

U. S. DEPARTMENT OF COMMERCE

LUTHER H. HODGES, Secretary

WEATHER BUREAU

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STORM DATA

JULY 1961

Volume 3 No. 7



ASHEVILLE: 1961

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	
					KILLED	INJURED	PROPERTY	CROPS		
ALABAMA										
Birmingham	1	Afternoon			1				Electrical	
Man killed while standing under a tree struck by lightning.										
Headland, Henry County	4	Afternoon			1				Electrical	
Injured while standing under a tree struck by lightning.										
Coffee Springs, Geneva County	13				1				Electrical	
Woman struck by lightning on bank of Geneva County Lake.										
Mobile	16	7:35 a							Waterspout	
Waterspout observed 30 miles south-southwest of Bates Field. Moved from west to east.										
Ford City Community Colbert County	20	Late afternoon				1			Electrical	
Girl struck by lightning while working in field.										
Mobile	21	8:52 a							Waterspout	
Waterspout observed about 20 miles east of Brookley Field on east side of Mobile Bay.										
Birmingham	21	7:00 p							Funnel aloft	
Funnel cloud observed briefly about 5 miles north of the Municipal Airport.										
Mobile	22	3:05 p							Waterspout	
Waterspout observed 10 miles southeast of Brookley Field moving north-northwest.										
Mobile	29	9:00 a							Funnel Cloud	
Funnel cloud observed ESE of Bates Field.										
ALASKA										
			None reported							
ARIZONA										
Tucson (30-50 miles N)	13	8:40 p.			0	0	?	0	Hail	
Pilot reported one-inch hailstones. Some damage to aircraft.										
Tucson	16	Evening			0	0	4	0	Wind	
Strong winds knocked down outdoor movie screen. Additional damage to small buildings and trees. Total damage about \$15,000.										
Glendale (near)	16	9:00 p.			0	0	5	0	Lightning	
A lightning-ignited fire destroyed an apartment building at the American Institute of Foreign Trade. About \$100,000 damage.										
Mobile	17	4:00 a.			0	0	0	0	Funnel cloud	
Pilot reported funnel cloud, not touching ground, about 35 miles south-southwest of Phoenix.										
Elrin (7 miles E)	18	6:30 p.			0	2	2	0	Wind	
Strong winds, accompanying thunderstorm, broke a large plate glass window injuring 2 children.										
Tempe	19	7:20 p.			0	0	0	0	Funnel cloud	
Pilot sighted funnel cloud over Tempe. Did not touch ground.										
Tucson	21	Evening			0	0	4	0	Wind and rain	
Strong winds and rain did about \$10,000 damage to homes, trees and utilities. Nearly all damage by wind.										
Tucson	22	Afternoon			0	0	4	0	Rain	
Heavy rain caused about \$30,000 damage to city streets.										
Final County (central and north-central)	22				0	0	4	4	Hail, wind, rain possible tornado	
Approximately 500 acres of cotton in the Magma-Queen Creek area and about 1,000 acres in the La Palma area were damaged. Most of the damage was due to hail. Heaviest damage occurred in the La Palma area, where some destruction was total. About 100 homes were also damaged near Coolidge. Property damage about \$10,000; crop damage about \$25,000. What appeared to be a funnel cloud touching the ground was sighted in the Toltec Buttes area (near Eloy) during the storm.										
Phoenix and Glendale	22	4:00 p.			0	0	5	0	Wind, rain, possible tornado	
Damage was heaviest in the northern and western sections of Phoenix and in Glendale. Strong winds and heavy rains damaged residences, business establishments, and utilities. Several automobiles were washed down flooded arroyos. Damage in Phoenix was estimated at about \$300,000, with an additional \$25,000 damage in Glendale. A possible tornado destroyed two hangars and damaged a number of aircraft at Deer Valley Airport about 6:15 p.m. The descriptions given by several airport personnel of the cloud formation preceding the damaging wind, indicate that a small tornado may have caused the destruction.										
ARIZONA (Cont'd.)										
Tucson	22	3:00 p.			0	0	5	0	Wind, rain, funnel cloud	
Heaviest damage was in suburbs, where many homes had roof and some structural damage. Several cars were washed away in flooded arroyos. Total damage estimated about \$75,000 of which about \$30,000 damage was to city streets. As the storm moved in, a funnel cloud was sighted to the southeast of town. The tip of the funnel was about 200 feet above ground and was not seen to reach ground level, before vision was obscured by heavy rain.										
Lakeside	27	Afternoon			1	1	0	0	Lightning	
A 59-year-old man was killed and his son knocked unconscious by a lightning strike.										
Tucson	27	4:15 p.			0	1	5	0	Possible tornado, hail, rain	
A severe thunderstorm accompanied by hail, heavy rain and a possible tornado did about \$100,000 damage to homes, streets and utilities. Property damage was heaviest in the Flecha Caida Estates area where at least one home was completely destroyed. An 8-year-old girl suffered a head injury from flying debris.										
Sentinel, Aztec, Dateland	28	8:00 p.			0	1	3	0	Wind	
Strong winds demolished Highway Department Engineering Camp, and ripped roof from cafe, injuring woman.										
Parker (7 miles north)	28	7:45 p.			0	0	4	0	Rain	
Heavy local rains flooded Paradise Harbor, causing about \$10,000 damage to boats.										
Risbee	31	Afternoon			0	0	4	0	Rain	
Heavy rainfall flooded Brewery Gulch, causing about \$10,000 damage, mostly to automobiles caught in the flood waters.										
ARKANSAS										
Jefferson County	14	8:00 a.			0	0	0	0	Funnel cloud	
Pilot reported funnel cloud 20 miles northeast of Pine Bluff.										
Hope, Hempstead County	14	7:30 p. to 8:15 p.	1		1	0	0	5	0	Wind, rain
Damage was confined to the City of Hope. The storm moved from the northwest to the southeast. There was extensive damage to roofs, windows, signs and trees. Rain caused considerable additional damage to buildings and contents where roofs were damaged and windows broken. Several streets were temporarily flooded.										
Washington County	16	7:00 p. to 7:15 p.			0	0	5	4	Rain, hail	
Reports of scattered damage over the northern half of the County, principally in the vicinities of Springdale, Tontitown and Goshen. Most of the damage was due to heavy rain but some hail with stones averaging one-half inch in diameter, with a few to three-fourths inch in diameter, was reported.										
CALIFORNIA										
Orange County	12	forenoon			1	4	3	0	Thunderstorm	
Lightning struck and killed a fisherman at Redondo Beach, burned out a number of power transformers, took the police radio off the air, and started several fires. There was an unconfirmed report that a funnel cloud had been sighted at 12:41 p.m. PBI by a pilot 15 miles east of Pearlossom, in Los Angeles County.										
Northern California	12				0	2	3	0	Thunderstorms	
Widespread thunderstorm activity resulted in damage to trees, power lines, and small structures. Many forest and grass fires started. Two persons injured when their tent was hit by lightning.										
COLORADO										
Eastern Portion and Southwest Corner	1	Afternoon			1	4	5	6	Hail, lightning & wind	
Electrical storms accompanied by hail, rain and wind over scattered areas in northeastern Colo. damaged property and crops. Lightning started fires in the Dolores, Dove Creek area of southwestern Colo. Hail was most severe in Logan, Sedgewick, Washington, Yuma and Weld Counties. In the Yuma area the estimated loss was around \$1 million and heavy losses in Weld County. There were several injuries and one death by lightning. A man was killed south of Ft. Collins. When lightning struck a tree under which he had sought shelter. Four men were struck by lightning and suffered burns in the vicinity of Las Animas. There was evidence of funnel clouds and some wind damage near Yuma, which may have been caused by a small tornado. Lightning and wind did much damage to telephone and power lines.										

