morning of the 12th. No permanent injuries resulted. Some strong winds combined with lightning caused some tree and building damage in Seneca Falls and Canandaigua lake on the 11th and during the early morning of the 12th. The Dewitt-Fayetteville area also reported some drainage flooding problems with heavy rain.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1978

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
NORTH CAROLINA									
New Hanover County	1st	6:38PM	-	-	0	0	0	0	Waterspout
	Waterspout sighted 3 miles south of Masonboro Inlet.								
New Hanover County	1st	7:00PM	-	-	0	0	0	0	Funnel Clouds
	Funnel cloud sighted near Masonboro inlet and east of Wrightsville Beach.								
Sampson County	10th	Afternoon	-	-	0	1	0	0	Lightning
	A woman in Turkey was struck by lightning when a bolt came through the telephone and hit her in the back. She received several burns.								
New Hanover County	14th	3:15PM	-	-	0	0	0	0	Hail
	Marble sized hail fell in the eastern part of Wilmington.								
Caldwell County	22nd	4:37PM	-	-	0	0	0	0	Funnel Cloud
	Pilot reported a funnel cloud 10 to 20 miles northwest of Hickory.								
NORTH DAKOTA									
Bismarck (Burleigh County)	10	3:50 a CST	-	-	0	0	3	0	Lightning
	Lightning set a garage on fire.								
Griggs County	11	10 am to 1 pm CST	-	-	0	0	3	0	Lightning
	Lightning killed seven head of cattle; set a barn on fire and set a house on fire.								
Grand Forks (Grand Forks County)	11	4:07 p CST	-	-	0	0	4	0	Wind, Heavy Rain
	Winds of 58 mph knocked down power lines and a few trees. Heavy rains flooded basements and underpasses.								
Richardton (Stark County)	11	4:30 p CST	-	-	0	0	0	0	Wind
	Winds of 60 mph. No damage reported.								
Taylor (Stark County)	11	4:35 p CST	1.0	133	0	0	0	0	Tornado, Wind
	Tornado touched down briefly in open country. Winds of 75 mph recorded during the storm. No damage reported from winds or tornado.								
SNE Carson (Grant County)	11	4:45 p CST	-	-	0	0	4	0	Wind
	High winds destroyed two old barns and damaged many buildings.								
7N Hebron (Morton County)	11	5:00 p CST	-	-	0	0	5	0	Wind
	Winds of 75 mph demolished several barns; downed power lines, and knocked over numerous trees.								
Bismarck (Burleigh County)	11	5:00 p CST	-	-	0	0	4	0	Wind, Heavy Rain, Lightning
	Winds of 58 mph. No wind damage reported. Lightning strikes burned 1500 hay bales and a storage shed. Heavy rains flooded some road underpasses.								
Mapleton (Cass County)	11	9:30 p CST	-	-	0	0	0	0	Wind
	Winds of 65 mph. No damage reported.								
Fullerton, Edgeley, Lisbon (Dickey, LaMoore and Ransom Counties)	11	Afternoon and Evening	-	-	0	0	5	3	Heavy rains, Wind, Lightning
	Heavy rains caused street and basement flooding. Some sunflower fields were damaged in Ransom County by a combination of heavy rain and wind. A house in rural Lisbon was set on fire by a lightning strike.								
Northeast Towner, Cavalier and Pembina Counties	11	Evening	-	-	0	0	0	4	Wind and Rain
	Some sunflower fields were damaged by a combination of rain and strong winds.								
Williston (Williams County)	12	1:34 a CST	-	-	0	0	4	0	Wind
	Winds of 54 mph toppled numerous trees.								
Hanks (Williams County)	12	Early morning	-	-	0	0	4	0	Wind
	High winds blew the roof off the city museum. Debris from the museum roof smashed a hole in an old school building.								
Taylor (Stark County)	12	3:30 p CST	-	-	-	-	-	-	Funnel
Cuba (Barnes County)	25	7:00 p CST	-	-	0	0	0	0	Hail
	Golf ball size hail. No damage reported.								
OHIO									
Cuyahoga County	12	Aftn	--	--	0	3	3	0	Lightning
	Thunderstorms moved through the Greater Cleveland area. Lightning struck and injured two boys as they walked across a baseball field in Middleburgh Heights. A 15-year old girl was injured when lightning struck an umbrella she was carrying as she walked to school in East Cleveland. Lightning strikes also started several minor fires.								
Northwest	12	--	--	--	0	0	4 ⁰	C	Dry Spell
	Unusually dry weather for the last four weeks heavily damaged soybean, melon, and sweetcorn crops in northwest Ohio.								
Perry Township Pike County	14	5:30 pm	5	400	0	2	4 ⁰	C	Tornado
	A tornado touched down in a rural area damaging farm buildings and about 20 acres of corn and 5 acres of tobacco. Two people suffered minor injuries when their home was damaged.								
Buckeye Lake Area Fairfield, Perry, and Licking Counties	14	7:00 pm	4	100	0	0	5	0	Tornado
	A tornado did hit-skip damage to many homes in the Buckeye Lake area. The storm first touched down on the southern shore of the lake east of Millersport, crossed the lake and dissipated near route 13 just south of I-70.								
OKLAHOMA									
Near Wilburton, Latimer County	3	4:45 p	-	-	0	4	0	0	Lightning
	Three men were injured at Robbers Cave State Park near Wilburton when lightning struck a tree they were sitting under. One person was hospitalized for burns on his back, another had burns on his feet, and the third experienced walking difficulties. A woman standing under a nearby shed was hospitalized because of a hearing loss.								
Near Lawton, Comanche County	5	5:00 p	1/2	20	0	0	0	0	Tornado
	A small tornado touched down northeast of Lawton on the Fort Sill Military Reservation. It was on the ground for about a minute before dissipating. While on the ground the tornado moved toward the north. Observers said the long, thin, rope-like funnel resembled a large dust devil. There was no damage.								
Edmond, Oklahoma County	6	12:25 a	-	-	0	0	5	0	Lightning
	Lightning struck a home in Edmond causing a fire that completely burned the structure down.								
Near Weatherford, Custer County	18	8:00 p	-	-	0	2	4	0	Wind
	Thunderstorm winds estimated at 50 miles an hour demolished a mobile home just west of Weatherford. Two persons inside were injured - one serious enough to be hospitalized.								
OREGON									
PACIFIC									
Between Gagan and Gellinan Islands, Kwajalein Atoll	14	3:10p	-	-	-	-	-	-	Waterspout
PENNSYLVANIA									
EASTERN									
Franklin, Montgomery and Bucks Counties	12	4 PM to 11PM EDT	-	-	0	0	5	0	Wind, Electrical
	Lightning caused power outages to over 3,000 customers. It also ignited one house fire in Franklin County and killed a dog in Montgomery County. High wind gusts destroyed 10 townhouses under construction and uprooted trees in Horsham Township, Montgomery County.								
Luzerne, Carbon, Lehigh, Berks, Montgomery and Berks Counties	18	7PM to 11 PM EDT	-	-	0	0	4	0	Heavy Rain Electrical
	Thunderstorm downpours caused widespread roadway flooding in Lehigh, Berks, Bucks and Montgomery Counties with some basement flooding in Allentown. Lightning strikes caused power outages to over 5,000 customers, some as long as 6 hours. Lightning also damaged two buildings in Quakertown.								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1978

