

U. S. DEPARTMENT OF COMMERCE
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WEATHER BUREAU
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STORM DATA

JULY 1959

Volume I No. 7



ASHEVILLE: 1959

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
ALABAMA									
Dallas County, Selma	1	12:40 pm	1/8	50	0	3	4	0	Tornado
									<p>About 2 1/2 miles east of town on U.S. 80 a funnel cloud dipped down during a thunderstorm and demolished part of a large masonry building. Buildings nearby were only slightly damaged. Two persons injured when walls collapsed, one injured by flying debris. Storm apparently moved from east to west.</p>
Covington County	17	P.M.	---	---	0	3	0	0	Lightning
									<p>Three youths knocked unconscious when standing near a wire fence which was struck by lightning. All were hospitalized for several days.</p>
Montgomery County	31	P.M.	---	---	0	0	4		Thunderstorm & Lightning
									<p>A severe thunderstorm accompanied by high winds caused scattered damage to roofs and porches of several houses, damaged a few farm buildings and uprooted trees. One house burned after being hit by lightning.</p>
Tuscaloosa County, Tuscaloosa	31	P.M.	---	---	1	0	0	0	Lightning
									<p>Lightning struck youth while working in cemetery.</p>
ALASKA									
Fairbanks	1	3:00 to 5:00 P.M.	4	*2			6	2	Thunderstorm with heavy rain and hail
									<p>The official beginning of the thunderstorm was at 3:32 P.M. on July 1 as observed at the Weather Bureau Airport Station; time of ending was at 7:15 P.M. Although only a trace of precipitation observed at the Weather Bureau Airport Station much heavier amounts were reported from near-by points. An unofficial, but reliable, report showed a precipitation total of 1.03 in. within a half hour period and a total of 1.30 in. for the 2-hour period from 3:00 P.M. to 5:00 P.M. The heavy runoff from the rapid rainfall overtaxed the drainage facilities provided in the urban Fairbanks area and the accumulation of water caused considerable damage to basement storage in both business establishments and private homes. The accumulated water left considerable silt in the flooded basements. In several cases the runoff which could not be carried by the drainage facilities was diverted through supporting soil and fill layers removing material and weakening foundations under buildings and paving. At least 10 street cave-ins resulted from the removal of foundation material.</p> <p>Although hail fell in the North Fairbanks (Slaterville) area where the ground became well covered by hail, and hail was reported from the University Experiment Station practically all damages are chargeable to the heavy rainfall and resulting rapid runoff. No crop damage was reported. Total damages have been estimated in the neighborhood of \$1 million.</p>
Bristol Bay area and across the Alaska Peninsula to Kodiak Island and the Kenai Peninsula	16 - 21	-	600	*300	2		6		Widespread windstorm
									<p>The strong winds which lashed the indicated area during this period resulted, principally, from two major low pressure systems which affected the general area in rather rapid succession. The first of these, centered just south of Kodiak Island on July 16, was pushed northwestward into the inland area near King Salmon by a high pressure ridge building over the Gulf of Alaska. When this system finally reached the Bethel area and began to weaken a well developed low was traversing the Bristol Bay area to maintain the relatively strong winds over the Bristol Bay coastal areas. After some stalling in the eastern Bay area this second storm moved across the upper Peninsula to bring increasingly strong winds to Kodiak Island and the Kenai Peninsula which continued through July 21. Overall damages from the two main storm centers cannot be ascribed to the storms separately, so the property damages must necessarily be assigned to the overall windiness during the general storm period from July 16 to 21, inclusive.</p> <p>Wind gusts reaching 54 mph were reported from Cape Newenham; gusts reaching 45 mph were reported from King Salmon. On the Kenai Peninsula gusts reached 38 mph at Kenai and reached 26 mph at Homer. It appears quite probable that winds in the open Inlet area exceeded the speeds reached at reporting stations near the coastal area.</p> <p>The two lives lost (father and son) evidently were the result of strong winds and heavy seas in the vicinity of Kigin Island, NW of Kenai in the central Cook Inlet area. The father's body was found entangled in a gillnet trailing a capsized boat; the son's body was not recovered.</p> <p>Property damages reported were confined to fishing boats and fishing equipment. Loss of boats and gear amounted to approximately \$2 million; loss of canned fish and fish in processing, plus the loss in catch prevented by the storm, has been estimated by the Fish and Wildlife officials to be in the neighborhood of \$1 1/2 to \$2 million dollars. The storm struck at a very critical time when runs were quite heavy at most points over the area, and severe damage resulted to boats and gear which were in active operation in exposed areas. This storm period has been evaluated by experienced fishing personnel as, perhaps, the most damaging on record for the Alaska area.</p>
ARIZONA									
Scottsdale	2	Afternoon					1		
									<p>Man died of heatstroke</p>
Tempe	3	Evening					1		Duststorm
									<p>Automobiles collided in severe duststorm preceding thunderstorm</p>
Willcox	7	5:30 p.					4		Wind and rain
									<p>Wind unroofed houses, rain damaged interiors. Wind damage \$9,000; rain damage \$6,000.</p>
Phoenix	8	Afternoon					1		
									<p>Woman died of heatstroke</p>
Casa Grande	9	Evening					4		Duststorm
									<p>Truck-car collision in duststorm</p>
Paradise Valley	9	6:00 p.	5	500			4		Wind
Gila Bend	10	Afternoon					1		
									<p>Man died of heat prostration</p>
Happy Jack	15	Afternoon					1		Lightning
Phoenix	16	Evening					2		Wind
Prescott	16	Afternoon					1		Lightning
Sunnyslope	17	Evening					5		Wind
Mesa-Chandler-Phoenix	17	Evening					1	6	Wind
									<p>The Mesa-Chandler areas were hardest hit. The storm was accompanied by heavy rain, lightning and some hail. Nearly all damage was caused by strong winds, however.</p>
Tucson	19	Evening					1		Lightning
Coolidge-Eloy and Casa Grande	19	Midnight					5		Wind
Tucson and vicinity	21	5:30 p.					5		Wind and rain
									<p>Approximately \$50,000 damage to county roads by flooding and \$25,000 to automobiles and home interiors by water; approximately \$25,000 wind damage.</p>
Buckeye	26	Afternoon					1		
									<p>Man died of heatstroke</p>
Phoenix	26	6:00 p.					1	*6	Wind and rain
									<p>A severe thunderstorm which formed in the mountains to the north of Phoenix, swept into the Salt River Valley in the early evening, causing extensive property damage along a 20-mile front. Nearly all of the damage was caused by strong winds blowing out of the north. The peak gust recorded at Sky Harbor Airport was 71 mph (north) at 6:52 p.m. Visibility was reduced to "zero" in many sections by blowing dust at the peak of the storm. Hail did an undetermined amount of damage to cotton between Mesa and Chandler.</p>
Tucson	26	6:40 p.					1	5	Wind
									<p>Strong winds accompanying heavy thunderstorm activity did extensive damage to homes and utilities.</p>
ARKANSAS									
El Dorado, Union County	1	11:50 a.					1		Lightning
									<p>One man killed by lightning while working on an automobile parked under a tree about 4 miles east of El Dorado.</p>
Newport, Jackson County	11	1:50 p.					1		Lightning, hail
									<p>Boy killed by lightning while playing baseball at City Playground. Some scattered light hail occurred from Newport to a point about 10 miles south. No estimate of hail damage is available. All stones were described as "small".</p>
Union Valley - Cherry Hill area, Perry County	11	2:50 p. to 3:00 p.	5	1,000			3	3	Hail
									<p>Stones ranging up to the size of golf balls and covered the ground in the Union Valley Community. The storm moved from north to south.</p>
Little Rock Airforce Base, Pulaski County	18	1:50 p.							Funnel cloud
									<p>A funnel cloud moved eastward over the Little Rock Airforce Base. No other reports of this funnel cloud were received.</p>

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
ARKANSAS (Cont'd)									
Fulaski County	21	1:00 p. to 1:30 p.						5	Hail
									Scattered hail was reported over the northern half of the County as the storm moved from north-northwest to south-southeast. There was some slight property damage at the Little Rock Airforce Base. Stones were small, averaging about 1/8 inch in diameter.
Fulaski County	24	12:06 p.							Funnel cloud
									A funnel cloud was reported over Lake Maumelle, 15 miles to the west-northwest of Little Rock. The cloud dissipated shortly after being sighted.
CALIFORNIA									
Camp Angelus, 10 miles east	1	11:55 a.m. to 2:00 p.m.					3	0	Thunderstorm
									A heavy thundershower accompanied by hail occurred from 6 to 12 miles east of Camp Angelus. Ruffoff was rapid, but damage was limited to a few blocked culverts and roadside scours.
Calxico	24	Morning					2	0	Gale winds
									Gale-like winds disrupted electrical service in a portion of the residential area of Calxico from 4 to 8 a.m. One man reported that the roof of his automobile was damaged by a falling limb.
Lanester area	30	6:00 p.m. to 9:00 p.m.					2	0	Thunderstorm - high winds
									A thundershower with high winds in the Antelope Valley area toppled telephone and power lines. The high winds took down 51 poles in a row on Ave. I, between 30th and 50th St., E, bringing poles, trees, and wires down on the streets. Traffic was snarled for hours.
COLORADO									
Calhan, El Paso County	5	2:30PM			0	0	3	--	Lightning
									A six-unit motel of cinder block and stucco construction was severely damaged by lightning, and completely destroyed by ensuing explosion and fire, presumably resulting from gas accumulation.
Denver	6	10:30AM			0	0	3	--	Thunderstorm
									Wind and lightning caused some damage in Metropolitan Denver. Gusts to 37MPH blew down power lines, signs, and trees. Lightning struck several transformers leaving areas without power. Damage by wind 50%, by lightning 60%.
Denver, Jefferson & Adams Counties	7	2:25PM			0	0	4	--	Wind
									Wind in gusts measured up to 45MPH at the Airport, probably more severe other areas, caused damage to power lines and buildings, and widespread minor damage from falling trees and broken limbs. A field house under construction at Adams City High School was severely damaged.
Springfield Area, Baca County	11	Afternoon			0	0	5	4	Hail
									Hailstones up to baseball size caused heavy damage to roofs, windows, trees, signs, gardens and crops in the Springfield vicinity. In Springfield, property damage was estimated to be near \$ million dollars, (including some additional hail damage on the 20th.)
Eastern Colorado	12	Afternoon & Evening			0	0	4	5	Hail and Wind
									Hail in scattered areas damaged property and crops. Near Hugo in Lincoln Co., baseball sized hail tore holes in roofs, broke window panes, damaged automobiles and crops. Wheat, hay, corn, and sugar beets received moderate to severe damage from hail and high winds in small areas near Sterling, Crook and Peets in Logan Co. Two inch diameter hail was reported in a heavy storm SE of Akron.
Southwestern and South Central Colorado	9-18				0	0	--	--	Lightning
									Numerous forest fires were started by lightning in the Pecos Springs, Mesa Verde areas. An estimated 4500 acres of timber were destroyed in Mesa Verde Park. Several smaller fires were sighted in Archuleta County. On the 18th, four forest fires were started in the South Platte area of the Pike Nat. Forest near Deekers.
Colorado Springs	15				1	2			Lightning
									A Colo. University student was killed by lightning while carrying a transit at Peterson Field. Two other men on the surveying team, standing about 10 feet away, were knocked down, but not severely injured.
Eastern Colorado	20	Afternoon			0	0	5	4	Hail and Rain
									Golfball and marble sized hail damaged property and crops in scattered areas. Springfield had further property damage. Spring grain and alfalfa crops were hit in the vicinity of Rye. An area in western Weld Co. near Milliken suffered damage to row crops. Heavy rain and hail in eastern Prowers Co. around Holly and Hartman had considerable loss to garden crops, corn, beets, and alfalfa.
Boulder and Summit Counties	24	Afternoon			0	1	2	--	Lightning
									A Boy Scout was struck near the Continental Divide in western Boulder Co. He suffered burns and an ear injury. Two leaders were knocked unconscious, but not injured. In Breckenridge, in Summit Co., lightning caused power failures and a small fire.
Denver	25				0	1	--	--	Lightning
									A Denver man was stung, while standing by a car that was struck by lightning. He was treated for burns and shock.
CONNECTICUT									
Sterling, Windham County	2	A.M.						4	Electrical
									Lightning struck lodge hall during morning electrical storm in eastern part of state. Resulting fire caused extensive damage to the interior. Transformer on nearby utility pole also struck and burned out.
Suffield, Hartford County	19	7:15 P.M.						3	Electrical
									Lightning-caused fire at Suffield damaged home to the extent of \$500 - 1,000. Power also disrupted for two hours in nearby Thompsonville as bolt felled tree limb onto power line.
Hartford and Litchfield Counties	22	Late P.M.					1	4	Electrical
									At Bristol, Hartford County, lightning struck metal clothes-line and traveled to storage barn to cause a delayed-action fire. Barn and contents of two automobiles, lumber and tools extensively damaged with loss estimated at \$20,000. At Winchester, Litchfield County, lightning killed cow while being milked and injured farmer. At another nearby farm bolt reported to have felled several cows and knocked dog 25 feet. Animals apparently not injured seriously.
DELAWARE									
Kent & Sussex Counties	14-15				0	0	0	0	Heavy rains
									Torrential rains flooded streets and roads, shorted telephone cables, and in some places washed out sections of roads and damaged bridges. Some fields were badly eroded.
FLORIDA									
Key West Monroe County	1	4:21 P.M.			0	0	--	--	Waterspout.
									Waterspout came ashore at Garrison Bight, damaging several buildings and some dock facilities.
Lee, Madison County	1	5:00 P.M.	Short	Narrow	0	0	--	--	Tornado.
									Several houses and farm buildings damaged along short, narrow path.
Tampa Hillsborough Co.	3	8:30 A.M.			0	0	--	--	4 Waterspouts.
Shadeville Wakulla County	3	Afternoon			1	0	--	--	Lightning.
Indian Rocks Beach Pinellas County	4	Afternoon			0	3	--	--	Lightning.
Okeechobee Okeechobee County	4	1:00 P.M.	Short	Narrow	0	0	--	--	Tornado.
									Several buildings damaged along short, narrow path.
Key West Monroe County	4	7:05 A.M.			0	0	--	--	Funnel cloud.
									2 funnel clouds seen 15 miles N.W. of Key West.
Miami, Dade County	6	1:32 P.M.			0	0	--	--	Waterspout.
West Palm Beach Palm Beach County	7	10:40 A.M.			0	0	--	--	Funnel cloud.
									Cloud seen 5 miles south of West Palm Beach Airport.
Key West, Monroe County	9	10:22 A.M.			0	0	--	--	Funnel cloud.
									Cloud seen 10 miles northeast of Key West.
Key West, Monroe County	10	7:00 P.M.			0	0	--	--	Funnel cloud.
Ft. Lauderdale Beach Broward County	10	9:45 A.M.			0	0	--	--	Waterspout.
Boca Raton Palm Beach Co.	10	8:45 A.M.			0	0	--	--	Funnel cloud.
Osteen, Volusia County	12	4:00 P.M.	Short	Narrow	0	0	--	--	Tornado.
									Cloud touched ground briefly in uninhabited area.
Orlando, Orange County	12	4:30 P.M.			0	0	--	--	Funnel cloud.
Mayport, Duval County	12	12:45 P.M.			0	0	--	--	Waterspout.
Jacksonville Beach Duval County	12	12:45 P.M.			0	0	--	--	Waterspout.
Sarasota Sarasota County	12	Afternoon			0	0	--	--	2 Funnel clouds.
Clearwater Pinellas County	13	11:30 A.M.			1	0	--	--	Lightning.
									Lightning killed fisherman while in his boat offshore.