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	
					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS		
COLORADO (Cont'd.)										CONNECTICUT										
Summit County	4	1:30PM			2	0			Lightning	Suffield, Hartford County	9	7:30p to 8:30p (EDT)			0	0	0	4	Hail	
A man and his daughter were killed when struck by lightning at an elevation over 14,000 ft. on Quandary Peak, five miles southwest of Breckenridge.										Three-quarter inch hail caused serious damage to broadleaf and some damage to shade tobacco crops.										
Arkansas Valley	7	Late Afternoon			0	0	4	4	Thunderstorm	Willimantic, Coventry, Mansfield; Tolland County	31	5:20p to 7:30p (EDT)			0	0	4	0	Thunderstorm	
Heavy rain in scattered areas caused flooding. A railroad bridge was washed out near Boyers in Lincoln County when up to 6 inches of rain fell in the vicinity. At Mansfield, east of Pueblo, a heavy rain flooded streets and roads.										Lightning and excessive rain knocked out power of telephone service to 350 homes, caused cancellation of shifts for 650 workers, flooded many sections and ripped out more than 700 feet of highway, sidewalks and storm sewers.										
San Luis Valley	8	Unknown			0	0		4	Hail	DELAWARE										
Golfball size hail caused extensive damage to crops in the vicinity of the Alamosa-Rio Grande County line.										Dover area, Kent County	16	?	?	?	?	0	0	4	?	Severe thunderstorm, windstorm
Weld County	9	Near Midnight			0	0		4	Hail and wind	A violent rain and windstorm struck the Dover area flipping house trailers, flattening barns and toppling trees.										
A severe hail and wind storm did considerable damage to several farms north of Millikin. Ready to harvest grain, beans, corn and hay suffered heavy damage.										FLORIDA										
East-central Colo.	10	Afternoon Evening			0	0		5	Hail	Orlando Orange Co.	2	5:05 p.			0	0	0	0	Funnel Cloud	
Scattered hailstorms in Kit Carson, Crowley, Cheyenne and Lincoln Counties, caused considerable damage to crops. One near Peconic, east of Burlington was severe, it demolished wheat, corn and other crops in a 6 mile wide area for several miles. Crop damage was heavy in the Mansfield, Hugg and Sarval areas.										Pensacola Escambia Co.	2	4:03 p.			0	0	0	0	Funnel Cloud	
Pueblo and Huernano Counties	11	Afternoon Evening			0	0		6	Hail	Titusville, 10 SW Brevard Co.	4	1:55 p.			0	0	0	0	Funnel Clouds (2)	
In the afternoon, severe hail caused up to 100% damage to ready to harvest wheat in an area in southern Pueblo County and northern Huernano County near Rye. The estimated damage to wheat was \$135,000. Later in the day, another hail storm started at Gardner around 6:30pm, doing damage to wheat and other crops.										Miami, 30 NNE Palm Beach Co.	5	9:25 a.			0	0	0	0	Funnel Cloud	
Las Animas County	14	4:15PM			0	0			Tornado	West Palm Beach, 20 W Palm Beach Co.	5	1:45 p.			0	0	0	0	Funnel Cloud	
A tornado was sighted in east-central Las Animas County on the north side of Fowler Mesa, it traveled northeast about 8 miles and disappeared.										Clair-Mel City Hillsborough Co.	5	Afternoon			1	0	0	0	Lightning	
Arkansas Valley	14	Afternoon	16	*4	0	0		4	Hail	Orlando Orange Co.	5	Afternoon			0	1	0	0	Lightning	
Hail "some as large as silver dollars", went through an area east of Olney Springs. Losses to corn, alfalfa and row crops were estimated at 50%. The storm was accompanied by up to 3 inches of rain which added to the loss. Lightning caused power failures over large areas.										West Palm Beach, 10 N Palm Beach Co.	6	10:55 a.			0	0	0	0	Funnel Cloud	
Logan and Phillips Counties	20	Afternoon			0	0	3	5	Hail, wind & rain	Apalachicola, 20 SE Franklin Co.	6	10:00 a.			0	0	0	0	Waterspout	
Hail accompanied by wind and heavy rain battered crops in an area from Sterling to Padroni, and in the vicinity of Holyoke and Amherst. In Logan County 1221 acres of beets were heavily damaged and 650 acres medium to light. About 50% of the loss was caused by hail, 50% by flooding. Damage at Holyoke and vicinity was from hail, lightning and heavy rain. There were also property losses.										Ft. Pierce, 5 NW St. Lucie Co.	7	1:15 p.			0	0	0	0	Funnel Cloud	
Paonia area	21	Noon			0	0		4	Hail	Panama City, 4 NW Bay Co.	9	8:29 a.			0	0	0	0	Funnel Cloud	
Hail as large as marbles & crystal clear in some areas, severely damaged apple, apricot, plum and peach crops over an area east of Paonia. Some growers had 100% loss of fruit and many had minor losses.										West Palm Beach, 10 NE Palm Beach Co.	10	7:00 a.			0	0	0	0	Waterspout	
Estes Park	26	12:30PM			1	1			Lightning	Jacksonville, 15 SE Duval Co.	12	5:25 p.	Short Narrow		0	0	0	0	Tornado	
A bolt of lightning struck and killed one man and injured another, while they were fishing at Lake Estes.										Pilot reports funnel cloud touched ground briefly in uninhabited area. No damage reported.										
Morgan County	26	Afternoon			0	0		5	Hail	Wausatcha Hardee Co.	14	6:00 p.	Short Narrow		0	0	3	0	Tornado	
A hailstorm swept through the Hillrose vicinity, causing damage to 1432 acres of beets, (1215 acres heavy damage). Many fields of corn and beans were wiped out.										Orlando, 15 WNW Orange Co.	16	6:35 p.			0	0	0	0	Waterspout	
Upper Arkansas Valley Area	27	4:00PM-5:00PM			0	0		4	Heavy rain	Leesburg, 5 S Lake Co.	16	6:53 p.			0	0	0	0	Waterspout	
Heavy rain in the Salida and Canon City area caused rock and mud slides along the highway that follows the Arkansas River. About 40 cars were trapped for about 7 hours between Salida and Canon City.										Pensacola Escambia Co.	18	9:15 a.			0	0	0	0	Funnel Cloud	
Morgan and Denver Counties	30	Evening			0	0		4	Electrical and heavy rain	Panama City Bay Co.	18	1:25 p.			0	0	0	0	Funnel Cloud	
Heavy rain, wind and lightning swept through Morgan County, doing considerable damage to the REA power lines. Lightning struck trees and antennas. In Denver, heavy rain and lightning disrupted power lines and caused flooding.										Naples Collier Co.	18	5:40 p.			0	0	0	0	Waterspout	
Wasa County	31	Afternoon			1	1			Lightning	Tampa, 15 S Hillsborough Co.	19	11:45 a.			0	0	0	0	Waterspout	
A bolt of lightning struck and killed a woman and left her husband injured on Island Lake on Grand Mesa.										Key West Monroe Co.	19	3:08 p.			0	0	0	0	Waterspout	
Northern Colo. near Continental Divide	31	Afternoon			0	1	*4	0	Electrical and heavy rain	Miami Dade Co.	21	6:00 p.			0	0	0	0	Funnel Cloud	
An electrical storm accompanied by heavy rain was general east of the Continental Divide northward into Wyoming. Denver had over an inch in a short time, flooding streets & basements. Wellington in northern Colo. had a 3 hour heavy rain. A rock slide caused by heavy rain hit a car, injuring a six year old girl.										Pensacola, 25 NW Escambia Co.	24	10:55 a.			0	0	0	0	Funnel Cloud	
										Pt. Lauderdale Broward Co.	26	7:15 a.			0	0	0	0	Waterspout	

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
FLORIDA (Cont'd.)										ILLINOIS (Cont'd.)									
Stuart Martin Co.	26	2:50 p.			0	0	0	0	Funnel Cloud	Kankakee	17	11:00 p			0	0	3	3	wind, rain electrical
Tampa, 17 W Pinellas Co.	27	11:30 a.			0	0	3	0	Funnel Cloud (Possible Tornado)										High winds damaged or destroyed several farm buildings, toppled trees. Lightning damaged pump; rain and winds damaged crops
Miami, 10 NNE Dade Co.	29	8:15 a.			0	0	0	0	Funnel Cloud	5 WSW Quincy-20 NNE Quincy-Macomb-15 S Galeburg-Mineral-Deer Grove	21	2:15 p - 6:00 p	160	narrow	0	0	5	5	skipping tornado
GEORGIA																			A skipping tornado which caused considerable damage in Taylor, Missouri, moved northeastward at approximately 40 mph causing damage to farmsteads and crops as it touched ground. Heaviest damage occurred in the vicinity of Mineral.
Fort Benning	7	p.			4	15	0	0	Electrical	4 NE Jacksonville	21	2:40 p		short narrow	0	0	0	0	tornado
									Four Fort Benning soldiers were killed and 15 others injured when lightning struck in a group on a rifle range. Two children were electrocuted in Monroe County on the same day when they came in contact with a power line blown down by the wind.										Tornado touched ground briefly without damage
Americus, Sumter County	12	4 p.			0	0	4	0	Wind and rain	Chatham	21	3:37 p			0	0	0	0	funnel cloud
									Winds demolished a drive-in theater screen, uprooted numerous trees and caused other minor damage.	Lake Springfield area	21	4:05 p			0	0	0	0	funnel cloud
Dublin, Laurens County	13	7 p.					4	3	Wind and rain	Grand Ridge	21	5:15 p	2	narrow	0	0	3	3	tornado
									Thunderstorm winds unroofed one house and damaged several buildings at the County Work Camp. Trees were uprooted and electric service interrupted in some areas. Heavy rains caused mostly minor crop damage.										Small tornado touched ground 3 times damaging crops and farmsteads
Franklin and Stevens County	16	4:30 p.	Short	Narrow	0	0	4	3	Tornado	3 NW Fairbury	21	afternoon			0	1	0	0	wind
									A small tornado moved through a farm area near the Franklin-Stevens County line, causing heavy damage over a small area. Several farm buildings were destroyed and numerous trees blown down. Crops were flattened by the winds on several farms.	Central Illinois	21	afternoon			1	0	5	5	wind, rain, hail, electrical
Savannah	18	2:40 p.							Funnel cloud										High winds toppled trees and utility lines and damaged many buildings throughout central Illinois. Damage was particularly heavy in Havana, Pekin areas with heavy rains flooding streets and underpasses. Lightning fired a barn east of Bloomington and a light plane crash-landed near Heyworth. A man was killed near Lincoln in an auto accident as a result of a driving rainstorm. At Clinton an 80 foot radio tower was tipped over by wind.
									Imperfectly formed funnel cloud moved from 5 miles northeast of Savannah Airport to 2 miles northwest before dissipating. May have occasionally touched ground, but no damage of consequence reported.	Bismarck-N West Lebanon, Ind.	21	6:20 p - 6:40 p	15	narrow	0	0	4	4	tornado
Pearson, Atkinson County	25	7 p.			0	0	4	3	Wind, hail and rain										Small tornado damaged farmsteads, killing 15 hogs, leveling corn fields
									Winds clipped four big poles on a 66,000 volt transmission line leading into Pearson, leaving the entire town without electrical service for a period of 17 hours. Several thousand broiler chicks were lost and other damage suffered. Accompanying rain and hail damaged tobacco remaining in fields.	East Ross Lane, near Danville	21	7:25 p	short	narrow	0	0	4	3	tornado
Valdosta, Lowndes County	26	p.			0	0	5	3	Wind, hail and rain										small tornado damaged farm buildings, machinery and killed farm animals
									A severe wind storm at the Valdosta Municipal Airport badly damaged two hangars and destroyed or damaged five aircraft. Trees and utility lines were blown down and several automobiles were damaged by one-half inch hail.	Augusta, Ursa	22	afternoon			0	0	3	4	wind, hail
HAWAII																			strong winds toppled trees. Golf ball sized hail damaged crops
No report received by printing deadline.										Park Forest	22	8:30 p			0	0	0	0	funnel cloud
IDAHO										10 S Vandalia	22	10:45 p			0	0	0	0	funnel cloud
Owyhee, Canyon, Ada and Boise Counties	5	Forenoon							Rain, hail	Sycamore	22	7:00 p			0	1	0	0	wind
									Thunderstorms broke out in SW Idaho during forenoon, causing flash flood in Rabbit Creek at Murphy about 10:15 a., hail, rain and wind damage to beans, small grains and corn vicinity of Melba and Kund. About one hour later heavy hail fell briefly at Garden Valley. Hailstones averaged 1 inch in diameter, with some up to 2 inches reported.										Man injured as sudden gust of wind caused him to lose control of car
Hill City Area	5	3 to 4 p.	5		3	4			Tornado, hail	Chester	24	10:25 p			0	0	0	0	funnel cloud
									Funnel cloud, travelling SW to NE, touched ground about 3:30 p., 5 miles SE of Hill City, wrecking barn, machine shed, feeding rack and loading chute. Hail, accompanying storm, averaged 3/4 inch diameter with some stones up to 1 1/2 inches. 50 to 60% loss of wheat and barley on 2000 acres NE of Hill City; several thousand acres less severely damaged.	Southern Illinois	28	afternoon			0	7	5	5	rain, wind, electrical
Rathdrum, Kootenai County	23	Early morning			4				Lightning										A bus skidded off a highway near Mt. Vernon during a blinding rainstorm, injuring 6 persons. Lightning destroyed a grain elevator in Centralia and struck several homes in Mt. Vernon injuring one person. Flooding occurred in many towns.
									Fire destroyed grain elevator with 115,000 bushel capacity.	Shelbyville	28	4:30 p			0	0	4	4	tornado, hail
ILLINOIS																			Small tornado toppled 19 trees and damaged buildings and crops on farmstead. Hail split cornstalks and chopped tops off soybeans.
Northern Illinois	4	morning			0	0	5	5	Wind, rain, hail	Northeastern Illinois	30	morning			0	0	4	4	rain, wind, electrical
									Heavy thunderstorms accompanied by high winds, hail and rain caused much damage to property and crops with heaviest damage in the Joliet area.										Heavy rains flooded basements and streets in Chicago and surrounding towns. Winds blew down many trees and power lines. Lightning knocked Waukegan radio station off air and hit school in Chicago
Robinson	14	evening			0	0	4	0	electrical	New Milford	31	morning			0	1	0	0	electrical
									Lightning caused fire which destroyed barn and contents										Woman injured when struck by lightning. Power in Rockford area knocked out by lightning.
25 WW Rockford	17	3:30 p			0	0	0	0	funnel cloud										