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
PENNSYLVANIA (continued)									
WESTERN Garrison (Greene Co.)	3	Eve			0	0	?	0	Thunderstorm Wind
									A barn several hundred yards from the village was destroyed by high winds, and some treetops were snapped.
Meadville	10	Late Aftn			0	4	4	0	Thunderstorm Wind Lightning
									Four persons were injured at Oak Grove Park when lightning struck a tree and travelled through the ground to a nearby picnic shelter where the victims stood. All were knocked to the ground, and three were later hospitalized. Seven homes in the area were also struck by lightning. Extensive damage to electrical lines was reported. One radio station in the area was knocked off the air for about an hour. High winds felled a number of trees. Heavy rains temporarily flooded some roadways. Small hail was reported.
Uniontown	12	Late Aftn			0	0	0	0	Rain
									Nearly three and one half inches of rain fell during a five hour period beginning about 3:30pm at Chalk Hill (5 miles southeast of Uniontown). Several Uniontown streets were flooded and numerous cars along these routes were stalled.
Portersville	14	11pm			0	0	0	0	Lightning
									Lightning struck a house on Oneida Valley Road causing minor damage.
Boalsburg	18	4:30am			0	0	?	0	Lightning
									Lightning struck a barn five miles east of town starting a fire which destroyed the structure and farm equipment within.
Highland Township (Elk Co.)	18	6:15pm			0	0	?	0	Thunderstorm
									Thunderstorms uprooted trees and downed power lines. One mobile home was damaged. The storm may have been a small tornado since most damage occurred along a path 350 feet wide.
Johnsonburg	18	Night			0	0	?	0	Rain
									Over two inches of rain washed but dirt roads and alleys and flooded basements.
Butler Township Butler Co.	21	Eve			0	0	?	0	Lightning
									Lightning struck a gas shed housing regulators and valves, sending flames fifty feet into the air. Fire officials evacuated 1000 families from the towns of Meridian and Lyndora due to gas line seepages.
Conneautville	29	Eve			0	0	4	0	Lightning
									A barn was destroyed by fire after it was struck by lightning. Farm machinery within was also destroyed.
PUERTO RICO									
Vieques Sound	9	6:00 p.			0	0	0	0	Waterspout
Vieques Sound	17	11:15 a.			0	0	0	0	Waterspout
Vieques Sound	18	1:15 p.			0	0	0	0	Waterspout
Vieques Sound	23	2:30 p.			0	0	0	0	Waterspout
RHODE ISLAND									
					NONE REPORTED				
SOUTH CAROLINA									
					NONE REPORTED				
SOUTH DAKOTA									
Edmunds, Southeast Mc Pherson and northern Brown Counties	11	4 PM CDT			0	0	0	4	Hail
									Hailstones near one inch in diameter fell in the east central portion. No injuries were reported.
Cook, Southern Lake, Northwestern Minnehaha and Moody Counties	11	7:12 PM CDT			0	0	3	0	High Wind
									Several severe thunderstorms caused high winds of 65-70 MPH. Minor property damage reported.
Codington County	11	7:35 PM CDT			0	0	3	0	High Wind
									Several severe thunderstorms caused wind gusts to near 65 MPH. Roofs of several barns were damaged.
Perkins County	18	8 PM CDT			0	0	4	0	High Wind
									High winds near 70 MPH blew over light towers and overturned several mobile homes.