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS	
FLORIDA (Cont'd.) Jacksonville Duval County	13	9:30 A.M.	-	-	0	0	-	-	Waterspout.
Miami, Dade County	14	7:45 P.M.	-	-	0	0	-	-	Waterspout. Waterspout seen from Lighthouse Key.
Ft. Lauderdale Broward County	14	6:19 P.M.	Short	Narrow	0	0	-	-	Tornado. Funnel cloud touched ground briefly southwest of Plantation in an uninhabited area.
Lake Worth Palm Beach County	15	10:05 P.M.	-	-	0	3	-	-	Lightning.
Ft. Lauderdale Broward County	18	5:18 P.M.	-	-	0	0	-	-	3 Waterspouts.
Tampa, Hillsborough County	18	Evening	-	-	0	1	-	-	Lightning.
Jacksonville Duval County	19	11:10 A.M.	-	-	0	0	-	-	Funnel cloud. Cloud seen 12 miles SSE Mason Airport.
Fort Walton Beach Okaloosa County	20	11:03 A.M.	-	-	0	0	-	-	Waterspout.
Orlando Orange County	21	Afternoon	-	-	0	2	-	-	Lightning.
Cross City Dixie County	22	2:21 P.M.	-	-	0	0	-	-	Waterspout. Two waterspouts seen in Gulf 25 miles south of Cross City.
Key West, Monroe County	25	1:00 P.M.	-	-	0	0	-	-	Funnel cloud.
Tampa, Hillsborough County	25	5:04 P.M.	-	-	0	0	-	-	Waterspout.
Tampa, Hillsborough County	26	5:00 P.M.	-	-	0	0	3	-	Lightning. Lightning started fire destroyed residence.
Pensacola Escambia County	27	10:00 A.M.	-	-	0	0	-	-	Waterspout. Waterspout seen 5 miles south of Naval Air Station.
GEORGIA Near Gray, Jones County	1	4:00 p.	3	150			3	2	Tornado Small tornado heavily damaged dairy barn on one farm about 2 miles north of Gray and damaged roof of another farm home 1 mile away. Several smaller farm buildings damaged and many trees uprooted. Storm moved northeast.
Brunswick, 30 miles SE	9	2:26 p.							Waterspout
Columbus, Muscogee County	10	2:00 p.					4		Thunderstorm, hail, wind and rain. A violent thunderstorm with heavy rain, hail and high winds hit the downtown section of Columbus. Power lines were torn down and streets were littered with large tree branches. Several streets were flooded and a number of automobiles were damaged by falling branches.
Vienna, Dooly County	10	5:22 p.	Short	Narrow	1	4			Tornado A small tornado which may not have quite reached the ground caused widespread, but mostly minor, damage to downtown Vienna. A brick wall blew out of the end of a cotton warehouse and numerous buildings suffered minor damage. Many trees were uprooted and utility lines were blown down, disrupting service for several hours. One man slightly injured when his hand was smashed by a door.
Cumming, 3 miles SE, Forsyth County	11	4:00 p.	Short	500	6	4			Tornado Tornado struck crowded resort area of Lake Lanier. Hardest hit was Bald Ridge Marina where docks and boats suffered varying amounts of damage. Six persons slightly injured, mostly by flying debris. Storm moved north.
Athens, Clark County	20	5-7:00 p.					4		Rain, wind and electrical Heavy rains, high winds and a severe electrical storm caused considerable damage to the south and southeast sections of Athens. Electrical service disrupted for 2500 homes and 1200 telephones knocked out. Rains damaged streets and roads, and a lightning started fire destroyed one house in nearby community.
Sharon, 10 miles SW Tallapoosa County	20	1:25 p.							Funnel aloft
See reference notes at end of table.									
IDAHO Bannock and Caribou Counties	24	Afternoon			0	0		4	Hail Hail began about 3:30 p.m. one mile east of Downey, where nearly 600 acres of wheat were ruined on one farm while other farms and several gardens sustained minor damage. Later, hail struck west of Grace inflicting considerable damage to grain, hay and potatoes.
Canyon and Owyhee Counties	25	Night			0	0	4	3	Wind Several houses damaged by falling trees, one in Homedale area so badly wrecked that rebuilding will be necessary. Some minor damage to farm buildings and numerous trees toppled, branches blown off with resultant damage to electric power and telephone lines.
ILLINOIS: See end of table for Illinois data.									
INDIANA Marion County	1	12:30 p.	-	-	0	1	4	0	Wind Two house trailers and truck blown over by strong gust of wind on Indiana Road 13 just south of the Wabash-Grant County line.
Bloomington County	1	1 p.m.	-	-	0	7	0	0	Lightning Two women and five children injured by lightning while at the beach.
Bartholomew County	1	1:30 p.	-	-	0	0	4	2	Tornado South of Columbus the roofs and siding of several buildings were torn off. Some corn and tobacco plants were flattened. A tool shed was lifted over a tractor and other equipment.
Fort Wayne, Allen County	1	1:45 p.	-	-	0	0	0	0	Funnel clouds Two funnel clouds aloft observed 35 miles south southwest of Fort Wayne.
Lynnville, Warrick County	11	p.m.	-	-	1	0	0	0	Lightning Lightning striking a tree killed a mother while she and her two children were taking shelter from the rain under a tree.
Brookville, Franklin County	11	5 p.	1	1760	0	0	0	5	Hail Hail damaged several fields of crops between Raymond and Whitcomb. About 800 acres of corn were totally destroyed by hail which sometimes were 1 1/2 inches in diameter.
Allen County	18	3:45 p.m.	-	-	0	0	0	0	Tornado In southwestern Allen County a funnel cloud touched ground briefly without causing damage.
IOWA Fayette, Fayette County	1	Night					4	3	Heavy rain 3 1/2 inch rain collapsed a 60x60 foot section of roof of Fayette High School with extensive building damage.
SN Charles City, Floyd County	8	3:00 p	1	200			4		Tornado Tornado moved East in skipping fashion-damage to barn, contents and farm machinery about \$20,000.
NE Pocahontas County	10	2:00 p	10	*3				4	Hail
Greenville & Webb, Clay County	10	2:00 p						3	Hail Hail 3/4 inch diameter
Hancock to Winneshiek County	10	2:30 p						4	Hail Scattered hailstorms. Hail to 1 inch.
SE Webster County	10	2:30 p	12	*3			estimated \$100,000.	5	Hail Crop losses
Boone County	10	2:30 p						4	Hail
E Jackson County	10	3:00 p						4	Hail
Randolph, Fremont County	12	4:00 p						4	Hail
Fringhar, O'Brien County	12	4:00 p	5	*4				4	Hail
Hartley, O'Brien County	12	4:00 p	4	*4				4	Hail
Monona County	12	7:30 p	2	880				4	Hail Near Soldier. Also, smaller losses in locality.
4S Ottumwa, Wapello County	30	11:00 a			1	3	3		Lightning
Davenport, Scott County	30	2:30 p					2	3	Lightning
Shenandoah, Fremont and Page Counties	31	12:20 p					1	5	3 Wind storm, heavy rain and hail Property losses due to wind. Rain and hail caused about \$2000.00 losses each.

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KANSAS										
Republic and Washington Counties	3	7p-8:45p	12	*8			3	3		Hail and electrical
										Hail stones up to 1/2 inches in diameter fell over small strips across these counties resulting in light crop and property damage. Lightning struck an enclosed hay shed a few miles northwest of Hanover. Barn and contents of hay and straw were burned.
Morris County	4	early morning								Electrical
										A large barn on a farm 2 miles east and 1 south of Milsey was destroyed by fire after being struck by lightning. Hay and the barn were the largest part of the loss.
Douglas and Leavenworth Counties	4	3:30a-5a								Wind and electrical
										Strong winds from the northeast broke some tree limbs and damaged power and telephone lines coupled with several lightning strikes that burned out transformers caused utility companies considerable trouble. Services were interrupted for as much as an hour in various localities.
Crawford County	4	6:30 am								Electrical
										During a heavy thunderstorm lightning struck a large tree slicing the bark from one side of the tree.
Lyon County	4	7:30p-8pm	6	500						Hail and electrical
										Crops were variously damaged by hail that was up to 1 inch in diameter. Lightning damaged utility lines both east and west of Emporia. A Fourth of July Celebration in Emporia was broken up by the storm. The storm moved south southeast.
Graham and Rooks Counties	5	3:30p-4:10p	25	*5			5	4		Hail and wind.
										Severe hail driven by south high wind struck the area from Bogie to Plainville. The greatest damage was near Palco where stones of soft ball size fell. The hail driven by the north winds broke windows, tore screens, damage siding and roofs. Stones were driven in a few cases through the siding and roofs. Auto wind shields were broken and cars dented by the hail. Gardens were ruined and trees stripped of leaves and small branches. Some hail was soft others were clumps or clusters of ice 4"x6". Hail caused the backs of cattle to bleed.
Norton and Phillips Counties	5	2:20p-3:30p	30	various						Hail and wind.
										Hail varying considerable in size and intensity fell over local areas from northwest of Norton to central Phillips County. Crops and building were damaged heavily in some places. Hail ranged in size from marbles to golf balls. Windows, roofs, automobiles were broken and damaged. Several small buildings were blown over by the wind. The storm moved east.
Ellis County	5	4:20p-5:10p	15	*3			5	5		Hail and wind.
										Winds of near 100 miles per hour with hail, some of which were as large as hen eggs and a few as large as base balls hit Hays and surroundings a sudden and vicious blow. Gardens, trees, roofs, siding, automobiles, windows, were damaged extensively. Trees were blown down causing breaks in utility services. A retaining wall was weakened and blown over. Welcome flags for a convention were literally blown away. The storm moved southeast.
Pawnee County	5	5:45pm to 6:30pm								Hail and wind.
										Scattered crop damage from hail was reported over the eastern part of the county. High winds broke tree limbs. Winds were estimated at 60 mph in larned. The storm moved southwest.
Ford County	5	evening								High winds
										The west and south concrete block walls of a large ware house in the west part of Dodge City were blown down by a severe wind.
Osage County	8	4pm								Electrical
										A barn 3 miles south of Quenemo was destroyed by fire after being struck by lightning. A quantity of hay was also lost with the barn.
Wyandott and Johnson Counties	8	4:30p								Electrical (4)
										Lightning strikes in 4 separate localities disrupted service for as long as an hour. One building had a number of cornice stones knocked out and others loosened when lightning struck it. Heavy rain flooded low intersections in Kansas City and 8 automobile accidents occurred as a result of poor visibility in the heavy rain.
Cowley County	8	7:30p								Electrical
										Lightning struck a transformer in Arkansas City and caused a service interruption of near a half hour for much of the town.
Montgomery County	8	8:30pm					2			Electrical (6)
										Six lightning strikes in various parts of town put out street lights
KANSAS (Con't)										
Seward County	10	3:50p-4:10p	10	*4				4	4	Hail and wind
										Hail driven by 65 mph winds damaged crops and some buildings west of Liberal. Most stones were 1 inch in diameter but a few were about 3 inches in diameter. The storm moved southeast.
Ford County	10	5pm								Tornado
										A house trailer was picked up by a small funnel cloud which came to earth about 4 miles east of Ford. The trailer was carried a short distance along the highway and then demolished when set down. Although the trailer was occupied there were no injuries.
Ottawa County	12	4p-5p	16	*1 1/2						Hail and wind Electrical (2) and funnel cloud.
										The hailed area was across the northern part of the county, northeast of Minneapolis and extended north to south. Stripped trees, ruined gardens, loss of feed crops, broken windows, damaged roofs, and platted siding indicate the severity of the storm. Hail stones were about the size of golf balls and covered the ground to a depth of 4 inches. Fog, resulting from warm air blowing over the colder ice on the ground, became so dense that traffic was halted. Two automobiles ran together because of the fog. Two lightning strikes resulted in the loss of a cow out in a pasture and splitting two large trees in the park nearby. A funnel cloud observed for just a few minutes. The storm moved south.
Ellsworth County	12	4:30p-5pm	6	*1						Hail
										Heavy hail of 3/4" to 2" in diameter with a few larger stones fell over much of Langley township, damaging crops and buildings. Hail came straight down without wind. Storm moving southeast.
Saline County	12	5:20p						1		Hail and wind
										Hail ranging in size up to that of hen eggs and driven by a high wind caused much crop loss in an area about 7 miles north of Salina. Poultry was killed and birds were observed trying to fly with some of their feathers missing. A trailer house 7 miles north of Salina was overturned by the wind. Hail remained in considerable quantity 16 hours after the storm. Storm lasted only a few minutes. The storm moved southeast.
Pawnee County	13	1:30pm						1		Electrical
										The telephone, T.V. and some wiring were damaged when lightning struck a house in the west part of larned.
McPherson County	13	4p-4:30p	3	*1						Hail
										Hail ravaged feed crops near Windom in western McPherson county. Roofs were damaged and about half the leaves were stripped from trees. Hail was left in drifts 3 feet deep. Stones were about pigeon egg size.
Sherman County	13	afternoon								Wind and electrical
										High winds broke 2 poles on a feeder electric line west of Goodland and lightning shattered 7 insulators on the line from Goodland to Colby. Power was off in rural areas from 5:30pm of the 13th till 1:30 pm on the 14th.
Decatur County	13	8p-9p								Electrical
										Eight head of cattle were killed by lightning 11 miles northwest of Decatur. A telephone line nearby had been walled by the lightning.
Cowley County	13	10:30p								Electrical
										Several homes and business houses in Udall reported minor damages from lightning.
Ellis County	13	11:00p						1		Electrical
										A man was injured slightly when lightning hit the T.V. antenna, jumped to the window air conditioner and then past the man to the kitchen stove.
Elk County	14	3:30a						4		Electrical
										A barn and 9,000 bales of alfalfa were burned after lightning struck at a farm 2 miles north of Howard.
Wilson County	14	6:05a								Electrical
										A farm home 2 1/2 miles south of Neodesha was struck by lightning. Some damage was done to the electric wiring.
Neosho County	14	9:30a								Electrical
										Lightning struck a house 4 miles northwest of Chanute damaging the wiring and making 3 holes in the roof. Firemen found the insulation smoldering.
Labette County	14	morning								Electrical (2)
										Lightning struck the office of a used car dealer in Oswego knocking