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS		
INDIANA South Bend	1	5:21 p.			0	0	0	0	Funnel cloud	INDIANA (Cont'd.) Hamilton County	28	7 p.			0	0	0	0	Funnel clouds	
									Funnel cloud observed 15 miles east of South Bend moving eastward.										About 3 funnel clouds were seen in the county moving east-southeastward.	
Switzerland, Ripley, and Ohio Counties	4	6:30-8 p.			0	1	4	4	Wind, hail	Elwood, in Madison County	28	7 p.			0	0	0	0	Funnel clouds	
									Several homes, barns, and outbuildings damaged or destroyed. Considerable damage to crops resulting in a total loss of some fields. Hail stones reported as big as golf balls and piled 6 inches deep in places.										Fans at a baseball park observed a funnel cloud travelling north-eastward, and shortly afterwards another travelling eastward.	
Marion	5	11 a.			0	0	0	3	Hail	Redkey, in Jay County	28	7:30 p.			0	2	4	0	Tornado	
									Hail up to two inches in diameter reported.										A small tornado tore off the roof of the post office and caused other minor damage. Two persons were slightly injured by flying debris. The area was littered with dead and stunned birds.	
Randolph County	6	12:15 p.	10	*1-1.5	0	0	0	4	Hail	Randolph County, eastern	28	8:30 p.			0	0	3	0	Tornado, wind	
									The storm beat down crops in a ten mile strip running from two miles north of Winchester southeast to Barton. Oddly shaped hailstones some the size and shape of ice cubes, some flat and some as big as golf balls did extensive damage to crops.										Scattered damage occurred to buildings. A patrolman saw a small funnel cloud strike the ground several times.	
Spiceland in Henry County	20	1-4 p.			0	0	4	3	Rain	Jamestown, in Boone County	28	10:30 p.			0	0	3	0	Tornado	
									Flash flooding washed away two town bridges, caused heavy damage to a factory, and forced two families from their homes. An unofficial rain gauge recorded 7.5 inches of rain in a 3 hour period.										A small tornado which was seen and heard struck a farmhouse and uprooted some large trees.	
Bedford in Lawrence County	21	5 p.			0	2	4	0	Lightning	Peru, 15 miles south-east, Miami County	30	11 a.			0	0	0	0	Funnel cloud	
									Lightning and resulting fire damaged a school with a loss of \$50,000. Two firemen were injured.	Indianapolis, 15 miles southeast	30	10:35 p.			0	0	0	0	Funnel cloud	
Cloverdale, near, in Putnam County	21	6:45 p.	1	20	0	0	4	0	Tornado	IOWA SW Clinton	1	4:30 a.							Funnel	
									Farm home and shed was demolished. Damages were estimated at \$6000.	4N Lorimer	1	3:00 p.							20% loss due to heavy rain, 10% wind.	
Warren County	21	7 p.	24	?	0	0	4	3	Tornado	S Madison County	1	4:00 p.							Hail	
									County sheriff followed the tornado for 24 miles as it skipped northeastward across the middle section of the County. It touched down at least twice damaging and destroying several farm buildings and crops.	3E Hampton	3	10:30 p.								Hail
Frankfort, in Clinton County	21	8:30 p.			0	0	0	0	Funnel cloud	Buffalo Center	4	6:00 p.							3 4 Hail	
																			2 inch hail.	
Monrovia, in Morgan County	21	evening			0	0	0	0	Funnel cloud	Thornton	4	8:15 p.							3 4 Hail	
																			1 1/2 inch hail.	
Goshen, Elkhart County	23	1-1:30 p.			0	0	5	0	Wind	Hampton	4	8:30 p.							3 4 Hail	
									High winds leveled a cement block warehouse 3 miles southeast of Goshen. About 250 stored boats were damaged or destroyed. Losses estimated at near \$200,000.	Lamoni	5	4:55 p.								4 Windstorm
																			Wind gusts to 75 mph.	
Tippicanoe Lake in Kosciusko County	23	2 p.			0	3	4	3	Tornado	SE Madison County	5	4:30 p.							3 5 Hail	
									A tornado travelling northeastward damaged or destroyed 16 house trailers and caused extensive crop damage. Three trailer occupants were injured. A pontoon boat was hurled 120 feet.										3 inch hail, 10 square miles damage.	
Logansport, in Cass County	23	4:45 p.			0	1	0	0	Lightning	4S Fairfield	5	5:15 p.							3 4 Windstorm	
									A man was struck by lightning near Logansport while sitting in the kitchen of a farm home.	Grundy County	7	3:30 p.								5 Hail
Vincennes, in Knox County	23	5 p.			0	2	4	0	Wind										Shiloh, Colfax & Pleasant Valley Twns., about 12 square miles damaged.	
									Winds blew the roofs off of several downtown buildings. Persons were injured by debris.	Rowan	12	5:00 p.	4	3000						4 Hail
New Washington, in Clark County	23	7:30 p.			0	0	4	0	Tornado	Richland	13	12:40 p.							4 Hail	
									A funnel cloud was seen just before the storm hit destroying two barns and damaging a home.	6SE Iowa City	13	3:50 p.								4 Hail
Evansville	23	7:50 p.			0	0	4	0	Lightning	Northwestern Iowa to Marshall and Grundy Counties	14	7:00 p.							5 6 Hail	
									Lightning and resulting fire destroyed a large barn and contents with a valuation of \$25,000.										Losses estimated \$3,000,000 in Sioux County. \$250,000 loss in Hawarden. Heaviest losses in northwest division and Hardin and Grundy Counties. Hail diameter to 2 1/2 inches and drifted to 1 foot depth. Apparently same storm that originated near Mitchell, S. D.	
Charlestown, in Clark County	23	evening			0	0	3	0	Tornado	N of Des Moines	14	10:00 p.								4 Hail
									A small tornado levelled two barns, several trees, and damaged some farm buildings.										3/4 inch hail.	
Attica, in Fountain County	24	9 p.			0	0	0	0	Funnel cloud	North Liberty	15	12:30 a.							4 Hail	
										Hopkinton	15	2:45 p.								3 5 Hail
Odell, in Tippicanoe County	24	9 p.			0	0	0	0	Funnel cloud										3 inch diameter.	
										Worthington	15	4:00 p.								4 Hail
Idaville, in White County	28	4:30 p.	?	30-40	0	0	4	0	Tornado	Wayne County	15	4:30 p.								4 5 Hail
									House and several barns were damaged.										Heaviest hail vicinities of Humeston, Sewal & Seymour. 10% loss from heavy rain.	
Wabash, in Wabash County	28	4:55 p.			0	0	0	0	Funnel cloud	2S Mondamin	18	3:05 a.							4 Lightning	
										Southern Kossuth County	18	7:00 p.								5 Hail
Lagro, in Wabash County	28	5:23 p.			0	0	0	0	Funnel cloud	Woolstock	18	9:30 p.	12	2000					5 Hail	
										Spencer to Ruthven	20	8:00 p.	12	2000						5 Hail
																			10% wind damage, 2 inch hail.	