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					KILLED	INJURED	PROPERTY	CROPS	
TENNESSEE									
Defeated, Smith County	10	1:00 p.						4	High wind and hail
									Trees and power lines down. Large hail destroyed the tobacco crop.
Greenback, Loudon County	10	1:30 p.						4	High wind and hail
									Extensive damage to the area's apple and tobacco crops. Barns were unroofed and the hay with it destroyed.
Smithville, DeKalb County	10	1:30 p.						4	High wind and hail
									Hail, some the size of golf balls, damaged local crops.
Byrdstown, Smyrna Community, Plain Grove and Ether Community, Pickett County	10	1:45 p.						4	High wind and hail
									Golf-ball-size hail damaged the local corn, late apple and tobacco crops.
Morrisston, Hamblen County	10	1:55 p.						4	High wind and hail
									Numerous acres of the local crops were destroyed by the large hail.
TEXAS									
NORTHERN									
Eastland County	4	2:15 p			0	0	?	?	Hailstorm
									A severe thunderstorm developed over north and central Eastland County. One inch hail was observed by a cooperative observer at Eastland.
Parker and Tarrant Counties	4	3:00 p - 6:00 p			0	0	5	?	Windstorm
									A severe thunderstorm developed in Ellis County and moved into Tarrant County. Around 5 PM high winds damaged the roofs of two houses in Benbrook and RACES storm spotters reported 70 mph winds in Afredo with very heavy rain.
Dallas County	4	4:15 p - 6:30 p			0	0	6	?	Windstorm
									The severe thunderstorm intensified over Dallas County. Around 4:30 PM winds ripped off a store roof and blew down several signs in West Dallas near Irving. Building damage also occurred west of downtown Dallas. In Oak Cliff winds estimated near 100 mph tore off the roof of a carport and blew down two 25-foot trees. Power lines were blown down in both West Dallas and Oak Cliff. One-half inch hail and winds to 55 mph were reported at Mesquite. Damage was also reported at the Marton Foods Plant on Denton Drive and Sowell Plastics, Inc. on St. Germain, both in Dallas. Most damage from the windstorm was concentrated in an area bounded by Westmoreland Road on the west, Mockingbird and Lemmon on the north, Stemmons Freeway on the east and the Dallas-Fort Worth Turnpike on the south.
Heath, Rockwall County	4	4:30 p			0	0	4	?	Windstorm
									A portion of the severe thunderstorm in Dallas County extended over into Southwest Rockwall County. Straight line winds in Candlelight Park, located in Heath, blew down a fence, blew away metal and wooden storage houses and damaged chimneys and roofs of several dwellings.
Johnson County	4	5:15 p			0	0	?	?	Funnel Aloft Lightning Strike
									The thunderstorm in Tarrant and Dallas Counties moved into Johnson County producing a funnel cloud between Granbury and Cleburne. Lightning set off a small grass fire near Cleburne with no significant damage reported.
Wichita and Eastern half Milbarger County	5	7:45 p			0	0	5	?	Windstorm
									Severe thunderstorm straight line winds damaged a hangar and five aircraft at Wichita Valley Airport, located approximately 8 miles west southwest of the Wichita Falls WSO.
Nacogdoches, Nacogdoches County	11	1:00 p			0	0	3	?	Tornado
									A tornado touched down 2 miles west of Loop 224 on Highway 7 in Nacogdoches and damaged a small building and some trees.
Shelby County and Panola	14	2:00 a - 10:00 a			0	0	6	?	Flash Flooding Lightning Strike
									Up to 16 inches of rain fell in parts of Shelby County. In Center, water up to five feet deep flooded parts of the city with extensive damage in the Pine Terrace Addition. High water at the Center City Sewer Plant caused a chlorine tank to float and then rupture forcing nearby residents to evacuate their homes. During the early morning hours all roads into Center were closed for a while due to the high water. Lightning caused minor damage at the Center Christian Church. Over the County, a bridge on FM Road 319 was damaged and two bridges on FM Road 1279 were damaged. Water was 3 feet deep at Highway 84 at the Texas-Louisiana Border. Up to 8 inches of rain fell in southern Panola County.
San Augustine and Nacogdoches Counties	14	2:00 am 10:00 am			0	0	5	?	Flash Flooding
									Six to twelve inches of rain fell in parts of San Augustine and Nacogdoches Counties. Highway US 59 was closed at Garrison where nearly 12 inches fell. The road surfacing on Texas Highway 147 south of San Augustine was washed away. In San Augustine County flooding caused the closing of US 96 and Texas Highway 7, 21, and 103. Some cars were swept off the roads.