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
KANSAS (Con't)									
Montgomery County	14	afternoon							a hole in the roof. A power line in the southern part of Parsons was hit and blew out a transformer fuse.
Montgomery County	14	afternoon							Electrical One man was knocked to the floor when lightning blew out all fuses and some of the electrical outlets from the walls.
Cowley County	14	night							Electrical Electrical appliances were damaged, the floor, walls and curtains burned or charred when lightning struck a house in Independence.
Cowley County	14	night							Electrical Lightning damaged the siding of a house, tore off a door, and burned some house furnishings. Several electrical appliances were also damaged near New Salem.
Butler County	14	near mid-night							Electrical A barn near Prairie View (community) together with contents of 1,000 bushels of barley and other items was utterly destroyed when set on fire by lightning.
Butler County	15	after mid-night							Electrical A shed, 5 miles northeast of Augusta was destroyed by lightning.
Marion County	15	early am							Electrical A home in Florence was hit by lightning damaging the electric stove and splitting one wall of the living room.
Marion County	15	2:00 am			4				Electrical A large barn northeast of Florence was set on fire by lightning and with contents of hay, grain, farm machinery and riding equipment was destroyed.
Wichita County	16	12:30p-12:40p	2	440					Tornado and funnel cloud A small tornado touched ground in an open field. A second funnel was sighted but remained aloft. Both were about 17 miles northwest of Neoti moving east at about 25 mph.
Montgomery County	16	5:30p-6:15p							Funnel Clouds (3) At least 3 funnel clouds were sighted in the east of Independence moving toward the northeast.
Lyon County	17	afternoon							Electrical A bolt of lightning struck a house in Emporia damaging the T.V., set fire to the porch roof and burned a hole in a gas line 18 inches below ground surface.
Riley County	17	3:30p							Funnel cloud A funnel cloud was sighted southeast of Manhattan, moving north.
Pottawatomie County	17	5:55p							Funnel cloud A roaring noise was heard as a funnel cloud was observed passing 2 miles northeast of Emmett.
Trego County	18	2:30p			1				Electrical A man was killed by lightning while standing near a road grader near Ogallah.
Stanton County	20	7 pm	12	4					Hail Small hail 1/4 to 1/2 inch in diameter fell over the area from 6 miles south of Johnson to near Big Bow. Yield of grain sorghums was reduced 30 to 50%.
Cheyenne County	20	2:10p-2:25p	1	900					Hail Crops and gardens were damaged by small hail 1/4 inch in diameter. Hail was still 2 inches deep next morning on south sides of buildings where it had been piled up by the 40 mph southwest wind.
Riley County	21	3:18p-3:23p							Funnel cloud Funnel cloud observed about 6 miles southeast of Marshall Field, Fort Riley. Funnel cloud had a definite "pumping" up and down action and was at its greatest development when first observed.
Morris County	21	evening							Lightning Three Angus cows and a calf were killed by lightning near Council Grove.
Harvey County	23	4:30p							High wind Winds estimated at 60mph over turned a house trailer as it was
See reference notes at end of table.									
KANSAS (Con't)									
Russell County	23	5 pm							towed along the highway near Weston. Hail, tornado and lightning Hail damaged crop along Big Creek about 6 miles south of Russell. Lightning struck a steel granary southwest of Russell, granary and contents were destroyed by fire. A small tornado was observed for a few minutes about 3 miles west of where the elevator was destroyed.
Pratt and Barber County	23	6:30p-7p	15	2	1	4			Hail Hail damaged a number of small areas over southern Pratt and northern Barber counties. One man was injured slightly by hail before he was able to get under cover.
Rice County	23	night							Lightning A bolt of lightning striking near a house in Lyons damaged the electric range.
Rice County	27	2:15p-2:25p							Funnel cloud A funnel cloud was sighted north of Nickerson a few miles, by the Rice County Sheriff. Heavy rain was falling around the funnel cloud.
Brown County	30	4:50p-5:20p				2			Wind, rain and lightning Strong west winds broke many branches and trees in and around Hiawatha. A number of automobiles, a few houses were damaged by falling trees and large limbs. Numerous utility lines were broken by falling branches. Heavy rain made visibility poor and a boy was injured when a motorist ran into him. Some damage was done to part of a house and a woman occupant was made deaf for a while by a lightning bolt.
Crawford County	31	3:30p							Funnel cloud A well developed funnel cloud that remained aloft from 4 miles north and one-half mile west of Pittsburg to near Arma, 10 miles north of Pittsburg was observed by State Highway troopers and the County Sheriff.
Johnson County	31	2:19p-2:25p							Funnel cloud A funnel cloud a short distance NE of Olathe was observed travelling slowly eastward for a few miles before it pulled back into the main cloud deck and disappeared.
KENTUCKY									
Jefferson County	1	PM				4			Wind Winds up to 59 miles per hour snapped off tree limbs, disrupted utility service, cast drift at least one boat on the Ohio River, and blew down a concrete-block wall.
Laurel County	1	5 PM			1				Electrical Lightning killed a man in the town of Keavy during a thunderstorm.
Madison County	14	PM				3	4		Wind, Hail, Rain Wind knocked over numerous TV antennas, uprooted trees, tore away tree limbs, and damaged utility lines. Bird egg-size hail pelted gardens and flower beds. Tobacco damage was caused by the wind and hail. Rain caused additional damage by flooding basements. Most damage reported in the city of Richmond. Damage by hail 80% of total, by wind 15%, and rain 5%.
Jefferson County	16	6:15 PM			1	1			Electrical The fatality and injury resulted when a bolt of lightning, which hit a nearby tree, was conducted along a stream of water to them.
Fayette County	27	PM				5	3	3	Wind, Hail Wind caused a grandstand at a ball park in Lexington to collapse causing the injuries. Storm also halted utility services. Wind and hail did considerable damage to tobacco in the county.
Mercer County	27	6 PM					4		Electrical A lightning bolt set fire to a large restaurant destroying the building and its contents.
Campbell County	27	PM					4		Wind Greatest damage in Newport. Wind during a thunderstorm caused a tower at a warehouse to collapse. Plate glass windows were shattered. A chimney and parts of several roofs were torn away. Awnings on buildings were torn away.
Mason County	28	1:30 PM					4		Electrical A bolt of lightning sparked a blaze which destroyed a building and most of its contents. Over 300 bales of hay were lost in the fire.
Lee County	30	PM					4		Wind, Hail High winds accompanied by hail struck the northeastern tip of the county. Corn fields were laid flat and tobacco patches were cut to pieces. Damage by hail 70% of total, by wind 30%.
Logan County	31	PM			1		3		Wind, Electrical Fatality result of being struck by lightning while loading hay at a farm near Lewisburg. Considerable damage was reported to corn and tobacco crops by wind.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (FARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
LOUISIANA St. Mary; Morgan City	7	2:30 pm						2	Lightning
									Struck WB anemometer; injured observer
Calcasieu; Lake Charles	7	4:50 pm							Funnel cloud
Lincoln; Ruston	11	6:25 pm						3	Hail
									Hailstones ranging up to golf ball size
Orleans; Lake Borgne	19	12:50 pm							Waterspout
Jefferson; 10 S of Kenner	20	10:14 am							Funnel cloud
Calcasieu; 8 SSW of Lake Charles	21	11:35 am							2 funnel clouds
MAINE York County	19	Evening			0	0	5	0	Electrical, wind
									Damage to several houses from lightning-started fires. At Arundel, Maine, wind ripped large shed apart, scattering wood and heavy equipment over the farmyard.
Lewiston-Auburn area	22	Afternoon			0	0	5	0	Electrical, rain
									Lightning scored three direct hits on telephone cables in Auburn with loss of service. Power outages also resulted from lightning strikes. Several road washouts and section of parking lot collapsed by heavy rain taking auto down with it. Vehicle badly damaged. Clogged sewers caused local floods.
MARYLAND Washington, D. C.	1	about 0300 EST			1	0			Lightning
									A man was struck and killed by lightning in a park.
Bellevue, Talbot County	1	0100 EST			0	0	4		Lightning
									Lightning struck a barn which burned to the ground.
Baltimore County	1	0300 - 0400 EST			0	0	4		Lightning and windstorm
									A severe electrical storm which swept across Baltimore County left a path of destruction. Property was hit by lightning and falling limbs and trees from strong winds cut some overhead wires and damaged some houses.
Montgomery County	1	about 0300 EST			0	0	3		Lightning
									Hundreds of residents were without power for four to five hours when lightning struck equipment of the Potomac Electric Power Co.
Ryattsville, Prince Georges County	1	a. m.			0	0	3		Lightning
									Lightning struck a grocery store and caused a fire.
Chevy Chase, Montgom- ery County	1	0400 EST			0	0	4		Lightning
									Lightning split a large tree and hit a roof of a large home. Damages estimated at \$30,000.
Ryattstown-Clarksburg, Montgomery County	1	2030 - 2100 EST			0	0	4		Windstorm
									A terrific twister type of windstorm ripped the roof off a large barn and twisted off large trees.
South River area, Anne Arundel County	10	0657 EST			0	0			Funnel cloud and waterspout
									Phenomenon first appeared about 0657 EST forming about 6 to 8 miles south of Annapolis. In the fully developed stage the funnel cloud extended downward from a cloud base of 800 to 1000 feet. The spot of the funnel extended vertically from the cloud base to the horizon. Funnel apex angle was about 20°. The phenomenon moved in a westerly or northwesterly direction for about 15 minutes and the base of the cloud layer lifted to about 2000 to 2500 feet. The funnel shaped phenomenon was replaced by a vertical shaft which appeared to be a waterspout. The waterspout appeared uniform between the cloud base and the horizon.
Kent Island, Queen Annes County	14	afternoon			0	0	4		Heavy rain
									Heavy rainfall caused the roof of a supermarket at the Kent Island Shopping Center to collapse due to the weight of the water. Merchandise in the rear of the store where the roof section fell was ruined.
MARYLAND (Cont'd.) Central and southern Eastern Shore, Talbot, Caroline, Dorchester, Woodstock, and Worcester Counties	14 - 15				0	0	5	0	Heavy rains
									Horizontal rains flooded roads and streets, shorted out telephone cables, and in some places washed out sections of roads and damaged bridges. Some fields were badly eroded.
Baltimore City and Baltimore County	19	p.m.			0	0	4		Lightning
									Lightning associated with severe thunderstorms hit a number of homes in Baltimore County; a 50-foot camera tower on the race track at the State Fair Grounds in Timonium was hit and burned before firemen arrived. A scow at Pier 1, Canton was hit.
Prince Georges and Montgomery Counties	19	p. m.			0	0	4		Windstorms
									Severe electrical storms accompanied by strong winds caused considerable damage as poles and trees were downed cutting power service to some communities. In some instances trees fall on automobiles.
Chesapeake Bay Bridge area, Anne Arundel & Harford County	19	p.m.			0	0	3		Waterspout
	19	p.m.			0	0	5	0	Lightning & heavy rains & strong wind
									A violent electrical storm accompanied by damaging winds caused considerable damage. Several dwellings and two barns were struck by lightning. One barn and one home were completely destroyed. A bull in the barn was killed. Basements were flooded. Erosion was severe in fields and some roads and highways were damaged.
Near Oakington, Harford County	19	p.m.			0	0	4		Windstorm
									A twister struck a farmstead near Oakington between Aberdeen and Havri de Grace. Trees on both sides of the house were taken out. The twister then dipped down and completely demolished a 80 x 30 foot equipment shed, whistled by a 300-year old brick and frame house and then leveled sheds and fruit trees. It tore tops from trees in woods on each side of the barn yard, cut a swath down a ravine and broke up over the head waters of the Chesapeake Bay. About 15 to 19 large trees were blown over.
Baltimore area	20	late afternoon			0	0	4		Thunderstorms, lightning, rain
									A severe thunderstorm accompanied by strong winds and heavy rains flooded streets and homes trees and overhead wires. At least one house was struck by lightning.
Frederick area, Frederick County	20	p.m.			0	0	4		Lightning
									Nine cows were killed by lightning.
Ijamesville, Frederick County	20	1115 EST			0	0	2		Lightning
									Lightning damaged a home.
Frederick area, Frederick County	20	p.m.			0	0	3		Windstorm
									200 telephones were knocked out of service when strong winds toppled trees over wires.
Cape St. Claire, near Annapolis, Anne Arundel County	24	p.m.			1	0			Lightning
									Lightning killed a man standing under a tree.
Essex, Baltimore County	24	p.m.			0	1			Lightning
									Lightning struck and critically injured a boy while playing near his home.
Seet Pleasant, Prince Georges County	24	p.m.			0	1			Lightning
									A man escaped with minor leg injuries when a light pole on which he was working was struck by lightning.
Elkridge, Howard County	29	p.m.			0	2			Lightning
									Lightning split a large tree and bruised and stunned a man and wife as they stood in their yard. Both were knocked to the ground.
Baltimore area	29	p.m.			0	0	3		Lightning
									Lightning struck in various places hitting a flag pole and snapping it in two, a warehouse, television antennas, utility pole, and three homes.
NW Washington, D. C., Prince Georges County, and Montgomery County	31	p.m.			0	0	4		Strong winds, lightning, & rains
									Strong winds toppled small trees and caused some overhead wires to break while heavy rains left many streets under three to four feet of water. Lightning bolts hit a 3-story brick apartment and a dry cleaning shop, had a one-story dwelling.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
MASSACHUSETTS									
Boston and vicinity	2	Early a.			0	0	4	0	Electrical, rain
									Series of 2 or 3 thunderstorms with brief, torrential rains occurred before 7 a.m. Wires downed, shingles ripped from several homes, roofs damaged and several underpasses flooded.
NE Worcester Co. and NW Middlesex Co.	10	Afternoon			0	1	4	0	Electrical, rain, hail
									Storm downed few trees, many limbs. Local flooding of underpasses and cellars especially in Fitchburg area. Wires downed and service to many homes disrupted. Several homes struck by lightning. Boy injured in collision due to failure of wet brakes.
Eastern portions	11	A.M.			0	1	4	0	Hurricane Cindy
									Winds much subdued; storm losses (total under \$25,000) due mostly to heavy rains. Power and phone service interrupted at few spots on the Cape when tree limbs were felled onto local service wires. Damage to boats minimal. Six families evacuated from beach cottages at 4 A.M. due to threatening wind and high storm tides. One injury in skidding accident blamed on storm. Heavy rains caused soil washing and road washouts in scattered areas. Underpasses, streets and some cellars flooded. Traffic halted at times by poor visibility in heavy rain.
Lynn to Beverly	15	Late afternoon			0	0	4	0	Rain
									Torrential downpour quickly flooded underpasses, low roads and many cellars in area. Man sarcooned atop auto in underpass in 4 feet of water.
Entire state except southeast portion	19	Afternoon and evening			0	15	5	0	Electrical, rain, wind
									Storm swept eastward across state, hitting coastal areas in evening. Its path was dotted with lightning-started fires, utility failures, fallen trees and flooded roads and cellars. Unusually high number of fires accounted for major portion of damage. Scores of minor highway accidents resulted from storm. Four firemen injured fighting blaze in Brighton section of Boston. Flash floods hit many roadways, stalling cars and adding to the usual Sunday traffic tangle. Squalls felled trees onto several homes.
Worcester, Hampshire, and Middlesex Counties	20	Evening			1	17	4	3	Electrical, rain
									Violent thunderstorms with locally torrential rains over most of area. Soldier killed and 17 others injured by lightning at Ft. Devens, Mass. Storm was nearly a repeat of the one of the preceding day in this area, as local floods, washouts, utility failures and many lightning-started fires kept firemen, linemen and highway departments working without pause for second day.
MICHIGAN									
Lower Michigan	18	Afternoon					4	0	Thunderstorms
									Severe thunderstorms occurred during the afternoon. Heavy rains fell over the western sections with local flooding resulting. Damage from local high winds and lightning strikes occurred in the eastern sections.
Macosta county	22	Late afternoon			7	3			Thunderstorms
									7 workers in a cherry orchard were injured by lightning. Lightning struck and followed an electrical wire leading into a building where they had taken shelter.
Macomb and St. Clair counties.	23	About 6:00 p.m.					4		Thunderstorms
									Severe thunderstorms caused several areas of damage. A house and some farm buildings were destroyed by high winds near New Haven. 2 houses struck by lightning and burned near Port Huron.
New Buffalo	25	6:00 p.m.			1				Thunderstorms
									Woman struck by lightning.
Southern Half of Lower Michigan	29-30						4	0	Thunderstorms
									Intermittent thunderstorms throughout the two day period caused scattered areas of damage from lightning, heavy rains and high winds.
See reference notes at end of table.									
MINNESOTA									
Elkton, Mower County	4	3:24 p.							Funnel aloft.
									Funnel reported moving north or west.
Becker, Clay, Marshall, Polk, Red Lake Counties	4	p.m.							Hail
									Crops damaged by hail. Dollar loss not available.
Kennedy ONE, Kittson County	7	4:28 p.							Funnel aloft.
									Farmer reported seeing funnel touch ground, near his home, without doing damage. Funnel moved northeast.
Fergus Falls, Ottertail County	7	4:53 p.							Funnel aloft.
									Funnel reported moving northwest. No damage reported.
Dear Creek, Ottertail County	7	5:30 p.	*200	30			4	4	Tornado, hail and rain.
									Roof lifted from concrete block school bus garage causing collapse of building, damaging 5 buses. Section of 18 inch brick chimney carried aloft a distance of 75 feet and dropped through school house roof resulting in extensive damage to interior of school from rain. Tornado moved east southeast. Accompanying hail damaged crops in 15 by 35 mile area.
Bertha (near), Todd County	7	7-9 p.	12	4				4	Hail, heavy rain.
									Rain, up to 5 inches, and hail damaged oats and corn.
Correll ONE, Big Stone County	7	10 p.						4	Tornado
									Barn destroyed, killing 3 calves. Trees damaged.
Clinton-Graceville Area, Big Stone County	7	10 p.							Wind, electrical.
									Barn destroyed on one farm with several others reporting damage to outbuildings and sheds. Trees reported twisted and stripped. Two farm homes struck by lightning. Extent of damage not known.
Dalton ONE, Ottertail County	7	11:15 p.							Wind
									Barns destroyed and house damaged. Tops of trees broken off.
Richville, Ottertail County	7	11:30 p.	2 1/2	100			3		Tornado
									Although funnel not seen observer reported wind sounded like freight train. Barn destroyed and all other buildings damaged. Piece of glass, 6 x 6", driven edgewise into metal covered brooder house. Stack of baled hay widely scattered by wind. Storm moved northeast.
Glenwood (near), Pope County	7	11:30 p.	18	30				4	Tornado
									Following a windy, hot humid day winds intensified about 11:00 p.m. with a roaring sound. Airport hangar lifted from foundation. Storm moved northeast.
Henning ONE, Ottertail County	7	11:30 p.						4	Wind
									Barn wrecked by wind. Trees downed.
Perhan-Dent area, Ottertail County	7	11:30 p.	15	4 1/2 to 3			5		Wind
									Four barns damaged and three destroyed in area. Many sheds and outbuildings damaged. Recently constructed lake cottage demolished. Many trees uprooted. Winds estimated in excess of 50 mph. Power and phone lines downed.
Brainerd area, Cass County	7	p.m.						4	Wind, rain.
									Cabins and boats damaged, power and phone lines out. Ranger estimated several thousand board feet of timber downed.
Dnania, Mille Lacs County	8	1:00 a.	1 1/2	300			5		Tornado
									School roof damaged and partially torn off. Windows blown in or peppered with bullet sized holes. Roof and walls of creamery damaged. Trees uprooted or snapped off and twisted. Minor damage to several homes and garages. Residents reported storm sounded like freight train or jet aircraft. Power and phone lines downed by falling trees. Storm moved northeast.
Marshall, Ottertail, Polk, Red Lake, Todd, Wilkin Counties	7-8	p.m.						6	Hail, wind.
									Crops damaged by hail accompanied by strong winds. Losses in parts of Polk County ranged from 50 to 100 per cent.
Minneapolis-St. Paul, Hennepin-Ramsey Counties	8	a.m.							Heavy rain, electrical.
									Rains up to three inches flooded streets and basements. Collapse of a portion of commercial garage roof believed due to weight of accumulated rain. Several homes received minor damage from lightning strikes.
Brownsdale (near), Mower County	10	4:00 p.	8	*2					Hail
									Field crops damaged in area extending from Maysville to Brownsdale. Roofs and siding damaged and windows broken in Brownsdale.
Fillmore, Houston Counties	10	4:00 p.						5	Hail
									Hail occurred in several widely scattered areas in the two counties with some losses up to 100 per cent.