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM	
					KILLED	INJURED	PROPERTY	CROPS		
KANSAS (Cont'd.)										
										to 120 mph. The third, heavy hail and severe winds of 60 to 100 mph damaged quite an area around Alden and Sterling in Rice County. A fourth damaged section was in Sheridan and northeastern Gove counties, from near Hoxie to Quinter, with several strips of damage from hail ranging in size up to 2 inches in diameter. Accompanying winds were estimated at 60 mph. Houses were unroofed, barns and sheds blown over, transmission lines broken, signs and TV aerials and tower bent and broken, and fruit orchards in northern Reno County lost a lot of fruit and many trees were broken. Hail riddled crops and beat them into the ground, broke many windows (the glass loss in Edmond was estimated at \$6,000), beat roofs and dented sidings and bark of trees, cut the backs of livestock, killed many small animals and poultry, and both cattle and pigs were found with their eyes put out by the hail. Two persons were injured as a result of the terrific wind. One man was killed by a broken electric wire.
Seward County	20	Afternoon								Heavy rain A heavy 2-hour rain in and near Liberal caused considerable flooding in parts of Liberal and especially in the business district.
Clay County	20	5:30p								Tornado A small tornado came to the ground about 3 miles northeast of Clay Center. The only damage was to a load of hay on a truck which was upset.
Northwest Lyons County	20	7:00p	5	*1						Hail Hailstones up to 1 1/2 inches in diameter fell near Bushong. Some crop damage.
Northwest Sumner County	20	7:30p								Tornado A tornado touched ground for several minutes between Milton and Comey Springs but without damage.
Nemaha County	20	7:00p-8:00p								Tornado A funnel cloud touched ground several times near Sabetha. It was shaped like a long finger and was suspended from very ugly and turbulent clouds.
Sumner County	21	11:05a								Funnel cloud A funnel cloud was reported 30 miles south of Wichita, near Wellington.
Smith County	21	1:10p								Funnel cloud A funnel cloud dipped down from the clouds and immediately lifted 10 miles south of Smith Center.
Saline County	22	1:20p-1:22p								Funnel cloud A funnel cloud was sighted near the Smoky Hill Air Force Base.
Cloud County	23	About 11:00p								2 funnel clouds Highway patrol reported 2 funnel clouds near Concordia.
Johnson County	24	12:30a								Hail Golf ball sized hail fell at Westwood in extreme northeastern Johnson County.
KENTUCKY										
Fayette County	7	7 PM			4	3				Heavy Rain Heavy rain centered in the southern section of the county caused flooding to numerous single-floor dwellings and basements in South Lexington. Some areas covered by as much as five feet of water. Minor crop damage due to flooding and erosion.
Fayette County	19	PM								Funnel cloud Funnel cloud observed 35 miles south southwest of Lexington.
South Central Kentucky	20	PM			3	4				Hail; wind An area of thunderstorms moving eastward through Barren, Hart, and Metcalfe Counties, with hail and wind, causing damage to tobacco crops, some trees unroofed. Lightning caused minor damage to one tobacco barn.
Grant County	21	PM			1	2				Hail; lightning Lightning fatality at Williamstown; minor damage to tobacco crops in northern sections of the county.
Johnson, Morgan, and Elliot Counties	30-31	PM-AM					5	5		Heavy rain Worst flash flooding ever experienced on Paint Creek, Johnson County and Barnett Creek, Morgan County, with streams swelling to 10 to 20 feet and in some instances 30 feet above normal levels. Several houses torn from their foundations and washed downstream in Barnett Creek. 9 homes and 75% crops damaged in Morgan County. Disaster Relief asked for.
LOUISIANA										
Burrwood	3	4:30 p.								5 funnel clouds
10 E South Pass (25 E Burrwood)	4	9:35 a.								Funnel cloud
Burrwood, NE	4	10:00 a.								3 funnel clouds
Burrwood, SE	4	10:00 a.								Waterspout
Near Alexandria	8	1:30 p.			2	1	0	0		Lightning
Metairie	10	1:30 p.			1	0	0	0		Lightning
Near Mansfield	13									Funnel cloud
Shreveport, 1 mi. NW	14	7:30 p.						3	0	Hail over 1 inch
8 NW New Orleans	16	3:25 p.			1	0	3	0		3 Waterspouts One drowned when boat capsized in high winds.
Michoud, E of New Orleans	24	2:00 p.						4	0	Thundersquall
Marsh Island	27	11:10 a.								2 waterspouts
Cameron Parish	27	11:20 a.								3 waterspouts One waterspout 5 NW Holly Beach; two just east of Cameron.
Near Reserve	27	11:30 a.								2 funnel clouds
Terrebonne Bay, near Cocodrie	27	4:00 p.								2 funnel clouds
7 SSE Lake Charles	28	1:00 p.								Funnel cloud
Near Fenton	28	2:20 p.								Funnel cloud
MAINE										
Canton	10	Night			0	0	2	3		Hail Hail accumulated to 2 to 4 inch depths with stones near 1/2 inch diameter and remained on ground in places until the following noon. Damage to crops was heavy in a limited area.
Aroostook County	10				0	0	4	0		Lightning Damage from widely scattered lightning hits included destruction of a church steeple at Presque Isle and considerable damage to a building at Caribou.
Southern	11	Afternoon			0	1	3	3		Lightning, hail Hail 1 inch in diameter severely damaged vegetables and fruit in limited area in and near Kennebec County. Lightning injured a swimmer at Dedham and started fires in scattered southeastern locations.
Houlton	12	1:32 p.			0	0	0	0		Hail Hail reported 3/4 inch size.
Southern	13	Afternoon			0	0	3	2		Hail, wind Hail up to 3/4 inch size damaged gardens at New Sharon. Stones up to 1 inch size hit North Whitefield, where gardens were badly damaged and where wind collapsed a barn.
Ft. Fairfield	18	4 p.	0.4	200	0	0	4	2		Tornado Tornado moved eastsoutheastward, demolishing a barn and damaging another barn, two homes and four vehicles. Some large trees snapped off. Accompanying hail was elongated, about 1/2 inch length, and covered the ground entirely. Peas and potatoes were damaged. Heavy rains in nearby Caribou caused some local flooding of fields and some road washouts.
Southern	21	Afternoon			0	0	4	4		Lightning, wind, hail Lightning caused several fires in the Fairfield area and local damage elsewhere. Widely scattered wind damage included felled trees and power lines. A light plane was turned over at Portland. Some crop-damaging hail reported from near Portland, Unity, and Oakland. More extensive wind and hail damage to crops in North Fryeburg area.
Locally throughout State	24	Late afternoon			0	0	4	0		Lightning, wind Lightning strikes damaged or destroyed by fire a number of buildings, mostly from southern Piscataquis County southwestward. Some damaging wind in Aroostook Co.
Houlton	30	Early morning			0	0	4	0		Lightning Two barns and one home burned.
Swanville	30	Afternoon			0	2	0	0		Lightning Two suffered burns from lightning strike at Swan Lake.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
MARYLAND									
Gambriels-Millersville Section Anne Arundel Co.	13	about 5:00PM EDT	1/2	?	0	0	4	C	Severe thunderstorm, windstorm, hail
			Five tobacco barns were demolished as a twister-type storm swept through the Gambriels-Millersville area. Hail accompanying the storm shredded some corn growing in the area. Trees were also knocked down on three farms as well as on nearby highways.						
Winfield, Carroll Co	16	about 11:00PM EDT			0	0	4	0	Lightning
			Fire, caused by lightning, damaged a three-story house.						
Frederick, Frederick County	16	night	?	?	0	0	4	?	Severe thunderstorm, windstorm
			Strong winds accompanying a severe storm ripped off roofs and did considerable damage to buildings at the Frederick Fair Grounds.						
Leitersburg-Ringgold Section, Washington County	24	6:00PM EDT	?	?	0	0	4	?	Tornado
			Tornado demolished or damaged buildings, uprooted or topped scores of trees, and wrecked telephone and power lines. An extremely dark sky and a roaring noise accompanied the storm.						
MASSACHUSETTS									
Pittsfield	2	3:30 p.			0	0	4	0	Wind, hail
			Thunderquill winds with gust estimated at 50 mph felled large scaffolding structures. Hail of 1/2 in. diameter caused no reported damage.						
Whately	2	4:30 p.	2	300	0	0	3	2	Tornado
			Tobacco shade cloth and some trees damaged in spots along path. Described as a "twisting wind stem" with funnel reported reaching the ground at least once. Moved toward ENE.						
Marblehead	2	5:30 p.			0	0	0	0	Funnel clouds
			Six funnel clouds observed by Salem Coast Guard Air Station.						
Norwood	2	6:30 p.			0	0	0	0	Funnel cloud
Northeastern	2	Afternoon			0	0	5	3	Lightning, wind, rain, hail
			Many buildings damaged by lightning and fires from lightning, including, at North Chelmsford, one large factory. Wind felled trees and limbs in many areas, resulting in loss of utility service to several thousand homes and buildings and vehicles damaged by falling trees. Wind blew roofs from several buildings, some windows out, and toppled some chimneys. An unofficial report of 72 mph gusts came from North Andover. One narrow zig-zag path of damage through Ipswich at about 5 p.m. suggested a possible tornado. Radar indicated severe convective activity there at that time with radar echoes reaching over 50,000 feet altitude. Occurrence of a tornado funnel, however, could not be confirmed. Washing and flooding rains damaged streets and walks, caused some cave-ins of streets, and flooded underpasses, mostly in Essex County. Haverhill reported rainfall of 0.91 inch in 20 minutes, as an example of an excessive rate. Several areas had hail of 3/4 inch size and Gloucester reported hail as large as baseballs. Some damaged tree fruits and vegetables.						
Petersham	3	Afternoon			0	0	4	0	Lightning
			Large barn completely destroyed by fire from lightning.						
Stoneham	3	4 p.	1/2	narrow	0	0	3	0	Tornado, lightning
			Funnel observed while still aloft; but pattern of damage to trees indicated rotary motion also at ground. Only minor structural damage. Hail from 1/2 to 3/4 inch size fell here and in some nearby communities. Power failures from both lightning and falling trees.						
North Oxford	3	7:55 p.			0	0	0	0	Funnel cloud
North Attleboro	6	1:30 p.			0	0	4	0	Lightning, rain
			Barn destroyed by fire from lightning. Heavy rains washed out soil and flooded some streets.						
Near Springfield	9	Evening			0	0	3	3	Lightning, hail, rain
			Lightning damaged utility services. Hail damage to tree fruits was heavy in spots. Flooding rains caused road blockage and some washouts.						
Eastern	10	Evening			0	7	4	3	Lightning, hail, rain
			Seven injured by lightning at Middleton. Lightning set fires damaging two homes and cut power services in several areas. Hail up to 1 inch size fell at Newburyport and up to 3/4 inch in East-central Worcester County, damaging gardens and fruit. Some road and cellar flooding from heavy rains.						
MASSACHUSETTS (Cont'd.)									
Hampshire Co.	21	4:15 p.	6	150	0	0	4	6	Tornado
			Major damage to shade tobacco and shading tents in Hatfield and Hadley. Corn and other crops also hit in east-southeastward path. Trees, utilities, and a greenhouse damaged. Accompanying hail averaged about 1/2 inch diameter.						
Georgetown	21	6:30 p.			0	2	4	0	Lightning
			Lightning injured two men and destroyed a home by fire.						
State	25				0	0	4	0	Lightning, wind, rain
			Lightning set several damaging fires and caused local power failures. Locally heavy rains flooded streets. Thunderstorms in forenoon, afternoon, and evening. Lightning caused power failures and set fire to several homes. A locally severe wind damaged one building in Worcester. Scattered washing and flooding from heavy rain.						
Michigan									
Milford 2 NW	2	Morning			1	1			Electrical
			At Camp Dearborn, young man was killed instantly and an elderly man companion was seriously burned when struck by the same bolt of lightning while both were seeking refuge from the thunderstorm inside a small tent.						
Kent County	12	2:30 p. 3:30 p.					1	4	Hail
			Sparta area reported hail up to 1" in diameter with resultant crop damage to 20-30 acres of cherries and apples.						
Northern Lower	14	Afternoon					4		Thunderstorms with high winds and heavy rains
			Excessive rains flooded streets, roads and basements with resultant serious repair damage in the area. High winds caused damage to barns and buildings.						
Grayling	17	Afternoon					4		Electrical
			At Camp Grayling, 4 National Guardsmen operating a field command post switchboard struck by a lightning bolt were injured and treated at a nearby military hospital.						
Southeastern and the Thumb area	19	Afternoon					4	C	Severe thunderstorms with hail, high winds, lightning and heavy rains
			Flooding caused serious damage to streets, roads and basements. High winds damaged buildings, barns and caused power disruptions. Caro area reported hail ranging from marble size to 3/4" diameter with resultant crop damage. Lightning damaged numerous trees.						
Ogemaw County	20	Evening					4		Electrical
			Several lightning induced fires burned barns and buildings with contents plus an oil storage tank all within West Branch vicinity. Lightning bolts killed a few cattle in the fields.						
Southern and Central Lower Michigan	23	1:00 p. 7:00 p.					5		Thunderstorms with high winds, lightning and heavy rains.
			Lightning and high winds caused loss of power and phone service to homes and commercial buildings in excess of 2 thousand in the area. Winds estimated at over 60 MPH blew down farm barns and buildings with resultant damage to contents. Numerous utility poles and trees were blown down with damage also reported due to falling trees and flying debris on cars and buildings. Damage due to flooded basements and streets was reported.						