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					KILLED	INURED	PROPERTY	CROPS	
TEXAS (continued)									
SOUTHERN									
Bay City, Matagorda	1	12:00 pm							Funnel clouds
									Four funnel clouds aloft were observed in the Bay City area. The funnels and associated heavy thunderstorms moved north and did not cause damage.
Vidor, Orange Co.	3	7:08 pm							Funnel cloud
									Texas Department of Public Safety trooper reported the funnel cloud over Highway 12 just east of the Vidor city limits. Its associated wind circulation apparently never touched ground as it moved southward over wooded swamp lands before dissipating.
Gregory, San Patricio Co.	7	2:15 pm							Funnel cloud
									The funnel remained aloft as it moved northwestward passing just north of Gregory.
Baytown, Harris Co.	10-11	10:00 pm - 4:00 am	City-wide		0	0	4	0	Heavy rain
									A thunderstorm became stationary over Baytown and dumped heavy rain which produced considerable street flooding. Besides flooding a number of automobiles, water entered and damaged a few homes in the Brownwood subdivision and caused some flood damage to a cafeteria. The flooding resulted from ponding of water in low areas.
Sabine Lake, Jefferson Co.	11	6:45 am	?	?	0	0	0	0	Waterspout
									The waterspout formed and dissipated over the northern end of the lake. Although it came near shore, it did no damage to boats or other property.
Sinton, San Patricio Co.	11	1:00 pm							Funnel cloud
									The funnel passed to the northeast of Sinton as it and its associated heavy showers moved rapidly to the north-northwest.
Coastal waters, Jefferson Co.	11	1:00 pm	?	?	0	0	0	0	Waterspout
									A pilot observed the waterspout in the Gulf of Mexico about 30 miles east of Galveston or due south of Mud Lake, Jefferson Co. It apparently did not interfere with marine or oil rig operations.
Corpus Christi Bay, Nueces Co.	11	1:25 pm							Funnel cloud
									The funnel occurred over waters of the bay about 1 mile east of the Nueces Bay Causeway.
Corpus Christi, Nueces Co.	11	3:00 pm - 6:00 pm	City-wide		0	0	?	?	Heavy rain
									Thunderstorm downpours produced up to 5 inches of rain within a 3 hour period across the city. Extensive street and urban flooding resulted in water standing 4 feet deep in parts of the city. Damage was not believed to be severe, however, some buildings and a number of cars did receive water damage.
6W Rockport, Aransas Co.	11	3:35 pm	Short Narrow		0	0	0	0	Tornado, funnel cloud
									Twin funnel clouds were initially observed 6 miles west of Rockport. As they moved northward with associated showers, one of the funnels was seen to touch ground briefly just west of Port Bay. The area was open undeveloped marshland and no damage occurred.
Portland, San Patricio Co.	11	5:50 pm							Funnel clouds
									Portland city police sighted two funnels aloft near Highways 181 and 35. Moderate to heavy thundershowers in the area were nearly stationary at the time.
Rockport, Aransas Co.	11	6:40 pm							Funnel cloud
									The funnel was seen in the Rockport area near moderate to heavy thundershowers.
Goliad, Refugio and Victoria Counties	12	Early morning	Area-wide		0	0	?	?	Heavy rain
									Heavy rain began over the three-county area the evening of the 11th and by early morning hours of the 12th, as much as 6-1/2 inches of rain had fallen in Victoria city, over 9 inches had fallen just east of Victoria, and over 6 inches had fallen at Refugio. Highways 59 and 77 south and west of Victoria were under water and suffered some damage. Widespread flooding occurred within the city of Victoria as streets became impassable. The amount of flood damage to vehicles, buildings, and personal property was not known.