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JULY 1959

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS						
MINNESOTA (Cont'd)										MISSOURI (Cont'd)														
Foxhome area, Otter-tail, Wilkin Counties	10	6:00 p.	20	* 2					Hail	St. James, Phelps County	27	3:10 p.							Funnel Aloft					
									Marble sized hail, with some stones three inches in circumference, pounded corn, bean and barley fields. Several farms reported 100 per cent loss. Dollar value of loss not available.	Kirkville, Adair County	30-31	12:30 p. 1:15 a., 3:1st					4		Thunderstorm					
Swift County	20	7:00 p.	12	*1-2					Hail										Many trees down, flash flooding on several small streams. Many power and phone lines down.					
Wadena-New York Mills area, Ottertail, Wadena Counties	20	10:00 p.	15	* 1			4		Hail	Grandview (10W), Jackson County	31	2:22-2:32 p.							Funnel Aloft					
Lyon, Murray, Nobles, Rock, Yellow Medicine Counties	22	p.m.					5		Hail	Kansas City, Jackson County	31	3:00-4:00 p.					4		Thunderstorm					
									Crop losses occurred in scattered areas in counties listed with some farmers reporting 50 to 100 per cent loss.										Winds hit gusts to 62 MPH. Many power and phone lines down. Trees down. Lightning damaged several homes.					
MISSISSIPPI										MONTANA														
Leflore County; Itta Bena	1	2:30 pm					3		Tornado	St. Phillip Wibaux County	7					1			Thunderstorm					
									Struck vocational school causing damage to barns and outbuildings.										A fifteen-year old boy was killed by a lightning strike while working on a ranch.					
Mississippi Sound, 30 SE Biloxi	6	9:59 pm							Waterspout	Westby (12 miles west) Sheridan County	13	6 p.m.	6	* 1/2				3						
Attala County; McCool	8				1		2		Lightning										Soft hail up to one inch diameter.					
Hinds County; 8 S Jackson	22	1:59 pm							Funnel cloud	Cut Bank (12 miles west) Glacier County	20	3 p.m.	4	* 1				3						
Washington County; 3 S Greenville	24	2:13 pm							Funnel cloud										Hailstones up to one inch diameter.					
MISSOURI										NEBRASKA														
Duval (6SE), Barton County	5	5:00 p.	1	* 1			4	5	Thunderstorm	Chester (north and south) Liberty County	27	3 p.m.	15	* 3/4				5						
									Hail from hen-egg size to jagged pieces 3 inches square caused heavy damage to about 500 acres of corn and soybeans. Also caused damage to roofs and windows, and injured cattle and sheep. 3.00 rain accompanied storm, which was confined to a relatively small area.										Hailstones up to 3/4 inch.					
St. Louis	10	Noon					4		Dust Devil	South portion Frontier Co.	3	afternoon	Spotted		0	0	0	4	Hail					
									The following account was prepared by WBAF, St. Louis: "Under cloudless skies around noon a vigorous dust devil developed in the downtown area of St. Louis. The dust devil lasted some 3-5 minutes and much paper and waste was visible in the vortex. Debris was carried to estimated heights of 150-200 feet. As a show of strength the wind moved a parked one and one-half ton truck several yards and rolled it into a fence. It lifted a small wooden car trailer into the air then dropped it upon its side onto the parking lot surface. It carried a five gallon can over and beyond a 9 foot fence and as a final effort blew out all the windows in a guard post building at a downtown manufacturing plant. These details were furnished by two eye witnesses who gave the same general accounting of movement and development."	South-central Nebraska	3	6-9 p.m.	150	*40	0	0	6	7						Hail and wind-storm
Verico Springs, Cedar County	10	Evening			1				Thunderstorm										Spotted damage occurred over area extending from Frontier and Harlan Counties in the west to Thayer and Fillmore Counties in the east. Heaviest damage in Holdrege-Loomis area and northern Franklin County. Stones up to 3 inches in diameter in the Holdrege-Loomis area.					
Vernon-Cedar Counties	16	1:00-2:00 p.							Funnel Aloft	Southwest of Adams	3	10 p.m.	4	Narrow	0	0	4	0	Tornado					
									Five funnels aloft near Nevada, Milo, Eldorado Springs and Stockton.	West of Johnson	3	night	Spot	Spot	0	0	4	0	Lightning					
Blodgett, Scott County	16	3:00 p.					minor		Tornado	Near Durwell	5	early a.m.	Spot	Spot	0	0	3	0	Lightning					
									Funnel touched ground briefly in an open field and then returned to "parent cloud".										Seven yearling heifers killed.					
Columbia (10 SSE), Boone County	17	5:50 p.							Funnel Aloft	Durwell to north of Wolbach	5	4-7 a.m.	45	*5-15	0	0	3	6	Hail					
Springfield, Greene County	17	7:00-8:00 p.				1			Thunderstorm	12 mi. W. of Fullerton to near Clark	5	5:30-6a.	22	*1-2	0	0	light	5	Hail					
									Six deer in Zoo killed by lightning. Police officer injured when hit by lightning.										Storm moved east-southeast. Stones half inch to an inch in diameter. Ground covered to depth of 2 inches in center of storm.					
Kingsville, Johnson County	17	7:40 p.							Funnel Aloft	Northeastern Seward County	5	8:15a.	8	*8	0	0	0	5	Hail					
Beosho, Newton County	20	4:05 p.					4		Thunderstorm										Stones 1/2 to 1" diameter. Ground covered two inches deep at center of storm. Storm moved south.					
									Lightning hit a house, which burned to the ground.	2 mi. South of Plattsmouth	5	noon	Spot	Spot	0	0	4	0	Lightning					
Marshall, Saline County	23	4:30 p.							Funnel Aloft										Home struck and burned to ground.					
Frohna-Appleton, Cape Girardeau-Perry Counties	26	2:30-3:00 p.	5	500	2	4	4		Thunderstorm	Arapaho-Stanford and southeast into Kansas	5	2 p.m.	25	*2	0	0	4	5	Hail					
									Trailer upset near Frohna. Two occupants injured. Many trees down. Hail and wind damage to corn fields.										Storm moved southeast. Stones 1-2" diameter. Also scattered hail in south-central Furnas County, with some damage.					