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
MICHIGAN (Cont'd.) Southeastern and the Thumb area Lower Michigan	24	Afternoon			1		*4	C	Thunderstorms with hail, high winds, lightning and heavy rains.
									At Wyandotte, a woman getting out of her car was knocked down and slightly injured due to severed live power line falling on the car. Power service elsewhere throughout the area was disrupted due to lightning and winds. A large farm barn 1 N of Standish was blown down with high damage to the stored farm implements. Numerous trees and a few buildings throughout the area were blown down with damage also due to flying debris. Damage was also caused by flooding of basements and streets.
St. Ignace 15 WSW	24	2:35 p.							Waterspout
									At Waugoshance Point, a Michigan Conservation Department officer observed a waterspout over Lake Michigan traveling northeasterly at estimated 60 MPH with no known damage being reported.
Iron Mountain and Kingsford, Michigan	29	5:15 p. 6:30 p.					*5	C	Thunderstorms with hail, high winds, heavy rains and lightning.
									Estimated winds of 75 MPH caused destructional havoc. Numerous trees were snapped off and uprooted, branches broken and blown about. TV antennas blown off roofs, signs blown down, roofs lifted off various buildings. Hail damaged gardens and farm crops. Hail was reported to have covered the ground from 6 to 10 inches depth in some sections of the twin cities. Nearby adjacent areas suffered very little damage.
Southwestern and Central Lower Michigan	31	early morning			1		*4	C	Thunderstorms with lightning, high winds and heavy rains.
									On a farm tenant home near Coloma, a three year old girl was injured when struck by a bolt of lightning while sleeping in the house. She was treated at a hospital for arm and hand burns and convulsions. Lightning damaged buildings along with high winds. Trees were uprooted with damage by falling trees onto cars and buildings reported. Power and phone service was disrupted temporarily to thousands of homes within the Kalamazoo area. Flooded streets, roads and basements also caused damage.
MINNESOTA									
Fountain, Fillmore County	1	1:00 a.			1		3		Heavy rain
									Heavy rain caused wall of basement home to collapse killing infant by suffocation.
Southwestern Minnesota	4	9:00 p.					5		Hail
									Hail up to 3 inches in diameter damaged corn and soybeans in Lincoln, Murray, Cottonwood, Jackson and Martin counties. Crop loss greatest in Cottonwood county.
West Central Minnesota	13	p.					4		Hail
									Hail damaged crops in Chippewa, Grant, Kandiyohi, Otter Tail, Pope and Stevens counties.
Morris (near), Stevens County	13	6:30 p.							Funnel cloud
									Funnel cloud, not touching ground, sighted by public southwest of Morris.
Southwestern Minnesota	14	5:00 p.					4	6	Hail
									Hail, accumulating in some areas to a depth of 2 to 6 inches, caused scattered damage to crops in Lincoln, Lyon, Pipestone, Murray, Rock, Nobles, Redwood, Brown, Cottonwood, Watonwan, Elbe Earth, Jackson, Martin and Faribault counties. Greatest damage reported Redwood, Cottonwood and Nobles counties. Storm moved southeast.
Southwestern Minnesota	18	6:00 p.					4		Hail
									Hail damaged crops in Lac Qui Parle, Yellow Medicine, Watonwan and Faribault Counties.
Southwestern Minnesota	20	3:00 p.- 9:00 p.					5	6	Hail, wind and rain
									Numerous heavy thunderstorms accompanied by strong winds and hail to golf ball size damaged crops and buildings south and west of a line from Traverse to Waseca counties. Some farmers reported total loss to crops. Greatest reported damage occurred near Granite Falls, Yellow Medicine County; near Appleton, Swift County and near Sacred Heart, Renville County. Hail damage also reported west and southwest of St. Cloud, Stearns County.
Crookston (near), Polk County	20	5:00 p.							Funnel Cloud
									Public reported sighting funnel cloud eleven miles northeast of Crookston.
MINNESOTA (Cont'd.)									
Buffalo, Wright County	20	5:50 p.					3		Tornado
									Funnel cloud moving northeast dipped down over Lake Pulaski and sucked up column of water estimated at 40 feet in height. Minor damage done to trailer house and boat dock. Distinct roar noted by many observers. Pilot reported funnel cloud, not touching ground, 12 miles SSW of Buffalo at 5:31P.
Granite Falls (near), Yellow Medicine County	20	8:30 p.							Funnel cloud
									Public reported sighting funnel clouds not touching ground 10 miles north and 16 miles southeast of Granite Falls.
Bird Island 10N, Renville County	21	p.							Funnel cloud
									Three funnel clouds sighted by public.
Cosmos, Meeker County	21	4:30 p.							Funnel cloud
									Sheriff reported sighting several funnel clouds, and not touching ground, 4 miles west of Cosmos.
Owatonna (near), Steele County	21	5:15 p.							Funnel cloud
									Funnel cloud sighted few miles east of Owatonna.
Rochester 30 SW, Olmsted County	21	6:00 p.							Funnel cloud
									Funnel cloud not touching ground sighted by public.
Owatonna, Steele County	21	6:55 p.							Funnel cloud
									Sheriff's office reported sighting funnel cloud.
Rochester 8W, Olmsted County	23	12:40 p.							Funnel cloud
									Public reported funnel cloud aloft.
Rochester 15 SW, Olmsted County	23	1:45 p.						4	Hail
									Hail 1 3/4 inch damaged crops.
West Central Minnesota	29	5:00 p.					5	6	Hail, wind
									Numerous thunderstorms accompanied with hail and gusty winds, moving southeast, damaged crops and buildings in Wilkin, Otter Tail, Big Stone, Traverse, Grant and Douglas counties. Greatest hail damage reported on a line from Wolverton to Foxhome, Wilkin county, and along Otter Tail and Grant county line. Hail covered ground to depths of 3 inches. Considerable damage also reported from Carlisle - Vergus Falls area, Otter Tail county. Crop loss was 100 per cent over several farms. Wind gusts to over 50 mph were recorded at the Alexandria FAA weather station, Douglas county.
Southeastern Minnesota	30	2:00 a.					5	4	Wind, electrical, heavy rain
									Numerous heavy thunderstorms moving in a northeasterly direction across southeast Minnesota blew down 2 barns, caused damage to numerous buildings, trees and utility lines, damaged 2 airplanes and flattened crops. Area affected extended from Lytle to St. Charles. One barn burned after being struck by lightning. Wind gusts were observed by the Rochester Weather Bureau Airport Station, Olmsted County, up to 59 mph. Rainfall ranging from 1 to over 3 inches were observed.
MISSISSIPPI									
Columbus	1	6:00 p.					*4	C	Thundersquall
Jackson	1	5:45 p.	1	10	0	0	3	0	Tornado
Biloxi, S	11	1:03 a.							Waterspout
State College	24	3:15 p.					*4	C	Thundersquall
Jackson	27	4-5 p.					4	0	Thundersquall
									Thundersquall in downtown Jackson flooded streets, stores; blew in plate glass windows, etc.
Cleveland	31	4:56 p.							Funnel cloud
MISSOURI									
Northwest Prairie Division	5	5:00 - 8:00PM					5	5	Thunderstorms
									A large area, roughly bounded by Kansas City and Savannah on the west, and Boonville and Unionville on the east, had numerous severe thunderstorms. Very heavy rains and hail and locally damaging winds accompanied the thunderstorms. Chillicothe had 2.00 inches of rain in less than an hour, and Boonville got 3.80 inches in one hour. Flash flooding occurred on many streams.
Southwest Missouri	13	8:00 - 9:30 PM					5	4	Thunderstorms
									An area bounded by Joplin and Springfield on the north and the Arkansas border on the south had numerous severe thunderstorms, with wind and heavy rain damage to homes and farms.
North Central Missouri	15	Evening					4	5	Thunderstorms
									Farms and towns in Harrison, Davies, Mercer, Grundy and Livingston counties had heavy rains and scattered hail, with some reports of hail up to golf-ball size and heavy damage to growing crops.
Belgique, Perry Co.	17	Late eve.						5	Thunderstorm
									Heavy hail damage to corn and hay. Many birds found dead under trees.
Central Missouri	18	1:00 - 4:00 PM					5		Thunderstorms
									Severe thunderstorms hit the California area about 1:00 PM, then moved through Jefferson City to Vienna, Rolla, Vichy and then to Salem and Arcadia. Lightning struck several homes. Winds with gusts to 80 mph at Vichy.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