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INURED	PROPERTY	CROPS	
TEXAS (continued)									
SOUTHERN									
San Antonio, Bexar Co.	13	3:30 am - 10:30 am	40	*20	1	2	6	0	Heavy rain
									Heavy thunderstorms developed in Mexico just southwest of the Rio Grande during evening hours of the 12th. Soon after midnight the storms began moving across the Rio Grande near Eagle Pass and continued to build as they progressed toward the east-northeast. The series of storms slowed in movement as they approached Bexar County, and as a result very heavy rain was dumped along a path across northwest Bexar County and the northside of the city of San Antonio. Rainfall totals were heavy but not extreme with up to 6 inches occurring in the Hollywood Park suburb. However, most rain fell on already wet ground in less than a three hour span causing large sudden rises in creeks and streets in the north part of the city. Water rose into some 20 homes scattered over the northside as a result of various streets and drainage ditches overflowing. Most significant, however, was flooding which occurred along Olmos Creek from near Lee High School downstream to below Dresden Drive. Three old homes received major flood damage about 15 to 25 newer homes received moderate flood damage, and an estimated 75 to 100 other homes had at least minor damage. Some 40 to 60 automobiles were heavily damaged along Olmos Creek also. Elsewhere in the city 75 to 100 vehicles received some water damage including one city bus which was swept into a swollen creek. The one fatality was a 61 year old man whose car became submerged at an intersection. A 25 year old woman and one other person received minor injuries after being swept away from their stalled cars by the swift water. Flood waters were retained by Olmos Dam with only minor overflow occurring in downtown areas.
Atascosa County	13	6:15 am	?	?	0	0	3	0	Wind
									Severe thunderstorms with wind gusts estimated at over 50 mph caused scattered minor damage over the northern half of Atascosa County particularly around Piesanton and Poteet.
3S Calliham, McMullen Co.	13	6:15 am	**50	20	0	0	2	0	Tornado
									A small tornado spun out of heavy thunderstorms that moved east-northeast over McMullen County. The twister was seen to touch ground briefly on the Bragan Ranch 3 miles south of Calliham near the McMullen-Olive Oak county line. No significant damage occurred as the tornado scattered debris along its short path through brush country.
Woodville, Tyler Co.	13	3:00 pm	Short Narrow		0	0	0	0	Tornado
									A Tyler County sheriff's officer observed a low hanging funnel cloud aloft just east of Woodville. The funnel moved east at 30 mph and the officer did see it briefly dip to ground level over a heavily wooded area two miles east of Woodville. Trees were twisted and uprooted but no property was damaged.
Clear Lake, Harris Co.	29	9:00 am							Funnel clouds
									A couple of funnel clouds formed over the Clear Lake area in extreme southern Harris County. They soon receded and caused no damage.
TEXAS WESTERN									
Slaton, Lubbock County	20	12:00 p			0	0	0	0	Funnel Clouds
									A series of three or four small, low-energy funnels were observed in the vicinity of Slaton. No damage occurred and each dissipated after 5 to 10 minutes. The funnels were highly visible; however, and the actual number of funnels is difficult to determine due to multiple reports.
Reeves and Loving Counties	25-28				0	0	6	4	Flooding
									Heavy rains, falling on the watershed of Cottonwood Draw, (50 miles northwest of Pecos) caused flooding of the north and south sides of the City of Pecos as the water backed up against the highway south and west of the city. Water was reported as high as 3 feet with approximately one-quarter of the city flooded. Damage in the city and county area adjacent to the city was estimated at \$100,000 to over 70 homes as well as another \$100,000 to streets. Damage was extensive in the northern portion of Reeves County although amounts were light. Heavy rains (12 inches reported near Guadalupe Peak) on the Pecos River watershed on the morning of September 26 caused a sharp rise on the river and flooding from Orta to Barstow. Approximately 200 persons were evacuated from Mentone in Loving County, but returned the following day. Little actual damage occurred in the later river flood. Total damage in all flooding was estimated at 1.5 million dollars.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1978