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
NEBRASKA (Cont'd)									
Western Polk County	5	11-11:30p.	8	35	0	0	3	3	Hail
									Stones 1/2 to 3/4" in diameter.
Northeast of Crawford to Crawford	6	2-3 p.m.	7	unk.	0	0	light	4	Hail
North of Crawford to Chadron	7	afternoon	20	*3	0	0	0	5	Hail
									Storm moved east.
North Platte-Gothenburg area	7	4:30 to 8:40 p.m.	35	10	0	0	5	6	Hail and Tornado
									(Tornado)
									Hail
									(Hail)
									Tornado at Gothenburg; severe hail and tornado damage in and near Gothenburg.
Southeast of Ainsworth	7	unknown			0	0	3	0	Wind squall
									A few sq.mi. of several windmills destroyed.
1/2 mi. west of Sargent	7	night	Spot	Spot	1	0	0	0	Lightning
									Man struck and fatally injured while fishing in river.
Near Burwell	7	night	2 spots	0	0	3	0	0	Lightning
									17 cattle killed.
Near Hesposne	9	9:15 p.m.	Spot	Spot	0	0	3	0	Lightning
									Barn struck and burned, adjacent granary also burned.
1/2 mi. west of South Sioux City	12	2-3 p.m.	3	*2	0	0	0	4	Hail
									Corn stripped, soy beans destroyed. Stones small. Stones small. 1/4" to 1/2" in diameter.
South of Crete	12	3:15 p.m.	10	*1	0	0	0	4	Hail
									Storm moved east. Stones one half to three-fourths inch in diameter. Ground covered three inches deep in center of storm.
East of Bridgeport	12	4-5 p.m.	10	*5	0	0	0	5	Hail
									Storm moved south. Stones one inch to one inch and a half in diameter.
North of Harvard	12	Afternoon	12	*6	0	0	0	4	Hail
									Damage spotted over area.
South of Sutherland	12	Afternoon		Small area	0	0	0	4	Hail
West of McCool	12	Mid-afternoon		About 1 sq. mi.	0	0	0	4	Hail
Scribner-Snyder area	12	afternoon	10	unknown	0	0	0	5	Hail
									Stones size of marbles. Storm moved SSE.
Fremont & Vicinity	12	mid-afternoon		A few sq.mi.	0	0	3	3	Hail, excessive rain, and wind.
Hemingford-Alliance-Broadwater	12	4-6 p.m.	60	*1 1/2	0	0	0	5	Hail
									Storm moved south. Largest stones size of golf balls.
Northern Clay Co.	12	5-6 p.m.	13	1 to 2	0	0	0	4	Hail
10 mi. East of Dalton to west of Sunol	12	6:30 p.m.	40	*3	0	0	0	5	Hail
									Storm moved SSE. Damage spotted over area.
1/2 mi. W of Scribner	13	2:30 p.m.	3	sq.mi.	0	0	light	4	Hail & excessive rain.
									Stones size of marbles. One farmer reports seven inches of rain in about 30 minutes.
West of Cedar Bluffs to Valparaiso	13	5:15-5:45 p.m.	15	+5	0	0	4	5	Hail
									Storm moved south. Stones up to size of golf balls.
Ogallala	13	late afternoon	Spot	Spot	0	0	3	0	Lightning
									Scale out in hotel roof, some water damage from accompanying rain.
20 miles north of Harrison to 10 mi. south of Harrison	13	6:45 p.-7:30p.	30	Variable	0	0	3	5	Hail
									Storm moved south.
Northwestern Cedar County	14	unknown	12	*5	0	0	3	4	Hail
									Storm moved south southeast. Stones 1-2 inches in diameter.
North and west of Bushnell	15	3 p.m.	10	*1	0	0	3	5	Hail
									Stones 2-3 inches in diameter. Ground covered 2 inches deep in center of storm. Moved southeast.
1 west of Stegall	15	unknown		small area	0	0	3	0	Windstorm, probably tornado.
South of Lexington	16	afternoon	2	sq.mi.	0	0	0	4	Hail
50 mi. west of Sidney	20	2:50 p.m.	Short	Narrow	0	0	0	0	Funnel cloud
									Reported by PIERRE
See reference notes at end of table.									
NEBRASKA (Cont'd)									
Near Atlanta	20	4:30-6p.	7	4	0	0	0	5	Hail
									Stones half inch to one inch in diameter. Ground covered 1 1/2 inches in center of storm.
2 mi. west of Benkelman southeast to Kansas border	20	5:30-7p.	7 1/2	*2 1/2	0	0	0	5	Hail
									Length in Nebraska. Storm moved southeast into Kansas. Stones 1 to 1 1/2 inches in diameter. Ground covered to depth of 2 inches in center of storm.
3 mi. southwest of Bartlett	30	2 a.m.	Spot	Spot	0	0	3	0	Lightning
									Few cattle killed.
Near Emerson	30	5:30 a.m.	Spot	Spot	0	0	3	0	Lightning
									Barn struck, partly burned.
7 mi. northwest of Stanton	31	8:45-10 a.m.	20	4	0	0	4	4	Hail
									Damage spotted over area. Storm moved south.
West of Dodge to Lincoln	31	9 a.m. to noon	40	*few	0	0	5	5	(Wind) (Hail) Hail and wind squall
									Trees, wires, and TV antennas damaged.
Ord and Vicinity	31	9:15 a.m.	Few	sq.mi.	0	0	3	0	Wind squall
2 mi. east of Springfield	31	Noon	A few	sq.mi.	0	0	0	4	Hail
2 west of Salem	31	1p.m.	Spot	Spot	0	0	4	0	Lightning
									Barn and contents burned.
NEVADA									
Las Vegas Area, Clark County	18	Evening					4		Wind
									Strong winds toppled telephone and power poles, blew off several roofs, and caused extensive damage to boats on Lake Mead.
NEW HAMPSHIRE									
Southeast portion	10	Afternoon			0	0	4	0	Electrical, rain, hail
									Most of damage resulted from washouts and local flooding. Five homes damaged by lightning-started fires. No damage from hail.
Southern portion	19	Afternoon			0	0	4	0	Electrical, rain
									Storm swept eastward across southern part of state hitting coastal areas in late afternoon. Its path was dotted with lightning-started fires, utility failures, fallen trees and flooded roads and cellars. Unusually high number of fires accounted for major portion of damage. Many trees downed in brief but violent squalls.
NEW JERSEY									
Southeast Coast	10						2		Hurricane "Cindy".
									Rainfall totalling 7 inches or more occurred along the southeast coastal areas, but no significant damage was reported, during the passage of "Cindy" along the New Jersey coast.
Essex, Union, Somerset, Middlesex and Monmouth Counties	20	Evening			2	4			Electrical, rain.
									A construction worker was injured when struck by lightning while working in Bridgewater Township, Somerset County. A County Park employee was hurled 20 feet when a bolt of lightning bounced from a car and struck him in the stomach, at Woodbridge, Middlesex County. Heavy rain flooded highways and streets; lightning hit electrical switching stations disrupting power service in several communities in Essex and Monmouth counties. A school building, a police radio tower, and several homes were struck by lightning.
Essex, Union and Middlesex Counties	23	Afternoon			1	1	3		Electrical, rain.
									A dock worker was killed and his companion injured when they were struck by lightning at Sayreville, Middlesex County. Several buildings were hit by lightning; streets and highways were flooded.
NEW MEXICO									
Roswell, Chaves County	5	7:20 p.					3		Wind
									Two trailer houses blown over and badly damaged.
Dexter, southern Chaves County	5	Evening					3		Wind
									Limbs broken from trees, signs blown down, trailer house demolished.
Southern Chaves County near Hagerman	8	P.M.					2		Lightning
									Two men working on barn struck by lightning.
Portales, 6 miles west	8	5:00 p.					3		Tornado
									Small tornado destroyed several buildings on farm.
Progresso, Torrance County	11	4:45 p.					2		Tornado
									Mostly over open country, fences and power lines down, two windmills destroyed, many trees uprooted.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
NEW MEXICO (Cont'd.)									
Southern Chaves County	11	8:00 p.						3	Hail
									Stones reported size of golf balls. About 200 acres of cotton destroyed.
Western Eddy County	11	P.M.						2	Tornado
									Over open country, only damage was oil derrick blown over.
Alamogordo, Otero County	12	8:30 p.						3	Wind
									Wall of building under construction blown down, small store unroofed.
Southern Torrance County	13	7:30 p.						4	Hail
									Hail stones 1" in diameter. Wheat and bean crop destroyed over an area of about 12 square miles.
Tucumcari, Quay County, 11 miles East	14	P.M.						3	Tornado
									Small tornado struck feed lot damaging several buildings.
Albuquerque	18	3:45 p.						3	Wind*
									Strong winds associated with a thunder squall blew down wall of partially completed building. Gusts to 46 mph recorded at airport.
Clayton, Union County, near	20	4:00 p.						1	Lightning
									Man working in field was struck by lightning
Floyd area, Roosevelt County	28	P.M.						3	Hail
									Heavy crop damage in 12 square mile area.
Berino, southern Dona Ana County	29	10:00 p.						3	Tornado
									Small tornado destroyed several sheds and two barns in a small rural community.
NEW YORK									
Western New York	1	Late afternoon & evening			2	nu-merous	5		Thunderstorms, heavy rain, wind and hail
									Squall line type thunderstorms swept through western counties and were especially severe near Lakes Erie and Ontario. Heavy rain squalls, gusty winds to 50 mph, and spotty areas of hail. Two killed, one by lightning in Buffalo area, and one by car in heavy downpour; numerous injured. Number of barns or houses destroyed by lightning caused fires.
Adams, Jefferson County	1	10:30 p.m.	40	100-200				4	Small tornado
									Funnel not observed. Explosive effect on buildings, taking some buildings 1/4 mile; sound effects like 100 "jets" flying by. Heavy rain and bright lightning. Moving southwest to northeast.
Buffalo and Niagara Frontier area and nearby western counties	6	Afternoon			2	several	0	C	Thunderstorms, wind and hail
									Severe thunderstorms accompanied by strong gusty winds up to 65 mph, several areas of hail. One death by lightning, another due to high winds; several injuries. Considerable crop damage due to hail.
Rochester area, Monroe County	6	Afternoon						0	C
									Holland and Parma sections - severe thunderstorm with hailstones and high winds. Some crop damage.
New York City area	10	late p.m.				nu-merous	5		Heavy rain
									Heavy rains from hurricane "Cindy". 30 car pile up on Tappan Zee Bridge due to rain slicked surface; 11 injured in two car collision on water covered highway near Bay Shore, L.I.; 8 injured in Manhattan; 2 injured in Westchester due to poor driving conditions as a result of heavy rains.
Southern Adirondacks, including Warren, Washington and Saratoga Counties	12	Late afternoon			5		5		Thunderstorms with gusty winds; tornado
									Severe thunderstorms with strong gusty winds. Considerable wind damage with gusty winds to 40 and 50 mph; some power lines downed. Trees blown on top of cars injuring 3 people; tops torn out of fruit trees. At Sacandaga Reservoir beach near North Broadalbin small tornado vortex picked up a 16 foot motor boat and carried it 100 feet; also damage to trees. A very short path west to east.
Salsmanca, Catteraugus County	15	5:30 p.m.						4	Thunderstorm, wind and hail
									Severe thunderstorm with high damaging winds and hail. Power lines and trees downed; some flooding.
NEW YORK (Cont'd.)									
New York City area	19	Afternoon						4	Thunderstorm
									Severe thunderstorm; lightning struck tree and killed 4 under tree, 2 others injured.
Southeastern Counties, New York City area and scattered areas across the State	20	Late afternoon & evening						0	C
									Torrential thunderstorm downpours in Orange, Dutchess, Ulster and eastern portion of Sullivan Counties. Up to 5 1/2 inches of rain in the Middletown area in 3 or 4 hours. About 3/4 of real estate in area was damaged due to flooding. Many cars inundated. Middletown damages alone in excess of one million dollars. Fifty percent of Dutchess County oat crop ruined. Power failures throughout the area and unusually severe damage to roads and highways. Damages were more severe than those suffered in 1955 from hurricane "Diane". At the same time damaging thunderstorms were reported in scattered areas across the State.
Troy, Schenectady area	21	Late afternoon						1	4
									Heavy rain
LaGrangeville area, Dutchess County	22	Late afternoon						0	C
									Severe local thunderstorm with heavy rain. One killed in car accident due to heavy rainfall. Large roof paved in at Troy due to water weight.
Syracuse area, Onondaga County	23	8 p.m.							4
									Thunderstorm and wind
NORTH CAROLINA									
Columbus and Moore Counties	1	Afternoon						4	5
									Hail, wind
Hoke County	2	Unknown							3
									Electrical
Burke County	8	Afternoon							4
									Wind, rain
Onslow and Pender Counties	8	See Remarks							
									Waterspouts
Southern Coast, and Central North Carolina	8-10	See Remarks							
									Hurricane "Cindy"
Pasquotank County	10	8 a.m.	Unk	Unk	0	0	4		Tornado
									Home and church destroyed in small morning storm.
Dare County	10	1:40-2:05 pm	Unk	Unk	0	0	4		Tornadoes
									One tornado damaged three homes and a commercial building at Nags Head at 1:40 p.m.; another broke down trees and power lines a few miles north of Nags head at 2:05 p.m. No casualties.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
NORTH CAROLINA (Cont'd.)									
Alamance, Anson, Durham, Franklin, Granville, Harnett, Lincoln, Iredell, Richmond, Stanly, Vance Counties	10	See Remarks			0	0	5	5	Wind, hail, rain, electrical
			Local squalls associated with storm "Cindy" caused scattered wind damage with some local flash-flooding and hail damage to crops.						
Buncombe, Forsyth, Halifax, Onslow, Pitt, Warren, Wilson Counties	13-14				1	5	5	5	Rain, electrical
			Frequent thunderstorms continuing after the passage of storm "Cindy" caused many cases of local flash floods and drowning of crops in fields. One man injured by lightning, and some wiring and appliances damaged.						
Franklin County	20	Noon					3		Electrical
			Five valuable cattle killed by lightning while standing under tree.						
Forsyth County	20	6:30-6:45 pm	1/4	100	1	4			Wind, electrical
			Severe local thunderstorm. Lightning injured man, wind damaged buildings.						
Harnett County	25	4 p.m.				2			Electrical
			Two women injured when lightning struck clothes line.						
Gates County	26	4 p.m.					4		Electrical
			Church struck by lightning, burned down.						
Davidson, Forsyth, Guilford, Rockingham Counties	27	2-4 p.m.			2	0	5	5	Rain, electrical
			Two children drowned in flash flood; numerous washouts; some disruption of power and communications facilities by lightning.						
North Carolina; all general areas	29-31				0	3	5	5	Electrical, rain, hail, wind
			Numerous thunderstorms over three-day period caused scores of cases of lightning damage, hail, strong winds and local flash floods. Two men and a child injured by lightning in different areas. Five cattle killed in two different places.						
NORTH DAKOTA									
Northwest counties	3	Evening						50,000	Hail and severe winds
Cavalier County	3	Evening							Tornado aloft
Northwest N. Dak.	6	Evening						70,000	Hail and strong winds
Ramsey County	7	Afternoon							Tornado aloft
North-central counties	7	Morning						50,000	Rain, hail and strong winds
Southeast Counties	9	Afternoon						30,000	Heavy rain
Richland County	9	Afternoon						25,000	Tornado
Cass County	14	Afternoon							Tornado aloft
Morton County	21	Afternoon			2				Struck by lightning
OHIO									
Northern counties	1	afternoon			0	0	5	4	Thunderstorms
			During the passage of a particularly vigorous cold front, local thunderstorms were widespread over the northern half of Ohio. Many of these were accompanied by 50-60 mph winds, much lightning, hail, and in a few cases, heavy downpours of rain. Considerable property damage resulted from the wind, including trees, roofs, utility lines, etc. At Coldwater (Mercer Co.), for example, a dozen poles in a high-tension line were felled, disrupting service over a wide area; and in Fostoria a masonry wall on a factory building under construction was blown over. Small grains in many areas were flattened, though some fields may have recovered partially. Hail of golf-ball size were reported near Fostoria, and also at Ghent (near Akron), but there were few other reports of hail.						
Grove City	5	3 P. M.	short narrow	0	0	3	0		Tornado
			A very small, immature tornado struck the Clyde Marcus farm west of Grove City, completely demolishing one barn and doing minor tree damage nearby. A second barn not more than 30 feet away was left completely untouched, as was the farmhouse 150 ft. distant.						
OHIO (Cont'd.)									
Celeryville	6	2 P. M.	15	*1	0	0	4	6	Hailstorm
			This hailstorm traversed a west-east course across the southern part of Seneca and Huron counties. Over much of its path damage was spotty, but greatest destructiveness was attained in the intensively-gardened Celeryville mucklands. In this area more than 2000 acres of radishes, celery, lettuce, etc. suffered major damage to complete destruction. Hail covered the ground to a depth from 1 to 3 inches. Only a portion of these crops can now be replanted. Outside the Celeryville area principal damage was to corn, soybeans and potatoes.						
Hardin, Hancock and Wyandot counties	11	evening	30+	*2-3	0	0	4	7	Hailstorm
			A severe hailstorm traveled a northeastward path across northern Hardin, southeastern Hancock and northwestern Wyandot counties during the early evening hours. Hailstones ranged in size from small to larger than golf-balls in a path estimated up to 3 miles wide. Within this strip crop damage ranged from serious to complete. Corn, soybeans, tomatoes and potatoes were completely stripped of leaves virtually nothing but stalks remaining. While it appeared that some fields of seed corn and soybeans would recover partially, much of it is beyond recovery.						
			Although the greatest destruction took place in the counties mentioned above, more spotty damage was reported as far southwest as Tipp City (near Dayton) and as far northeast as central Huron county. If this were considered all the same storm, it would cover a path 120 miles in total length. Property damaged included mainly roofing, siding, windows etc. on farms, automobile tops and farm machinery. Few, if any, greenhouses were reported hit.						
OKLAHOMA									
Welch, Craig County	6	5:30 p.							Funnels aloft
			Two funnels aloft were sighted west of Welch. One remained in sight for 20 minutes.						
North-central and Northeast Area	8	p.m.						4	Wind, rain
			Severe thunderstorms moved southeastward across the area. Strong winds that reached 70 miles per hour caused widespread light damage to buildings, trees, utilities, etc. Heaviest damage was centered in Washington and Tulsa Counties. Heavy rains of 1 to 3 inches were recorded.						
Oklahoma City, Oklahoma County	9	1:00 a.					1		Electrical
			Lightning struck home causing fire which burned man seriously.						
Hardesty, Texas County	10	4:00 p.							Funnel aloft, hail wind, rain
			A severe thunderstorm over eastern Texas County was believed to have spawned a funnel aloft south of Hardesty that moved southward into the Texas Panhandle where it struck the ground. Heavy hail up to one inch in diameter accumulated up to 6 inches deep over a 40 square mile area east of Hardesty. Crops were destroyed by the hail, strong winds caused general light damage and heavy rain of over 3 inches was recorded.						
Beaver, Beaver County	11	p.m.					1		Wind
			Man was injured when wind blew a sheet of metal from a metal building at an oil rig.						
Felt, Cimarron County	11	p.m.							Hail
			Severe hail storm struck a small area east and north of Felt. Crops were damaged to completely destroyed. Travelers on Highway #64 east of Felt reported 3 inches of hail on the highway.						
Tulsa, Tulsa County	13	3:00 a.	3	880			3	3	Hail
			Hail up to one inch in diameter accumulated up to 5 inches deep on the level and 18 inches deep in drifts in extreme southeast Tulsa. Crops and trees were stripped and many birds were killed. Strong winds in the area caused general light damage.						
Bakly, Caddo County	12	3:30 p.	9	*2 1/2			3	5	Hail, rain, wind
			Heavy hail up to 1 inch in diameter caused complete destruction to crops in the area. Over 200 acres of cotton was lost as were peanuts and feed crops. Strong winds estimated at 65 miles per hour drifted the hail as much as 6 inches deep and some minor damage was attributed to the wind. Heavy rain of up to 5 1/2 inches was measured. Storm moved southward.						
Oklahoma City, Oklahoma County	13	3:35 p.					4		Wind, rain, hail electrical
			Severe thunderstorm moved across extreme northern portions of city with strong winds, heavy rain and hail. The strong winds ripped part of the roof off radio-TV station building and destroyed the roof of a patio at a residence. Lightning struck two homes causing damage of \$600 and \$25. Considerable hail up to 1 inch in diameter fell in the area. Heavy rain of over 5 inches caused local flooding. Storm moved southeastward.						