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					KILLED	INJURED	PROPERTY	CROPS		
MISSOURI (Cont'd.)										
Columbia, Boone Co.	21	10:15 - 10:45 AM	12	50			5		Thunderstorm	
			This storm had some characteristics of a tornado, but no funnel was ever sighted. The storm was visible from the Weather Bureau Airport Station at the Columbia Municipal Airport during most of its existence. It formed as part of the southernmost cell in a line of thunderstorms approaching Columbia from the west. The first reported damage occurred about 3 miles WSW of Columbia. The storm's path took it through the northern portion of Columbia and then out into a rural area about 10 miles ENE of Columbia. It did damage to many homes, business buildings and farms. Debris was observed in the air about 300 feet above the ground one-fourth mile south of the Columbia Municipal Airport. When the storm moved on east of the airport a few miles, Weather Bureau radar showed a classic "hook shape" on the southwest corner of the main thunderstorm cell.							
Sweet Springs, Saline County	22	12:15 PM	1	200			4	4	Tornado	
			Two funnels were observed. Only the smaller of the two touched the ground.							
Sweet Springs (near) Saline County	22	6:15 PM					4	4	Tornado	
			Farm buildings and crops damaged. Witnesses saw the funnel approaching. A farm boy and girl held on to a tree trunk to keep from being blown away.							
Lone Jack, Jackson Co.	22	Evening	3	300			4	5	Tornado	
			Heavy damage to buildings and trees on several farms. Evidence of rotating motion in pattern of debris. Much damage to crops.							
Ewing, Lewis County	22	3:00 PM					4		Tornado	
			Evidence of rotating motion from appearance of debris. Up to 4.00 inches of rain fell near the path of the storm.							
Sikeston, Scott Co.	23	3:00 PM					5		Thunderstorm	
			Heavy wind damage to homes and buildings in Sikeston. Wind estimated 70-80 mph in gusts.							
Savannah, Andrew Co.	23	8:30 - 9:00 PM					4		Thunderstorm	
			Two inches of rain, and some hail, fell in a 30 minute period.							
Bureka, St. Louis Co.	23	8:00 PM							Funnel Aloft	
Pleasant Hill, Jackson County	23	5:00 PM							Funnel Aloft	
St. Louis County	24	9:30 PM					3		Thunderstorm	
			Power interrupted in 1200 homes. 2.50 inches of rain and wind gusts to 55 mph accompanied storm.							
MONTANA										
Vaughn, Cascade County	6	6:30 p.m.	30	?	0	0	0	4	Thunderstorm, Heavy Rain, Hail	
			So much rain fell in a short time that flooding broke an irrigation canal resulting in more damage than from hail. Heaviest hail damage 3 to 6 miles west of Vaughn, up to 100% damage some fields. Hailstones up to 1 inch diameter. A car went into borrow pit during storm drowning a small child.							
Forayth (1 1/2 miles west), Rosebud County	8	7:45 a.m.	?	?	1	0	0	0	Thunderstorm	
			A lightning strike killed a beet field worker.							
South of Sunburst, Toole County	15	Evening	15	4	0	0	2	4	Hail	
			Hailstones were nearly two inches in diameter. Damage mostly to small grains.							
Great Falls, Cascade County	20	9:47 - 10:05 a.m.							Funnel Cloud	
			Funnel cloud estimated 10 miles west of Weather Bureau Airport Station - did not touch ground.							
Eastern Glacier, Southern Toole, and Liberty Counties	22	Afternoon	120-150	*3-10	0	0	4	6	Thunderstorm, High Wind, Hail	
			This storm was one of the most destructive experienced in the area for many years. It developed in Canada early afternoon, crossed the border north of Browning, and continued southeastward to south of Chester. Winds were estimated 80 to 100 MPH and did considerable damage to granaries and other farm buildings. Swathed grain was completely destroyed. Hailstones varied in size from 3/8 to 1-1/4 inches in diameter. The severity of storm was not determined for several days as it did not pass over any thickly populated areas.							
Fairview, Richland County	27	Evening	8	*2	0	0	3	4	Thunderstorm and Hail	
Culbertson, Roosevelt County	27	Afternoon	30	*10	0	0	3	5	Thunderstorm, Hail, Wind	
			Hailstones were about the size of walnuts.							
MONTANA (Cont'd.)										
Southern Toole, Liberty, Hill, Blaine, and Phillips Counties	28	Afternoon	190	*5-10	0	0	6	6	Thunderstorm, Rain, High Wind, and Hail	
			General extent of storm from Dunkirk to Malta and south of Milk River. About one-fourth of the crop damage and over one-half property damage was from wind. The wind was so strong in some sections that hail was driven in a horizontal direction. Crop damage was mostly to small grain.							
Froid (12 miles west) Roosevelt County	28	7:00 p.m.	5	*1 1/2	0	0	0	4	Hail	
			Damage to crops varied from 50% to 100%							
Southern Prairie and Northern Custer Counties	29-30	Night	80	*2-4	0	0	4	5	Thunderstorm, Heavy Rain, Wind, and Hail	
			Path of storm was narrow and twisted. Some areas were heavily damaged while others had none. The storm caused damage from Miles City northward to Terry and east to Mildred and Ismay. There were two "waves" of the storm, one around 9 to 10 p.m. and the second after midnight. Hail accumulated in borrow pits and coolers up to depths of 4 feet. Hail was 2 feet deep on highway 212 near Miles City and had to be cleared off with a snow plow. There was considerable damage to power lines. Rain was beneficial to ranges and replenished stock water supplies.							
Northern Valley County	30	3:00 p.m.	6	*1 1/2	0	0	0	4	Thunderstorm, and Hail	
			Hailstones were 1/4 to 1/2 inch in diameter. Damage mostly to grain crops.							
Dodson (11 miles north), Phillips County	30	Afternoon	?	?	0	0	0	4	Thunderstorm, Heavy Rain, and Hail	
			Hailstones were the size of marbles and accumulated in 5-inch drifts in draws, deeper in areas to east of station. About 1 1/2 inches of rain fell in a little over 1/2 hour.							
NEBRASKA										
Vicinity of Clinton	1	9:15 a.	short	narrow	0	0	4	0	Tornado	
			Destroyed grain bins, storage tanks, etc.							
Vicinity of Clinton	1	9:10 - 9:25 a.	7	* 1	0	0	4	5	Hail and excessive rain	
			Stones 1/2 to 3/4 inch driven by high wind, complete crop destruction. Hail 80% excessive rain 20%.							
Garden & Dundy Counties	1	8:50 p.	12	* 1-2	0	0	4	5	Hail	
			Variable damage on south table of Garden County and skipped to Dundy County where stones ranging from 3/4" to 1-3/4" covered ground 2" deep before storm moved on into Kansas. Extensive damage to buildings, pigs killed, other livestock cut and bruised.							
Scattered areas in Adams, Hamilton and York Counties	1	8:430 p.	?	?	up to 3	up to 2	0	4	4	Hail and high wind
			Stones from 1/2" to 1" diameter covered ground to inch depth in spots. Considerable wind damage to trees, barns, sheds, etc.							
Northeastern Sheridan and west-central Cherry Counties	5	7:30 - ?	40	* 3	0	0	4	5	Hail and strong winds	
			Hail entered Nebraska from South Dakota and continued southeastward 40 miles. Total crop destruction from hail; some property damage from hail but mostly from wind.							
Carlsten to Belvidere	5	night	10	* 1	0	0	0	4	Hail	
			Hail damage spotted along path with local areas of severe damage.							
Near Wilber	6	12:15 a. - 12:45 a.	8	* 2	0	0	0	5	Hail	
			Stones 1/2 to 3/4 inch damaged wheat, corn will recover. Some scattered areas elsewhere in Saline County.							
Southern Panhandle	9	3:00 p. - up to 7:00 p.	10	* 1	0	0	0	5	Hail and wind	
			Scattered areas in Morrill, Cheyenne, Garden, Deuel and Keith Counties. Stones 1/2 to 1 inch diameter covered ground to a depth of 6 inches in some areas.							
W Chase County	10	4:00 p.	2	* 1	0	0	0	4	Hail	
			Stones 1/2" to 1" fall briefly.							
Near Smithfield	10	4:30 p.	5	* 2	0	0	minor	4	Hail	
			Hail fell briefly. Ground covered by 1/2" to 1" stones.							
Northeastern Nebraska	10	6:00 p. - to abt. midnight	?	?	0	0	4	5	Hail	
			Scattered areas in Holt, southern Knox, southern Cedar, Antelope, Pierce, northern Madison Counties. Stones mostly 1/2" to 3/4" but ranged up to 2-1/2" and in some places covered ground to a depth of 2 inches.							

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM				
					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS					
NEBRASKA (Cont'd)										NEW JERSEY													
Southwestern Cheyenne County	11	2:00 p.- 3:00 p.	20	* 1	0	0	0	4	Hail	Gloucester County	7	7:10a				1			Fog				
			1/4 to 1/2 inch stones covered the ground.																	On a county road in West Deptford Township, Gloucester County, a driver was killed in a head-on accident during a period of heavy fog.			
Western Nebraska	11	2:30 p.- 9:30 p.			0	0	4	5	Hail	Monmouth County	29	Daytime				6			Heavy rain				
			Many scattered areas in Hamilton, Polk, York, Thayer, Seward, Saline, and Cedar Counties. No definite pattern in time or space. Stones mostly 1/2 inch to 3/4 inch diameter gave light damage generally but was locally severe.																The Long Branch station reported a total of 6.50 inches of rain in 9 1/2 hours, with 3.30 inches falling in a 1-hour period. Considerable property damage was done in the vicinity of Long Branch, Spring Lake, and Fort Monmouth.				
15 North Lincoln	12	11:45 a.							Pumel cloud aloft	NEW MEXICO													
10 NW Omaha	12	12:45 p.							Pumel cloud aloft	Eddy County, northern	2	3:00 p.m.	?	?	0	0	0	0	Tornado				
Northeastern Nebraska	14	1:30 p.- 3:40 p.			0	0	0	4	Hail										Small tornado touched ground briefly over open country, no damage.				
			Widely scattered areas in Duming, Thurston, Burt, Washington and Douglas Counties. Hail mostly 1/4 to 1/2 inch diameter. Individual storms of short duration.								Albuquerque	8	p.m.			0	0	5	0	Heavy rain			
Southeastern Nebraska	15	1:00 p.- up to 5:00 p. 10			0	0	4	5	Hail										Heavy rains caused considerable flooding of low lands areas. Heaviest rainfall of record in 90 minute and one hour periods. Several families evacuated, many streets eroded. Two boys drowned in rain filled excavation.				
			Many areas in Jefferson, Gage, Otoe, Nemaha and Richardson Counties. All size stones ranging from pea size to 3 inches in diameter. Ground covered in some areas.								Socorro and vicinity	9	p.m.			0	0	5	4	Heavy rain, wind and hail			
10 miles NE Atkinson	18	6:00 p.			0	0	?	?	Tornado										Flood damage to homes and business buildings. Streets badly eroded. High winds destroyed a light plane at the airport and damaged roofs. Hail damaged crops in surrounding area.				
			Touched ground briefly and reentered clouds. Occurred in connection with a series of large severe hail storms.								Los Alamos	10	3:00 p.m.			0	0	4	0	Hail			
Numerous areas from north-central to southeastern Nebraska	18	5:30 p.- 11:00 p.	250	?	0	0	6	6	Hail and high wind										Heavy hail in eastern section of town. Stones 1 1/2 to 2 inches in diameter.				
			A series of severe hail storms broke out in Holt County at 5:30 p.m. and moved southeast at 40 miles per hour reaching Gage County about 10:30 p.m. and moved on into Kansas. Intensity of the hail varied from place to place and was occasionally accompanied by damaging winds. Hail stones at most places measured from one to two inches in diameter, but many times reached three inches, and at a number of places were described as "soft-ball size" or nearly four inches in diameter. Both flat and jagged, and normal round stones fell. Buildings and automobiles were severely damaged, animals ranging from chickens and pigs to cattle were killed, and at many places crops were a complete loss. Counties reporting the largest losses were Holt, Garfield, Boone, Nemaha, Morrill, York, Seward and Saline. Other Counties reporting damage included Antelope, Platte, Valley, Greeley, Wheeler, Custer, Howard, Hall, Adams, Polk, Lancaster and Gage.								Baton	11	p.m.			0	0	4	0	Hail			
			A series of hail storms in Daves, Box Butte, Sheridan, Keith, Perkins, southwest Lincoln, Hayes, Hitchcock and Red Willow Counties. A few isolated storms early in the morning. Just before noon a series of storms broke out in Keith County and moved rapidly southeastward with local severe damage from there to the Kansas border of Red Willow County. The ground was covered locally by stones 3/4 to 1/2 inches in diameter and in some instances nearly 3 inches. Crop loss was from 50% to 100%, with considerable damage to buildings and automobiles. Between 3:30 p. and 5:00 p. hail fell in scattered areas of Daves, Box Butte and Sheridan Counties ranging from 1" to 3" diameter and locally accumulated to a depth of 2" to 8".								Ribera	12	6:20 p.m.			0	0	3	0	Hail			
			Hail stones up to 2 1/2 inches in diameter damaged cars, roofs and windows.								Lea County, northern	12-14				0	0	0	4	Hail			
			Several hail storms during this period damaged hundreds of acres of cotton, vegetable and feed crops.								Levington	14				0	1	0	0	Lightning			
Panhandle and south-western Nebraska	19	7:00 a.- 1:00 p.	240	* 5-40	0	0	5	6	Hail and damaging winds										Man injured when lightning struck his home.				
			A series of hail storms in Daves, Box Butte, Sheridan, Keith, Perkins, southwest Lincoln, Hayes, Hitchcock and Red Willow Counties. A few isolated storms early in the morning. Just before noon a series of storms broke out in Keith County and moved rapidly southeastward with local severe damage from there to the Kansas border of Red Willow County. The ground was covered locally by stones 3/4 to 1/2 inches in diameter and in some instances nearly 3 inches. Crop loss was from 50% to 100%, with considerable damage to buildings and automobiles. Between 3:30 p. and 5:00 p. hail fell in scattered areas of Daves, Box Butte and Sheridan Counties ranging from 1" to 3" diameter and locally accumulated to a depth of 2" to 8".								NEW YORK												
			Hail stones began in southwestern Custer County in mid afternoon and moved south-southeastward across Dawson, Gosper and north-eastern Furnas Counties by evening. Stones ranged from 1/2 to 3/4 inch, with a few one inch in diameter. Ground was covered to a depth of 3 to 4 inches in storm centers. Complete loss of all crops reported in many areas. Storm was most severe in Gosper County.								Scattered sections, including Glens Falls and Elmira areas	2	late afternoon			1		4	0	6	Severe thunderstorms, wind, heavy rain, hail		
Lebanon	19	Early afternoon							Pumel cloud aloft										Widely scattered severe thunderstorms with damaging winds, heavy brief rains and hail. Most severe in the Glens Falls and Elmira areas. Considerable agricultural and property damage due to wind and hail in the Glens Falls area. Power lines knocked down in Elmira area with one person killed by electrical shock.				
South-central Nebraska	22	3:00 p.- 7:30 p.	75	* 1-6	0	0	4	6	Hail and wind	Niagara Frontier area north of Buffalo	7	4-5 p.m.	8	100	0	0	5	Tornado					
			Hail storms began in southwestern Custer County in mid afternoon and moved south-southeastward across Dawson, Gosper and north-eastern Furnas Counties by evening. Stones ranged from 1/2 to 3/4 inch, with a few one inch in diameter. Ground was covered to a depth of 3 to 4 inches in storm centers. Complete loss of all crops reported in many areas. Storm was most severe in Gosper County.															5	Thunderstorms, severe lightning, heavy rain, wind				
Northeastern Custer and Sherman Counties	22	1:30 p.- 3:00 p.	10	* 3	0	0	0	4	Hail	Scattered areas across the State	14	early morning							Scattered areas across the State, in particular Syracuse, Utica, Little Falls, Rochester, Saratoga and Schenectady received severe thunderstorms accompanied by unusually severe lightning, heavy downpours of rain and strong winds. At least 2 barns were lost to fire caused by lightning; widespread loss of power in many communities, including several hospitals; 34,000 volt line knocked out in Syracuse. Numerous deaths indirectly caused by the storm conditions. Over 3 inches of rain fell in a few hours in some of the storm areas.				
			Considerable damage to crops by 1/4 - 1/2" hail that covered the ground in spots.								Little Falls area	17	12:30 p.m.			0	0	4		Severe thunderstorms, high winds			
Berea Vicinity	26	4:00 p.	4	* 2	0	0	0	4	Hail										Severe thunderstorms with near tornadoic type winds; numerous large trees with resulting property damage throughout the city; widespread damage to porches, homes, etc.				
7 NE of Hebron	31	3:15 p.							Pumel cloud aloft	Niagara Falls area	18	2 p.m.			2	0	3		Thunderstorm				
NEVADA																			Severe electrical storm - 2 golfers killed by lightning while standing under a tree near a golf course during heavy rain.				
NEW HAMPSHIRE																							
Weare	2	About 4 p.	20		0	0	3	-2	Tornado	Long Island, western and central sections	20	during day			0	1	5		Thunderstorms, heavy rains				
			Barn roof destroyed but path was fortunately mostly through woods.																Thunderstorms, heavy rains with amounts up to 3 inches and around 2 inches in one hour. Numerous lightning strikes with at least six private dwellings and a large club house receiving strikes. Extensive flooding to 2 or 3 feet in depth. Traffic tie ups and many basements damaged. One youth struck by lightning that ricocheted off a building; he survived.				
Salem	2	5 p.	5		400	0	1	5	Tornado														
			One injury by flying glass. Damaged trees and buildings in path, toward southeasterly direction.																				
New Boston	21	3:30 p.	2	narrow	0	0	3	0	Tornado														
			Trees and utility lines in path damaged. Some windows broken in nearby buildings. Accompanying hail averaged 1/2 inch in size. Moved toward east.																				