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
TEXAS (continued)									
WESTERN Presidio County	25 Sep - 4 Oct				0	0	5	4	Flooding
	<p>Extensive and heavy rains south of Ojinaga, Mexico, on the nights of September 24 and 25 caused a slow but steady rise on the Rio Grande River. At Presidio, the river crested on the afternoon of September 26 at a stage of 25.6 feet; 11.1 feet above flood stage. The flood crest reached Lajitas on the evening of September 27 with a stage of 19.9 feet; 6.9 feet above flood stage.</p> <p>Additional heavy rains fell September 28 through 30 on the Rio Conchos Basin in Mexico. Subsequent releases from reservoirs in Mexico brought about a second rise on the Rio Grande and the second largest flood in history at Presidio. Peak stage at Presidio in the second rise reached 25.7 feet. Three miles of levees were destroyed near Presidio with some 600 acres of farmland flooded. South of Presidio to Lajitas, nearly 7,000 acres of unplanted farmland were flooded as well as an additional 600 acres of crops. In the Big Bend National Park several roads and trails were closed, and a large amount of silt and debris deposited in the campgrounds and picnic areas. Also one residence was destroyed, the foundation of a store undercut, and some irrigation pumps damaged. The water subsided on October 4 after having caused nearly \$500,000 damage.</p>								
UTAH									
SALT LAKE COUNTY	17	5:30 P- 11:30 P			0	0	5	0	Heavy Rain - Flooding
	<p>A strong cold front and low pressure center passed through Northern Utah during the late afternoon and evening and brought thunderstorms and heavy rainfall to most of Salt Lake Valley. Basement flooding of about 100 homes was noted near low lying areas of the Jordan River and Mill Creek. Damages to homes and newer subdivisions was estimated at approximately \$250,000. 1.38 inches of precipitation occurred at the airport with this storm. Up to 2.5 inches of rainfall occurred along the Salt Lake Bench areas.</p>								
VERMONT									
NONE REPORTED									
VIRGINIA									
Danville	1	Midnight			0	0	3	0	Lightning, Rain
	<p>Widespread power outages were attributed to lightning strikes that destroyed several transformers in the area. Local minor flooding occurred, with water "chest high" in one section.</p>								
Page County	16	Evening			0	0	4	0	Lightning
	<p>Bolt of lightning responsible for fire that destroyed a barn and its contents in the Fletcher Chapel community west of Luray.</p>								
Richmond-Petersburg area	22	6:00 p- 8:00 p			0	0	4	0	Lightning, Rain
	<p>Cold front was accompanied by thunderstorms - some with locally heavy rainfall. Around 6,500 homes had electrical service interrupted in the Richmond area, with one television station reporting an estimated \$17,000 damage to its electrical circuitry due to lightning. Some minor flooding occurred in low spots as up to three-and-a-half inches of rain fell in some sections.</p>								
Newport News	22	Night			0	0	4	0	Lightning
	<p>Blaze started by lightning destroyed a garage and two classic motor cycles stored inside.</p>								
VIRGIN ISLANDS									
Virgin Passage	28	4:45 p.			0	0	0	0	Waterspout
WASHINGTON									
NONE REPORTED									
WEST VIRGINIA									
Kanawha county	10	5:35pm			0	0	0	0	Hail
	<p>Golf ball size hail reported at Cabin Creek from a rapidly developing thunderstorm.</p>								
WISCONSIN									
Eau Claire, Trempealeau and Buffalo counties	12	Evening and night			0	0	100,000 ?		Heavy rains causing flooding conditions
Sheboygan County	12	Afternoon			0	0	75,000 to 100,000		Wind
	<p>Easterly winds gusting from 30 to 50 mph whipped Lake Michigan waves to 10 feet causing between \$75,000 and \$100,000 damage to Sheboygan Yacht Club and a number of boats moored there.</p>								
Ozaukee County	20	6 AM			0	0	80,000		Lightning
	<p>Lightning-caused fire destroyed barn and all the contents, including 150 tons of hay. Estimated loss in excess of \$80,000.</p>								
WYOMING									
Fremont County	7	7:30 p. MDT	20	*15	0	0	5	C	Wind
	<p>Strong winds associated with a cold front caused damages in Riverton including downed power lines, uprooted trees, and subsequent electrical fires in town. Wind gusts in excess of 50 mph were estimated.</p>								
Lincoln County	17	12 Hours to 18	80	*45	0	0	5	C	Snow
	<p>Considerable damage from a heavy, wet snow over most of Lincoln County included downed power lines and trees, and extensive crop damages across the county.</p>								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