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	
					KILLED	INJURED	PROPERTY	CROPS		
OKLAHOMA (Cont'd.) Burns Flat, Washita County	12	3:40 p.	8	*6			4	5	Hail, wind, rain	
									Heavy hail of up to one inch in diameter accumulated up to 3 inches deep causing destruction of near 2000 acres of cotton and near 4000 acres of other crops. Strong winds caused \$6000 damage to a trailer camp. A hangar was unroofed at Clinton-Sherman Air Force Base and some light planes were damaged. Other light wind damage to small buildings, trees, etc. was noted in the area and wind and hail damage was noted as far south as Cooperston and Snyder in Kiowa County. Heavy rain of near 4 inches fell during the storm. Storm moved southeastward.	
Purcell, McCain County	13	p.m.				1			Electrical	
									Lightning struck a swimming pool area resulting in one youngster being knocked unconscious.	
Key, Noble, Osage, Pawnee, Payne, Washington, Nowata and Craig Counties	13, 14, 15								Rain, wind	
									Thunderstorms dropped heavy rains over a large area. Amounts ranged from 5 to unofficially near 10 inches. Extensive damage resulted to crops, fields and roads as the rains fell heavily at variable intervals causing washing. Considerable flooding resulted along streams and rivers.	
Texhoma, Texas County	14	6:15 p.							Funnels aloft, rain, hail, wind	
									Three funnels aloft were sighted in the immediate vicinity of Texhoma. Strong winds resulted in some light damage and heavy rain and some hail was also reported.	
Altus, Jackson County	17	5:05 p.							Funnel aloft	
									Police reported funnel one mile east of Altus stayed in sight for ten minutes.	
Oklahoma City, Oklahoma County	17	6:15 p.							Funnel aloft, rain	
									Funnel aloft was reported over southern portion of City during severe thunderstorm. A warm wind was noted in the area at the time. Heavy rain caused some local flooding. Storm moved eastward.	
Seminole, Seminole County	19	4:00 p.							Funnel aloft	
									Public reported funnel aloft just north of city.	
Pawnee County	21	11:50 a.							Funnel aloft and Cushing	
									Funnel aloft was sighted half way between Pawnee and Cushing moving northeastward.	
Ponca City, Kay County	21	12:30 p.							Funnel aloft	
									Public observed funnel aloft 5 miles east of Ponca City.	
Nowata, Nowata County	21	1:20 p.							Funnel aloft	
									Police reported funnel aloft between Nowata and Bartlesville moving northeastward.	
North-central and Northeastern Sections	21, 22								Rain	
									Heavy rains fell over widespread areas causing considerable washing. Amounts ranged up to 6 inches and mostly fell over a short period of time. Flooding resulted along streams and rivers.	
Kildare, Kay County	22	8:00 a.					4		Electrical	
									Lightning caused fire which destroyed a home.	
Edmond, Oklahoma County	22	12:00 p.					4		Electrical	
									Lightning struck metal roofed hay shed and resulting fire destroyed 12,000 bales of hay.	
Oklahoma City, Oklahoma County	22	1:25 p.							Hail, rain	
									Few 2/3 inch hailstones fell at airport during severe thunderstorm. Ground was nearly covered by small hail in northern sections of the City. No significant damage was reported. Storm moved southward.	
Mountain Park, Kiowa County	22	6:50- 9:00 p.	20	7			6	5	Tornadoes, hail, wind, rain	
									Public noted several small funnels drop from base of low black cloud and touch ground. Several homes and outbuildings were damaged in the area as were TV antennas, utility lines, trees, etc. A severe hailstorm with stones of golf ball size caused complete destruction to crops over 4 path 2 to 7 miles wide from Cooperston to Snyder. Heavy rain fell during the storm. Storm moved southwestward.	
Albert, Caddo County	22	7:00 p.	2 1/2	*1 1/2			4	4	Tornado, hail, wind, rain	
									Tornado struck one mile west of Albert and covered a path 1/2 mile long and 1/4 mile wide. A barn was destroyed. The funnel traveled northwestward. A severe hailstorm centered at Albert. Stones up to 1/2 inch in diameter covered the ground. Crops in the area were badly damaged or destroyed. Strong winds caused damage to buildings, utilities, trees, etc. Near 4 inches of rain fell in the area.	
OKLAHOMA (Cont'd.) Humphreys, Jackson County	22	8:45 p.	6	*2			4	5	Hail, wind, rain	
									Severe hailstorm with stones up to one inch in diameter destroyed cotton and other crops in the area northeast of Humphreys to Headrick. Some hail damage was also noted in southeastern and south-central portions of the county. Strong winds caused variable damage across the southern half of the county. The greatest destruction resulted in Eldorado where a grain elevator was blown down and porches, roofs, outbuildings, TV antennas, etc. were damaged. The storm moved southwestward.	
Southeast two-thirds of State	26, 27								Rain	
									Remnants of Hurricane Debra moved northward across the southeastern section and re-curved through north-central into west-central sections of the State. Rainfall associated with this storm ranged from 3 to 8 inches. Considerable damage to crops and land resulted from washing. Local flooding resulted along small streams.	
OREGON Eastern Klamath County	14	Afternoon				0	0	4	1	Lightning
										Numerous small spot fires started by lightning in northern and eastern Klamath County. Only one reached any sizeable proportions. Extended over about 1,100 acres of sage brush, grass and sparse timber land.
Southwest and south central Oregon	18	Afternoon				0	0	3	5	Lightning
										Hundreds of spot fires started by lightning but all but one controlled after little or no damage. In Lake County a grass fire burnt over 20,000-30,000 acres. Loss largely confined to range forage for this year.
Crook and Curry counties	19- 20	Afternoons				0	0	5	2	Lightning
										Numerous small fires resulted from lightning strikes but only two reached a size to cause significant damage. Near Agness in eastern Curry County three or four acres of timbered land was burned over. In Crook County east of Prineville about 1,000 acres, some of which contained stands of ponderosa pine, were burned.
Scattered over most of the State	22	Afternoon				0	0	5	5	Lightning
										Practically every National forest in the State experienced some lightning strikes and hundreds of small spot fires occurred. However, all but four were extinguished before causing any significant damage. The four included one of approximately 5,000 acres in the Deschutes National Forest area; one of less than 1,000 acres in rangeland of Grant County; one of about 7,000 acres in rangeland of Wheeler County; and one of approximately 25,000 acres on brush and grass land of the Fort Rock area in Lake County.
About 50 miles east of Prineville	24	Afternoon	1	200	1	1	1	1	1	Wind
										One boy was killed and another injured when a freak gust of wind tipped over a hayloader on them when they were working on it.
Near Redmond	29	Morning	2	*1	0	0	1	4		Frost
										Temperatures down to 22 to 28 degrees morning of 29th caused estimated two thirds loss of crop to approximately 150-200 acres of potatoes, some alfalfa.
PENNSYLVANIA Western	1	Afternoon & Evening				2	1	5		Thunderstorms
										Two men were struck and killed by lightning in a logging camp in Huntington County and another man injured near Kane when strong winds caused a tree to fall onto the car in which he was riding. Numerous barns were fired by lightning causing most of the property damage.
Wilkes Barre Area	10	Afternoon & Evening				2	2	3		Thunderstorm
										One man was struck and killed by lightning and another killed in auto accident in which two others were injured when car skidded on wet street and crashed into a pole. Phone and power service was interrupted for a period due to lightning strikes in transformers.
Millerstown	10	Evening						4		Thunderstorm
										Heavy rain caused collapse of portion of flat roof on school building.
Williamsport Area	14	Evening						3		Thunderstorm
										A house was struck and partially destroyed by ensuing fire. Three cows were also struck and killed by lightning.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
PENNSYLVANIA (Cont'd.)									
Southeastern Counties	20	Afternoon			1	1	3		Thunderstorm
Auto accidents resulting from wet slippery streets caused the death of a child and the injury of an adult in Philadelphia. Several lightning strikes were reported along with ensuing minor fires.									
Lehigh County	23	Night				1	3		Thunderstorm
One man was slightly injured when struck by lightning near Palmerton. Strong winds blew down trees and lightning fired a barn and knocked out electrical service for a brief period in some communities.									
Philadelphia	30	Afternoon			1		3		Thunderstorm
One man was struck and killed by lightning. Property damage resulted from heavy rain that caused flooding of streets and basements.									
PUERTO RICO									
Orocovis	5	2 p.				1			Hail and thunderstorm
A stroke of lightning during a hail and thunderstorm killed a 22 year old man while fishing in the Rio Damán near Orocovis.									
Utado	18	Afternoon			1	1			Thunderstorm
Lightning killed a 12 year old boy and his dog and injured an 8 year old girl during an electric storm in the afternoon at Barrio Arenas de Utado.									
Caiba	28	5:30 p.	Short	Narrow			5		Waterspout
A waterspout formed over the water between Caibero and Vieques Islands about 5:30 p. and passed over land in the vicinity of the Roosevelt Roads Naval Station at Caiba knocking down trees and electric light poles and ripping the roof from a cock fight arena. Electric light power was disrupted and some damage was done to telephone lines. No injuries were reported. The path of the waterspout over land was estimated at not more than 1/4 mile and its duration was about 5 to 4 minutes.									
RHODE ISLAND									
Washington County	10-11	Late P.M. of 10th to Early A.M. of 11th					3		Rain
Rainfall of 4.10 inches at Westerly in southwest Rhode Island resulted in washouts at street construction project. Rain also blamed for three auto accidents which caused total damage of \$300 to the vehicles involved. No personal injuries reported. Precipitation resulted from coastal storm which yielded 2.5 to 3.5 inches overnight to southeastern New England.									
SOUTH CAROLINA									
Columbia, Richland County	1	early morning			0	0	1	0	Lightning
Greenwood, Greenwood County	1	Night			0	0	4	0	Thunderstorm
Electric and telephone service interrupted; four residences damaged.									
Lexington, Lexington County	1	5:30 p.			0	0	4	0	Lightning
A barn and car destroyed and other property damaged.									
Eastern, Central and Northern South Carolina	8-9	10:00 p. - about All day - 9/200	about 100 mi.		1	0	5	5	Tropical storm Cindy
Beneficial effects of Cindy far out weighed damage. Most damage developed from extremely heavy rains in Central and Northern South Carolina.									
Mt. Olive section, Horry County	9	Aft.			1	2	0	0	Lightning
Twenty-five miles east of Charleston, about Dorchester County	11	11:55 a.			0	0	0	0	Waterspout
Lyman, Spartanburg County	11	2:00 p.			0	1	0	0	Lightning
Isle of Palms, Charleston County	13	7:12 p.			0	0	0	0	Waterspout
Woodruff, Spartanburg County	17	6:15 p.			0	0	3	0	Windstorm
SOUTH CAROLINA (Cont'd.)									
Ten - fifteen miles northwest of Columbia, Richland County	19	7:40 p.			0	0	0	0	Funnel cloud
Funnel cloud sighted 15 miles W. of Lake Murray.									
Rock Hill, York County	20	5:00 p.			0	0	4	4	Heavy rains
Heavy rains and erosion from successive rains since Cindy caused accumulated damage and interruptions to services.									
Myrtle Beach, Horry County	20	8:10 a.			0	0	0	0	Waterspout
Moving northeast.									
Eastover, Richland County	27	4:00 p.	0	0	1	0	2	0	Lightning
A boy was killed and a cow destroyed by lightning.									
Florence, Florence County	29	10:30 p.	0	0	0	0	2	0	Heavy rain
Some interruption to electrical services.									
Rock Hill, York County	30	night	0	0	0	0	2	0	Thunderstorm
Lightning caused interruption to utilities.									
Union, Union County	31	4:30 p.	0	0	0	0	2	0	Thunderstorm
There were some interruptions to services.									
SOUTH DAKOTA									
Java area, Walworth County	3	8:30 p.					4	5	Tornado, wind, hail
The tornado moved northeastward after destroying farm buildings at the west edge of Java. Elsewhere in the area, high straight-line winds caused property damage while hail damaged crops.									
Winnier area, Tripp County	3	8:40 p.						5	Funnel cloud, hail, wind
A funnel cloud was reported 5 miles southwest of Winnier. A little later, hail damaged crops near Colona. Some stones were the size of walnuts and hen eggs.									
Warner area, Brown County	3	7:00 p.					4	5	Funnel cloud, hail, electrical
Crop-damaging hail accompanied a thunderstorm moving eastward. The funnel cloud was sighted at Warner. Later, lightning damaged a house in Day County and a trailer home in Spink County.									
Eagle Butte, Dewey County	3-4	Night					4	3	Wind
Most of the damage was to buildings under construction.									
Jackson County to Roberts County	7	5:00 p. - 260 10:00 p.	70		3	5	5		Wind, hail
A very strong and widespread windstorm began near Kadoka and moved northeastward across the State at a speed of 60 to 65 miles per hour. Airplane hangars were damaged or destroyed at Murdo, Badfield and Watertown. Fourteen barns were destroyed or seriously damaged. Five trailer homes were overturned. There were considerable minor wind losses. Hail caused a part of the crop damage.									
Turton area, Spink County	7	9:00 p.					4		Tornado
Farm buildings were damaged.									
Freetho area, Lyman County	13	6:00 p. - 7:30 p.	50	4			3	5	Hail, wind
The storm began north of Wood and moved northeastward, passing between Kennecott and Alliance, and ending northeast of Alliance. A little later, hail fell southwest of White Lake in Aurora County.									
Nebridge, Walworth County	14	4:45 p.					1		Lightning
The injured person had been standing beside an automobile and was thrown to the ground and rolled for some distance. A tree nearby was split to the ground.									
Isabel, Dewey County	17	9:00 a.					1		Lightning
A boy was struck by lightning while walking through an alfalfa field.									
Codington County	18	2:45 p.							Funnel cloud
A small funnel cloud was sighted 15 miles northwest of Watertown. It dissipated 5 minutes later.									
Eastern counties	18	Afternoon						4	Hail
Hail was scattered at intervals along the Big Sioux River. Most of the damage was east of Estelline and north of Watertown.									
Miner and Kingsbury Counties	20	Afternoon	25	5			3	4	Hail, wind
Hail fell from northeastern Miner County to southeastern Kingsbury County. Property damage was caused by strong winds.									