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STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS			
NEW YORK (Cont'd.)										NORTH CAROLINA (Cont'd.)											
Scattered areas across the State	24	afternoon & evening			1	1	5		Thunderstorms, heavy rain, high winds	Halifax County	26	5:30 pm					4	0	Small Tornado		
									Severe thunderstorms with heavy rains, damaging winds and severe lightning damage. At Buffalo one man was killed and one injured by lightning. In Syracuse 12,000 homes were without current; winds up to 54 mph; over one inch of rain in a brief time. A barn was burned in Oneida County; also at Rochester, Mt. Morris and Sheldrake. Plattsburgh had torrential rains and flooding. A barn was burned in Orange County and a home burned at Kyack. In Staten Island nine homes were damaged by lightning.	Masourey store building demolished. Funnel seen.											
Long Island	26				1				Extensive heat and high humidity	Granville, Person Counties	26	Aftn					4	5	Hail		
									A woman died of heat prostration during a period of extensive heat and high humidity which lasted for six days.	Hail damaged tobacco and other crops over 10 sq. mi. area; also several cases of roof damage.											
Chateaugay, Franklin County	29	afternoon					4		Thunderstorms	Wayne County, Seymour Johnson Field	26	5:45 pm			1	0	0	0	Electrical		
									Severe thunderstorms with lightning damage and barns and homes burned.	Air Force Colonel killed by lightning.											
South-central counties	29	early morning					6		Severe thunderstorm, heavy rain	Iredell County, Statesville	27	Late aftn					3	0	Electrical		
									Specifically the Unadilla-Sidney area during the early morning hours from about 4 a.m. to 10 a.m. Torrential downpour of rain from severe thunderstorm. Up to 7 inches of rainfall on U.S. Engineers' gage at East Sidney Dam in 3 hours. Other gages measured 5 to 6 inches. Bucket survey indicated amounts in excess of 7 inches. Severe localized flooding in the small streams and brooks turning the streams into raging torrents. Flood damage was quite extensive to roads, streets, buildings, railroads and farmlands; one or two million dollars at least.	Home set on fire by lightning.											
Syracuse and Rochester areas	30	late afternoon & evening			1	0	5	5	Thunderstorms, damaging winds, lightning and heavy showers	Cumberland County	31	6 pm					0	4	Hail		
									Severe thunderstorms with damaging winds and lightning and heavy showers occurred in the Syracuse-Rochester area. Considerable low level flash flooding, communication and power lines out, trailer homes blown over, some of which were lifted off their foundations. Hundreds of acres of corn and wheat damaged or ruined. Crop losses in the Onondaga Hill - Skaneateles - Camillus area near Syracuse were particularly severe. One death in Rochester area due to lightning strike.	Tobacco, corn and cotton crops damaged over limited area.											
Western Long Island-Staten Island area	31	4-7 p.m.			0	0	5		Thunderstorms, damaging winds, heavy rain	Beaufort, Craven, Duplin, Jones, Pamlico, Pender Counties	---	---					5	6	Rain		
									Torrential rainfall, 4 inches or more in 3 hours, resulted in widespread flooding of streets, homes and highways. Some areas had a rise of water up to 7 feet. Gale winds tore trees and power and communication lines down, subways stopped and highways were blocked by water.	Rain occurring too frequently and in too large amounts during May, June and July has caused dropping of crops and leaching of nutriment from lands over much of these and perhaps portions of adjoining counties.											
NORTH CAROLINA										NORTH DAKOTA											
Anson, Caswell, Granville, Rockingham Counties	3	4 pm					0	5	Hail	Fargo, Cass County	13	4 PM							2 funnel clouds aloft		
									Tobacco crop damaged about 75 percent over considerable areas.	Emmons County	17	4:50 PM							Funnel cloud aloft		
Bertie, Cleveland, Cumberland, Granville, Halifax, Martin, Nash, Rockingham, Sampson Counties	6	2 - 5 pm					4	6	Hail	Divide County, Crosby-Ambrose-Fortuna area	17	Afternoon and eve.	25	*5			3	4	Hail and wind		
									Extensive damage to crops over areas totaling about 60 square miles. Most damage to tobacco. Some scattered roof damage.	Extensive hail damage with only minor property damage. Hail damage would average 75 percent in Fortuna-Colgen area.											
Columbus, Robeson Counties	7	5 pm					4	5	Hail, Electrical	Northern Rowville and Northern Bottineau counties	17	evening	75		0	1	5	4	Hail and wind		
									Tobacco damaged over 30 sq. mi. area. House and barn burned when struck by lightning.	A series of thunderstorms some accompanied by damaging winds and hail in a band along the Canadian line. Most hail damage in the Antler area. Property damage appeared most severe in the Antler-Lorraine-Mohall area. Numerous barns and other structures blown down or damaged. A tree was blown down on a camper at Lake Metigoche. 2 funnel clouds reported at Antler. Winds described locally as "whisters" did most of the damage.											
Durham, Granville, Pender, Wake Counties	12	6 - 7 pm					4	5	Hail	Benson county	17	10 PM	25	*2-3			4	4	Hail and wind		
									Crops damaged over 15 sq. mi. Most of damage to tobacco.	Storm described as one of the worst to ever hit the county. Many crops total loss. Numerous buildings blown down severely.											
Sampson County, 3 mi. south of Clinton	12	1:30 pm			8	1	0	0	Electrical	60 miles SW Fargo	19	1:45 PM							Funnel cloud		
									Nine tobacco workers, aged 13 to 70, struck while taking shelter in tobacco barn from thunderstorm. Lightning apparently struck metal heating system against which victims were leaning. Only one survived. Three other workers under open shelter outside building were unhurt.	Public reported funnel cloud touching ground briefly near Engleville, N. Dak. No damage apparently.											
Buncombe, Burke, Forsyth, Guilford, McDowell, Surry Counties	15	3 - 5 pm					4	4	Hail, Electrical, Wind	Cass county west of Fargo	20	11 AM							Funnel cloud 4 miles north of Mapleton		
									Hail damaged crops, mainly tobacco. Wind and lightning damaged roofs, trees, power and telephone lines. Gusts to 68 miles per hour recorded at Winston-Salem Airport.	60 miles West Fargo	20	2:27 PM							Funnel clouds		
Wilson County	17	2 pm					0	4	Hail	Dickey county, Monang-Ludden area	20	2-3 PM	20	*5			2	4	Hailstorm		
									Tobacco crop severely damaged over 1 sq. mi. area.	3 funnel clouds reported by highway patrol in Barnes county between Valley City and Jamestown moving southeastward.											
Cumberland, Hoke, Pitt Counties	18	Late aftn					5	6	Hail, Wind	Case county, Buffalo-Fillsbury area	20	afternoon	25				2	4	Hailstorm		
									Very destructive hailstorm in Hoke County, stones up to one inch in diameter. Crops over 20 sq. mi. near total destruction. Also widespread light damage to roofs and buildings by wind and hail. Light damage other two counties.	Hail up to 1 inch in diameter. Storm lasted 15 minutes.											
										Stutsman county, Buchanan area	20	afternoon			*3			2	4	Hailstorm	
										2 to 3 ft. drifts of hail reported in ditches. Storm moved north to northeast.											
										5 miles east Jamestown	21	1:14 PM							Funnel cloud		
										12 northwest Jamestown	21	2:14 PM							Funnel cloud		
										10 west Fargo	21	4 PM							Funnel cloud		
										40 NNW Jamestown	22	11:20 AM							Funnel cloud		
										Observed moving southwestward for 3 minutes.											
										45 NNW Jamestown	22	12:03 PM							Funnel cloud		
										Observed by highway patrol moving southwestward.											
										40 N Devils Lake	22	1:25 PM							Tornado		
										Unconfirmed tornado sighted by Harold Feldner northwest of Clyde observed to touch the ground briefly.											
										15 SE Devils Lake	22	3 PM							Funnel cloud		
										Observed moving from southeast to northwest.											