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

THE FOLLOWING ARE LATE REPORTS, CORRECTIONS, AND DELETIONS:

LATE REPORTS PENNSYLVANIA									
WESTERN									
JULY 1978									
Hempfield Township (Westmoreland Co.)	10	Aftn.			0	3	0	0	Lightning
A 13 year old boy was struck by lightning and was later admitted to a local hospital in fair condition. Two of his sisters, 150 yards away, were slightly affected by the lightning strike.									
Johnstown area	10	2:30pm			0	0	4	0	Lightning
Lightning struck two homes in the area. One of the homes suffered fire damage.									
Connellsville	10	1pm			0	0	4	0	Thunderstorm Wind
Strong thunderstorm winds picked up a house trailer and threw it down an embankment onto five parked cars.									
Ellwood City area	23	3:10pm			0	1	4	4	Thunderstorm Wind
The roof of a large old barn was ripped apart and one half of a fruit tree orchard was flattened in Perry Township. In nearby West Pittsburg, a summer house and lawn furniture within were extensively damaged by high winds. One man suffered minor injuries. Several trees throughout the area were uprooted.									
Slippery Rock Township (Lawrence Co.)	23	3:15pm			0	0	4	0	Thunderstorm Wind
Strong winds tore a large metal portion of roof from a house.									
Portersville	23	3:20pm			0	0	?	0	Thunderstorm Wind
Strong winds flattened a barn.									
Butler Township	23	3:30pm			0	0	?	0	Thunderstorm Wind
About 50 large trees were blown down in the Highfield area. A number of houses were damaged by falling trees.									
Petrolia, Bruin	23	3:30pm			0	1	4	0	Thunderstorm Wind
The roof of the Petrolia firehouse was blown off by strong winds. One woman was injured when the roof of her house was blown off. Numerous other homes in the area were also damaged.									
East Brady, Bradys Bend	23	4:05pm	?	?	1	24	5	?	Tornado
One man drowned when he was blown from a boat dock into the Allegheny River near East Brady. Boats on the river and on a nearby creek were flipped into the air, some boats were thrown to shore. At least one mobile home was overturned; several boat docks were destroyed; and many vehicles were damaged by felled trees.									
Watersonville	23	4:10pm	?	?	0	2	5	?	Tornado
A pontoon boat with eight aboard was overturned, seriously injuring two persons. Three mobile homes were overturned and several others were heavily damaged. Many trees were uprooted, felled, or broken off halfway up the trunk and tangled.									
Knox	23	4:10pm			0	18	5	?	Thunderstorm Wind
Thirty to forty travel trailers and camping units were overturned and ninety others were damaged at the Knox KOA Campground. Golf-ball size hail was reported. A 350 foot water slide was destroyed and wood-frame cabins at the campsite were blown apart. A farm implement and machine store nearby sustained extensive damage.									
Porter Township (Clarion Co.)	23	?			0	0	5	0	Thunderstorm Wind
The roof of the Porter Township Elementary School was blown off as was the roof of a nearby home.									
Clarion	23	4:30pm			0	0	5	?	Thunderstorm Wind
At the Clarion County Airport a mobile home used as the airport office was leveled. Several aircraft were severely damaged. The Clarion golf course recorded wind gusts of 82mph before the anemometer was destroyed by the force of the wind. In the town of Clarion, scores of trees were uprooted or tangled by the wind.									
Corisca	23	4:50pm			0	0	4	0	Thunderstorm Wind
The roof and a wall of the local school was demolished.									
Brookville	23	4:45pm			0	18	5	4	Thunderstorm Wind
At the Pinecrest Country Club, over 100 trees were blown over or snapped apart in apparent parallel lines. Many farm buildings throughout the area were heavily damaged. Several fruit tree orchards were flattened. The home team dugout at Gray's Field Memorial Park was demolished. Homes and vehicles were damaged by falling trees. The town of Brookville was closed to all but emergency traffic after the storm. A portion of the Mapleview Farm Market was demolished. One mobile home east of town was destroyed.									