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STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM		
					KILLED	INJURED	PROPERTY	CROPS			
SOUTH DAKOTA (Cont'd.) McCook County	20	Late afternoon	35	10			4	5	Hail, wind		
									The storm started in the southwestern part of the county and moved northeastward.		
Wakoda area, Clay County	31	6:30 a. to 7:00 a.						4	Hail		
									The hail fell northeast of Wakoda. The stones were not large, but were abundant enough to be scooped from the ground.		
TENNESSEE Knoxville and Vicinity Knox County	10	afternoon			1				Wind, hail, rain and lightning		
									A man sustained minor injuries when hit on the head by a blown tree limb. Lightning downed 2 chimneys and badly damaged several home appliances. Wind blew down a 20-foot sign and a 50-foot flagpole and uprooted several trees. Hail up to golf ball size damaged gardens and fruit trees. Several streets were flooded.		
Sevier, Anderson and Cumberland Counties	10								Hail		
									Hail heavily damaged crops. Size was reported up to golf ball dimensions in Anderson and Cumberland Counties and up to baseball size in Sevier County.		
Knoxville, Knox County	15	6:15 p.			1				Lightning		
									A woman using the telephone was knocked unconscious and received head injuries when lightning struck a tree and entered the house via the phone line.		
Lafayette (near), Macon County	18	12:30 p.					4		Lightning		
									A planing mill was struck by lightning and burned to the ground.		
Fallaha, Coffee County	21	afternoon			1				Lightning		
									A 13-year old boy was knocked down and dazed while playing golf when lightning struck a nearby tree.		
Chapel Hill, Bedford County	24				1				Lightning		
									A woman, gathering in clothes from a line, was struck by lightning and received a painful abdominal burn. Only a few sprinkles of rain were reported prior to the injury.		
Sevierville, Sevier County	25				1				Lightning		
									Lightning struck and killed a man operating a farm tractor.		
TEXAS Fort Arthur, Jefferson Co.	2	1:15 pm	short	narrow	0	0	4		Tornado		
									Small tornado moving northeast picked up 35x75' building, dropped it on several cars parked nearby.		
Andrews, Andrews Co.	4						6		Hail, wind		
									During thunderstorm, 2-1/2" rain in 40 minutes, lifted roofs, snapped power lines, broke telephone poles, damaged homes all over town. Wind gusts estimated 80 to 100 mph.		
2E to 3E Silverton, Briccoe Co.	6	2:30-3:20 pm	3 1/2	200 to 400	0	0	4		Hail, rain		
									Hail marble to pea size covered ground, stripped cotton stalks on several farms; more than 4" rain in 15 minutes damaged cotton. Wind est. gusts 70 to 80 mph.		
2 1/2 E Vidor, Orange Co.	6	3:05 pm			1	0			Electrical		
									Workman killed by lightning.		
Bay City, Matagorda Co.	7	11:47 am							Funnel		
									Did not touch ground.		
Port Neches, Jefferson Co.	7	3:30 pm			0	0	5		Electrical		
									Lightning struck 85,000 bbl oil tank, fire destroyed it. Particles from the fire, carried by easterly wind approx. 20 mph, caused paint damage to some homes and cars. Doors shattered through the business district at time of blast.		
18 NE & 6 1/2 NE Haleshoe, Bailey Co.	8	4:30 pm					4	4	Tornado, hail		
									Wrecked 1/2 mile of telephone lines, 7 cotton trailers smashed, TV antennas and tree limbs downed. During heavy thunderstorm and hail, rain to 4". One inch of hail in 30 minutes, one area, caused heavy crop damage.		
27 SW Haleshoe, Bailey Co.	8	4:30 pm			1	0			Electrical		
									Man plowing on ranch killed by lightning.		
5 S Palacios, Matagorda Co.	9	abt 6 am							Waterspout		
									Disipated at 5:25 am.		
Burn Spearman, Hansford Co., & Moore, Frio Co.	10	5:30 pm	7	500	0	0	4	0	Tornado		
									Moved SE from Oklahoma where it appeared as a funnel not touching ground. Length & width given are approximate, at McKibben, Texas. One grain elevator and 2,000 bushels wheat destroyed, windmills in path damaged.		
TEXAS (Cont'd.) 7 NW Skellytown, Garson Co.	10	5:30 - 6 pm	15	N 5	0	0	4		Wind		
									Damaged garage and workshop, walls in home cracked and broken, pieces of sheetmetal scattered over wide area, large limbs twisted from trees.		
Canyon area, Randall Co.	10		10	N 4	0	0	4	4	Hail		
									Damaged large acreage of cotton and grain sorghum, much roof damage. Accompanying 6" rain.		
1 1/2 NE Amarillo, Potter Co.	10	6:05 - 6:20 pm		500	0	0	4		Hail		
									Pantex Village and U.S. Hwy 60, damage to roofs, windows, autos.		
McLean, Gray Co.	10	7:15 - 7:35 pm		5	N 3	0	0	4	4	Wind	
									Northeast winds est. up to 75 mph demolished sheetiron warehouse, welding shop and dairy barn, damaged partly built home and two roofs, TV antennas, power lines; 23 truckloads of tree limbs cleared up after this storm in the town of 1500 population. 2.75" rain in one hour.		
Estelline to Tall, Childress Co.	10			12		0	0	0	0	Funnel	
									Moved south, did not touch ground.		
Hedley area, Donley Co.	10	8:30-9:15 pm		20	N 6	0	0	4	0	Wind	
									Southeast wind est. to 75 mph, hard rain est. 1 to 3", damaged 15 windmill towers, roofs of outbuildings and barns, TV antennas. One trailer house destroyed.		
Memphis area, Hall Co.	10	8 to 11 pm		9	N 4	0	0	6	0	Hail, wind, rain	
									Hail, 4" rain and high winds between Estelline and Farnall damaged cotton and feed crops. In Memphis a grain elevator and drive-in movie screen were blown down, windows, roofs, trees, windmills, outbuildings and TV antennas damaged. This was part of general storm system from Hutchinson County moving SW to Cottle County, about 75 miles length in all.		
2 N Rio Medina, Medina County	11				short	narrow	0	0	3	3	Tornado
										Broke limbs off trees, damaged roofs, tore screens off windows, blew corn to ground.	
Big Spring, Howard Co.	12	4:50 am				0	0	5		Electrical	
										During heavy thunderstorm lightning struck and set fire to country club, 75% loss.	
Lamesa, Dawson Co.	12	4:30 - 6:45 am		10	N 1 1/2	0	0	0	4	Hail	
										Moved from N to SW, extended from approximately 6N to 1S and 2W of Lamesa, damage to crops.	
Rr Claude, Armstrong Co.	12	abt 11				0	0	0	0	Funnel	
										Did not touch ground.	
Lake Texoma, Grayson Co.	13	8am 1:30 & 2 pm			short	narrow	0	0	3	Tornado	
										Destroyed one boathouse, 20 boats damaged and sunk, 10 others damaged. Another boathouse lifted by wind, roof of a third twisted away.	
Freeport, Brazoria Co.	13					0	0	0	0	Funnels	
										2 sighted, did not touch ground.	
Tennessee Community, Anderson Co.	13	5:15 pm				2	5			Electrical	
										Lightning struck group of cotton choppers. No rain, few clouds.	
NE portion Moore Co.	14	7:05 - 7:30 pm		10	500	0	0	4		Tornado	
										Moved SE. Some windmills fell from NW to SE while others fell from SE toward NW. Part of hailstorm described below.	
NE portion Moore Co.	14	7:15 - 7:30 pm		10	N 4 1/2	0	0	3	3	Hail	
										Moved SE, major damage to grain sorghum in boot stage. During rain.	

See reference notes at end of table.

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JULY 1959

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					KILLED	INJURED	PROPERTY	CROPS	
TEXAS (Cont'd.) Vega, Oldham Co.	11	8:10 - 7:10 pm	8	M 6	0	0	3	5	Wind, hail
									Wind est. 60 to 90 mph blew 2 trailer houses off foundations, broke windows, damaged outbuildings, barns, trees and shrubbery. Service station garage demolished. Golfball size hail damaged roofs and crops. Moved SW.
Heraford area, Deaf Smith Co.	11	night	25		0	0	3	3	Hail
									Crop damage 50% to 100% in Frio Community, cotton and row crops other areas damaged. Heavy damage to metal barns. Moved SW.
Liberty, Liberty Co.	15	7 am			0	0	5	0	Electrical
									During storm which moved NE, lightning struck business district, caused fire which heavily damaged 3 buildings and contents, slight damage to another.
Mr Nederland, Jefferson Co.	15	9 am			0	0	0	0	Funnel
									Did not touch ground.
5 SW Weinart, Haskell Co.	15	1:35 pm			0	0	0	0	Funnel
									Raised dust, did not touch ground.
25 NW Adilene, Taylor Co.	15	2:33 pm			0	0	0	0	Funnel
									Did not touch ground.
10 NW Adilene, Taylor Co.	15	2:50 pm			0	0	0	0	Tornado
									Touched ground momentarily, open country. Pilot report.
N of Crowley, Tarrant Co.	18	2 pm			0	0	3	3	Electrical
									Lightning struck and fire destroyed hay barn and 600 bales of hay.
N of Roscoe, Holan Co.	19	abt 12:30 M			0	0	0	0	Funnels
									2 funnels seen, did not touch ground.
Sabine Pass, Jefferson Co.	19	2:15 pm			0	0	0	0	Funnel
									Pilot report; did not touch ground.
Anahac, Chambers Co.	19	afn			1	1			Electrical
									Lightning struck and killed youth fishing in Trinity Bay. Companion burned and stunned.
30 SW Jefferson County Airport	19	3 pm							Waterspout
Mr Kilgore, Gregg Co.	20	10 am			0	0	5	0	Electrical
									Lightning struck 80,000-barrel oil storage tank during heavy thunderstorm moving SE. Tank exploded, fire destroyed it and contents.
20 ESE Jefferson County Airport	20	11:17 - 11:20 am			0	0	0	0	Tornado
									Pilot report, touched ground briefly, no damage.
10 NE Houston, Harris Co.	20	11:35 am			0	0	0	0	Funnel
									Did not touch ground, dissipated shortly thereafter.
18 SE Jefferson County Airport	20	12:08 - 12:17 M			0	0	0	0	Funnel
									Did not touch ground.
Bovina area, Parmer Co.	20	5 pm	2		0	0	2	3	Hail, wind
									During violent thunderstorm golfball size hail and high winds heavily damaged crops. Some cotton destroyed, windows on farm broken. Storm moved SE.
Freeport, Brasoria Co.	20				0	0	0	0	Funnel
									Did not touch ground.
5 W Rockdale, Milam Co.	20	6:50 pm			0	0	0	0	Funnel
									Moved NE, did not touch ground.
Jefferson County Airport	21	11:23 - 11:28 am			0	0	0	0	Funnel
									Long, thin, about 200 feet long did not touch ground.
Happy, Srislar Co.	21	3:45 - 4:05 pm	1 1/2	300	0	0	5	5	Hail
									Moved from N to SW, known path of storm in Randall and Srislar Counties extending from NE to SW of Happy. Wind moderate; damage to roofs, glass, autos. Haise, cotton and other crops destroyed.
TEXAS (Cont'd.)									
Edmonson, Hale Co.; Hart, Castro Co.; and Olton, Lamb Co., areas	21	late afn		M 4	0	0		3	Hail
									Hail, some golfball size, stripped cotton and damaged feed. Some farmers reported total loss.
NW Jefferson County Airport	22	12:44 - 12:51 M			0	0	0	0	Funnels
									Funnel aloft joined by another, both dissipated, did not touch ground.
Canyon, Randall Co.	22	8:00 - 3 & 4 pm			0	0	4		Hail, wind
									Considerable roof and crop damage by hail not more than 1" diameter, driven by strong east wind. Storm moved southwest.
Midland area, Midland Co., and Stanton area, Martin Co.	23	5:30-7 pm			0	0	4	5	Hail, wind
									Hail 1/4" to more than 1" diameter, winds up to 60 mph heavily damaged cotton, damaged farm and garden crops over hundreds of acres, blew down trees and shrubs. Roofs ripped from lumber shed, garage and water tank; walls of lumber shed buckled, several buildings damaged (Midland). Heavy hail damage also reported in nearby Stanton area. Storm moved southwest.
3 NW Anton, Hookley Co.	23	9:40 pm			0	0	0	0	Funnel
									Did not touch ground.
Mr Sebastian, Willacy Co.	24	5:50 pm			0	0	0	0	Tornado
									Touched ground momentarily.
Brasoria, Galveston, Harris, Chambers, Jefferson, Orange & Liberty Counties	24		100	M 100	0	0	6	6	Hurricane
									to 20
									The eye of Hurricane Debra was centered over Dickinson, Texas, at 7-8:30 am of the 25th. The lowest reported pressure by a land station was recorded at this point, 29.13". Highest wind was 80 to 90 mph with gusts of 105 near Freeport. Tides were generally 3 to 5 feet above normal in Galveston Bay. Morgan Point on the north end of Galveston Bay recorded their highest tide as 7.9' msl. Rainfall was heaviest along the east Texas coast. Orange, Texas, reported their storm rainfall total as 11.42". By 3:30 pm the eye was 5 miles northeast of Cleveland, Texas, according to Texas A&M College radar observation. Diameter of the eye at that time was 5 miles, moving north at 17 mph. By 10 am of the 26th remnants of Debra were located near Tyler, Texas. Debra turned northwestward into central Oklahoma, crossing the Red River near Paris, Texas, about 6 pm of the 26th.
10 NW Emedy, Karnes Co.	26	night			0	0	3		Tornado
									Small, destroyed 2 barns, 4 utility poles; rainfall 2 to 3-1/2".
Mr Houston, Harris Co.	27	6:18 am			0	0	0	0	Funnel
									Did not touch ground.
Gonzales area, Gonzales Co.	27				0	0	5	0	Electrical
									House struck by lightning, contents and house destroyed.
Jollyville, Williamson Co.	27	5:41 pm			0	0	0	0	Funnel
									Moved ENE, did not touch ground.
7 NE Corpus Christi, San Patricio Co.	29	9:45 am			0	0	0	0	Funnel
									Did not touch ground.
UTAH Salt Lake City, Salt Lake County	3	Afternoon				1	2		Lightning
									Bolt of lightning struck a large tree near a residence. The lightning charge traveled along a wire into a bedroom, causing damage to bedding. A boy, 19 years old, was knocked from bed, suffering minor injury.
West Mountain, Utah County	6	Evening					4		Wind
									High winds demolished a chicken coop, dairy test shed and a machine shed.
VERMONT Troy	12	Afternoon			0	0	5	5	Electrical, hail
									Barb windows facing north were knocked out. Hail, up to 1 inch diameter, destroyed much of corn crop.
VIRGINIA Richmond and vicinity	1	Midnight-7:00 a.					5	6	Electrical storm with heavy rains and locally strong wind.
									Heavy rain (4.5 inches at WBAS, Richmond) accompanied thunderstorm, with frequent and vivid lightning that tangled communications, disrupted power service and temporarily blocked low lying sections of roads and streets. At least 14 fire alarms sent firemen to residential and commercial establishments. Minneapolis Honeywell Regulator Company estimated that a lightning strike caused fire - instrumentation and equipment damage of \$75,000.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1959

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
VIRGINIA (Cont'd.) Augusta County South of Waynesboro	1	1:30 p.	10	100			4	C	Tornado
									A funnel cloud roared along a narrow strip, leaving in its wake two demolished farm buildings, several damaged homes, hundreds of snapped trees and dozens of flattened vegetable gardens. Tornadoic winds were accompanied by heavy rain and hail. 1000 chickens killed when top half of cinder block building was taken off. Distribution of wreckage confirmed the storm as a tornado.
Tidewater and Piedmont Sections of State	2-3	During night					4	C	Locally severe thundershowers
									A number of localities were hit by damaging winds, heavy rain, and severe lightning. The Petersburg-Roanoke, Newport News and Lynchburg areas reported damage to buildings, trees and utilities.
Petersmouth, a few miles W and SW	10	8:30 a. -8:45 a.		Narrow			3		Tornado
									Houses damaged - funnel cloud observed. This storm was at first considered to be two, but probably areas hit (3 miles apart) by single storm.
Grayson County, between Potato Creek, Va. and Turkey Knob, N.C.	10	Afternoon		300			4	C	Tornado
									Trees uprooted, hail and wind damaged tobacco crops, at least one barn demolished - funnel cloud observed.
Charles City Area- 23 miles SE Richmond	10	11:25 a.		Narrow			4		Tornado
									Barn demolished on Westover Plantation. Funnel cloud observed.
Southeastern section of State	10	During day					4	C	Remnant of Hurricane Cindy
									This storm lost hurricane force before its center reached the coast just north of the Hampton Roads area about 3 P.M. from its noon location near Rocky Mount, North Carolina. Locally heavy rains and at least two tornadoes were reported on the 10th. Rain and locally severe weather was undoubtedly more general by the slow moving cold front over the Appalachians on the 10th.
Norfolk, 15 miles north over bay	16	2:35 p.							Waterspout observed by pilot
Grayson County, vicinity of Galax	22	1:00 p. -4:00 p.					3	C	heavy rain, flash flooding
									3.77 inches rainfall between 1 and 4 P.M. led to flooding and the evacuation of several families from homes in lower areas.
Lexington-Buena Vista area	24	3:30 p. -4:30 p.					2		Heavy rain, flash flooding
									2.00 inches rainfall within one hour washed out several small bridges, halted traffic and flooded low lying sections.
Norfolk, 5 miles SE	26	1:00 p.							Funnel cloud observed. No damage reported
Oceana, 10 miles ESE of WBAS, Norfolk	31	11:28 p.							Funnel cloud observed. No damage reported
WASHINGTON Eastern	27				0	0	3	5	Wind and dust
									High wind caused power failures in various localities in eastern Washington. A plate glass window was blown out in Ephrata and a roof over a lumber rack at Onak was destroyed. The greatest damage resulted from shattering of unharvested wheat and barley. Preliminary estimates place loss at 10 to 50% of crop in some localities.
WEST VIRGINIA Huntington	27	9:00 AM				1			Lightning, heavy rain
									Man in open struck by lightning as he ran for shelter. Heavy rain caused flooding of streets and underpasses; water entered several downtown stores.
WISCONSIN Green Bay, Brown County	5	dusk	20 plus						Hail
									Hail storm passed along a narrow path across the city, leaving as much as 3 inches of 1/4-inch hail on the ground. No material damage was done. The storm intensified, with hail reaching golf ball size about 20 miles to the east; here it stripped all vegetation over a path a mile wide.
La Crosse - Sparta La Crosse and Monroe Counties	8	early afternoon				6	3		Lightning
									Numerous strikes.
Harrisville, Marquette County	8	mid-afternoon	Short				4		Tornado
									Several homes, boats, cars, and power lines damaged. Also touched down at Turtle Lake.

See reference notes at end of table.

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
WISCONSIN (Cont'd.) Niagara, Marinette County	8	4:54 p.	Short			3	4		Tornado
									Touched down for approximately one minute. Extensive damage to homes, power lines, and trees.
Southwest Corner and Southern Part of State	10								Hail
									Hail, wind, and rain did extensive crop damage. Areas hardest hit were Vernon, Sauk, Rock, and Dunn Counties.
Milwaukee, Milwaukee County	17-18								Rain
									South Milwaukee recorded 5.17 inches of rain in 24 hours. North-east Milwaukee recorded 3.50 inches in 1 hour and 20 minutes. Many streets and basements flooded.
WYOMING 6 miles west of Big Piney	14	afternoon				1	2		Thunderstorm
									Lightning killed one man and injured two others
ILLINOIS Orangeville	10	6:15 pm							Funnel cloud
									Funnel remained aloft and moved toward the southeast.
Oregon	10	7:30 pm	short narrow				4		Tornado
									Small tornado moving toward the southeast wrecked outdoor cinema screen near White Pines State Park. No damage to nearby trees.
De Kalb	10	8:00 pm	1	60			4		Tornado
									Tornado moving toward the southeast wrecked a small hangar at the municipal airport.
Northeast Illinois	10	8-9 pm					2		Wind, lightning
									Heavy thunderstorms with wind gusts as high as 70 mph damaged many trees and utility wires in an area extending from De Kalb and Sycamore to the western Chicago suburbs. Two persons were injured when a tree fell on a car at Maywood.
Grayslake	29	early morning					4		Wind
									During the early morning or previous night, thunderstorm wind gusts wrecked several fairgrounds tents.
Peoria	30	7:20 am				1			Electrical
									A man fishing at the edge of the Illinois River died as lightning struck very close to him.
Centralia	30	5:40 pm					3		Tornado
									Probable small tornado destroyed a two-car garage near Centralia. (Further reference to this storm will appear in the December 1959 issue of this publication.)

* Miles instead of yards.

¹ Includes crop damage.

C Crop damage.

† 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 \$5,000,000
- 7 \$5,000,000 to \$50,000,000
- 8 \$50,000,000 to \$500,000,000
- 9 \$500,000,000 to \$5,000,000,000.

States and territories not listed in these tables reported no storms or unusual weather phenomena during the month.

Note: This publication contains our best information on storms but, due to the difficulties inherent in collection of this type of data, it is not all-inclusive. Delayed data and corrections will be carried in the June and December issues of this publication.

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USCOMM-WB-Asheville - 8/31/59 1000