LATE REPORTS PENNSYLVANIA (continued)									
WESTERN									
JULY 1978									
Indiana	23	4:50pm			0	0	4	0	Thunderstorm Wind
High winds caused extensive damage to a partly-constructed church along Rte 119 just south of town.									
Punxsutawney	23	5pm			0	1	0	0	Thunderstorm Wind
One man was injured when strong winds blew a display table into him while at a flea market along Rte 119 just south of town.									
State College	23	5:30pm			0	0	4	0	Thunderstorm Wind
Wind gusts tore a 30 by 60 foot section of roof from the Mittany Hall. The Penn State University Weather Station recorded gusts of 60mph.									
Centre Hall	23	5:40pm			0	0	?	0	Thunderstorm Wind
One mobile home was overturned by high winds.									
TEXAS									
SOUTHERN									
Port Arthur Jefferson Co.	25	2:00 pm			0	1	2	0	Electrical
Mr. B. D. McGreevy received a direct lightning strike while in the yard of his residence in northeast Port Arthur. The lightning hit just minutes before heavy showers began to fall on the area. The bolt shredded clothes he was wearing and melted the frames of his eyeglasses. He lapsed into a coma as a result of the strike, but made a sudden recovery two days later.									
5 NE Three Rivers Live Oak Co.	28	1:20 pm	1	35	0	0	0	2	Tornado
A tenuous rope-like funnel was observed to form near the edge of an area of heavy showers. The funnel extended to the ground from a cloud base estimated 1500 feet above ground level. The tornado first hit the surface on the north side of State Highway 72 about 5 miles northeast of Three Rivers. It moved eastward about 15 mph, lasting for about 5 minutes, and cut a swath through a field causing only a small amount of crop damage.									
VIRGINIA									
Wise County	23-24	Night			0	0	3	4	Wind, Hail
Severe thunderstorm caused extensive damage to power lines, while fallen trees blocked some roads. Area in vicinity of Big Stone Gap hardest hit as marble-size to golfball-size hail about 2:30AM leveled corn, tobacco and other crops.									
Spottsylvania (nr)	24	2:30 p			0	1	4	0	Wind
Home under construction - due to be completed the first of September - flattened by freak wind. Two men, working in upstairs portion, were caught in the rubble. One pulled himself out uninjured, however, his father suffered shoulder injuries. Damage estimated at least around \$40,000.									
Charlottesville	24	Night			0	0	3	0	Rain
Heavy thunderstorm rain resulted in local flooding on Route 29.									
AUGUST 1978									
CALIFORNIA									
NORTHERN									
NONE REPORTED									
MARYLAND & D.C.									
Lineboro (nr), Carroll County	28	3:30 p	2.3	30	0	0	3	2	Tornado
Small tornado apparently moved into Carroll County from York County, Pennsylvania. It continued in a northwest to southeast path, uprooted or twisted off trees and destroyed a shed, killing a steer inside. A woman heard a roaring sound as it approached her home. In one instance, a tree was twisted off several feet above ground level by the force of the wind, but no damage was done to house next to it. Total damage estimated at around \$1,000.									

STORM DATA AND UNUSUAL WEATHER PHENOMENA

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
CORRECTIONS									
MARYLAND & D.C.									
Carroll County	28	3:30 p			0	0	3	3	Wind, Hail
<p>A thunderstorm with strong winds and hail moved across the north-east portion of the county. One home reported trees down, some property damage and a cornfield flattened. Crop loss due to hail estimated at \$1,500. Property damage due to wind was estimated at around \$1,000.</p>									
TEXAS									
SOUTHERN									
Banders, Kendall, Kerr, Gillespie Counties	2-3								Heavy rain
<p>No additional new information was available to supplement the report in the last issue of Storm Data. Future updates on this particular flood event will be reported under "CORRECTIONS" as new information becomes available.</p>									

O Includes crop damage.
 C Crop damage.
 * Miles instead of yards.
 ** Yards instead of miles.
 † Storm damages are placed in categories varying from 1 to 9 as follows:
 1 Less than \$50
 2 \$50 to \$500
 3 \$500 to \$5,000
 4 \$5,000 to \$50,000
 5 \$50,000 to \$500,000
 6 \$500,000 to \$5 Million
 7 \$5 Million to \$50 Million
 8 \$50 Million to \$500 Million
 9 \$500 Million to \$5 Billion

Note: This publication contains our best information on storms but, due to the difficulties inherent in collection of the type of data, it is not all-inclusive. Late Reports and Corrections will be carried in the month following receipt of these data.

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