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

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					KILLED	INJURED	PROPERTY	CROPS	
NORTH DAKOTA (Cont'd.)									
20 S Grand Forks	22	5:11 PM							Unconfirmed tornado
Dickey and Lamoure counties	25	4 PM	20		3	5			Hail and wind tornado
					Tornado sighted about 10 miles southeast of Edgeley did no damage. Evidence of tornado winds could be seen where it passed thru a cornfield. Severe hail caused much crop damage over a path up to 20 miles long. Damage to buildings by both hail and winds.				
OHIO									
Darko County	5	Afternoon	15	*3	0	0	3	3	Hail, rain, wind
					Heavy thunderstorm rain, accompanied by hail, crossed southern Darko County early afternoon doing extensive damage to wheat, corn and oak fields, fruit trees, etc. In Fort Jefferson hail of golf-ball size broke a truck windshield and dented car bodies. Other localities suffering damage were Arcanum, Cordoba, Ithaca and Palestine.				
Cambridge	19	Afternoon			4	0	0	0	Lightning
					Four construction workers who had sought shelter from the rain under a tree were killed as lightning struck the tree.				
Sidney	28	8:55 PM	1/2	200	0	22	05	C	Tornado
					A violent, but small-scale tornado first struck in the Stewart subdivision in southwestern edge of Sidney destroying 10 homes and damaging 7 others. It then skipped to the downtown area where further damage to buildings resulted. Among those heavily damaged was the Sidney Machine Tool Co. plant.				
Ansonia	28	8:45 PM	20	200	0	2	05	C	Tornado
					A hit-skip tornado, apparently originating across the Indiana border, first struck Union City at 8:30 PM, then touched ground about 9 miles east in the northern edge of Ansonia. There an occupied house trailer was demolished and the two occupants carried some 250 feet into the fields. Also outbuildings on four farms were destroyed. About 9 PM it touched ground again 8 miles farther east near Versailles. Typical tornado damage was observed in all three places.				
Troy	28	10 PM	Short	Narrow	0	0	4	0	Tornado
					Extensive damage to trees, utility lines and homes resulted when a small tornado suddenly struck near the center of Troy, then as suddenly ended. Whistling and roaring sounds heard by residents identify this storm as a tornado.				
Hilliard	28	11:30 PM	1	500	0	0	0	0	Tornado
					A funnel dipped to ground just west of Hilliard on Scoto-Darby Cr. Road doing major damage to farm buildings, and crops. It then lifted, but apparently touched lightly again about 3 miles east in a housing development along Dublin Road, where one new house was partially unroofed.				
					All four of the above tornadoes were apparently distinct from each other, but occurred as part of the same thunderstorm system which moved eastward during the evening hours.				
Kidorado	31	5:30 PM			0	1	4	3	Thunderstorm wind
					Strong thunderstorm winds caused extensive damage to property and crops in the vicinity of Kidorado. Many trees were uprooted, several houses unroofed and three barns demolished. While this damage resembled that done by small tornadoes, no funnel cloud was observed. High winds heavily damaged corn, wheat and soybean crops over a wider area in northern Probie and southern Darko Counties.				
					Similar though less extensive damage was done by the same storm as it traveled eastward including Kenton, Marion and several other communities.				
OKLAHOMA									
Purdy, Garvin County	2	3:00 p.	3/4	100	0	0	4	?	Tornado, rain
					Tornado partially destroyed farmstead near Purdy. Heavy rain, estimated at 4 inches, fell in 1/2 hour following the tornado. Tornado moved west-southward.				
Blackwell, Kay County	6	6:50 p.			0	1	4	?	Wind, rain, lightning
					Severe thunderstorms with strong winds, estimated up to 90 miles per hour, caused damage to buildings, trees, utilities, etc. over the north-central area of the State. Blackwell was hardest hit by the storm which moved southward. Heavy rain of up to 4 inches fell generally in the area and over 9 inches was reported north of Stroud in Lincoln County. Lightning struck a man and knocked him unconscious in Newkirk.				
Custer, Washita, Beckham, Kiowa and Greer Counties	21	p.m.	?	5*	0	0	?	5	Hail, wind, funnel aloft
					Severe thunderstorm with hail, ranging to the size of golf balls, and strong winds moved south-southwestward from southwest Custer County, east Beckham County, west Washita County, northwest Kiowa County, and northeast Greer County. Also, there were isolated spots east of Hobart in Kiowa County and northwest Jackson County. Some reports indicate 2 feet of hail in ditches and ground covered. Several thousand acres of cotton were destroyed and sorghums were badly damaged. Clinton-Sherman Air Force Base reported funnel aloft to the west at 5:00 p.m.				
OKLAHOMA (Cont'd.)									
Coalgate, Coal County	12	noon			1	0	0	0	Lightning
					Young man was killed by lightning while out in open and a companion was knocked down.				
Kiowa, Pittsburg County	12	p.m.			0	1	0	0	Lightning
					Man was injured when struck by lightning.				
North-central, Central and East Sections	13	p.m.			0	1	4	?	Lightning, hail
					Severe thunderstorms moved across northern and eastern sections of the State. Many lightning strikes were reported and several homes were burned or damaged. A youth was injured in Miami when lightning struck the home. Hail up to one inch in diameter was reported from Enid and west of Relston where some crop damage was noted.				
North-central, Central, Northeast and East-Central Sections	14-15				0	1	5	5	Rain, hail, wind, lightning
					Severe thunderstorms dropped heavy rains over widespread areas of northern and eastern Oklahoma the 14th and early the 15th. Rainfall amounts ranged from 3 to 8 inches. Widespread flash flooding and flooding resulted. Heaviest rain fell in the Muskogee area with Tulsa County also hard hit. Strong winds caused general damage. The worst destruction was a shopping center under construction in Tulsa. Several homes were destroyed or damaged by lightning strikes in the area. Man was injured by lightning while talking on the phone in Prague in Lincoln County. Scattered hail up to one inch in diameter was reported but damage evidently was light.				
Bluejacket, Craig County	16	5:40 p.			0	0	0	0	Two Funnels Aloft
					Two funnels were sighted. The first moved from north of Bluejacket to northeast of Welch and the second, about the same time, was sighted near the Neosho River in extreme northeast part of the County.				
Tulsa, Tulsa County	16	7:00 p.	?	?	0	0	6	0	Hail, wind, rain
					Severe thunderstorms with baseball sized hail, strong winds and heavy rains battered the City of Tulsa. Hail damaged thousands of roofs with heaviest damage in eastern sections of the City. Several hundred autos were either flooded or received hail damage. Strong winds caused general damage to trees and utilities.				
Chouteau, Mayes County	16	7:00 p.	15	5*	0	0	3	?	Funnel aloft, hail
					Funnel aloft was sighted south of Pryor near Chouteau. Hail up to the size of hen eggs fell over a large area south of Locust Grove.				
Tonkawa, Kay County	21	3:12 p.			0	0	0	0	Funnels aloft
					Severe thunderstorm moved eastward south of Tonkawa. Public sighted funnels aloft but number not reported.				
Southwest and Central Sections	21	p.m.	?	?	0	0	?	?	Rain
					Heavy rain of up to 5 inches fell over an extensive section of the area from Mountain View to Shawnee. No general flooding resulted, but there was considerable flash flooding.				
Waller, Pittsburg County	21	8:00 p.			0	0	0	0	Funnel aloft
Fairland, 5 miles East, Ottawa County	22	12:18 p.	?	?	0	0	4	0	Tornado
					Tornado destroyed a boat dock and caused heavy damage to 5 large boats at Port Aspinwall on Grand Lake. Several 300 pound concrete footings were lifted some 35 yards up a hill.				
Garvin, 2 miles east, McCurtain County	23	6:30 a.	1	25	0	0	3	0	Tornado
					Tornado damaged home and tore up trees.				
Guyton, Texas County	31	p.m.			0	0	?	?	Funnel aloft, rain, hail, lightning
					Severe thunderstorms over central and north Texas County caused flooding over the area as unofficially up to 7 inches of rain fell during the afternoon. Funnel aloft was sighted just north of Guyton. Some hail stripped leaves from maize in northern part of the county. Lightning killed 18 head of cattle near Optima.				
OREGON									
Entire State	Most of month				1	Un-known	3	6	Abnormally hot weather
					Hot, dry weather over entire State most of month resulted in near records for prolonged hot spell several stations. This following an abnormally warm, dry June was producing serious irrigation water and soil moisture shortage in central, eastern Oregon. Searing temperatures also cut heavily into yields, quality Umatilla County processing peas, Columbia Basin grains. Caused bean blossoms to wither and fall before fruit set in Willamette Valley. At least one death attributed to heat exhaustion. Hot, dry weather created very serious fire danger in grass and forest lands of State.				

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
OREGON (Cont'd.)										PUEBLO RICO									
Western and Central Oregon	12	Afternoon			0	Unknown	4	4	Thunderstorm	None reported									
<p>Preceding hot weather, low humidities had already created very hazardous conditions in State grass and timber land. Lightning storms with little accompanying precipitation touched off large number forest and grass fires. Fortunately, most of them were controlled before reaching more than a fraction of an acre in size. Three of them, however, burned over several hundred acres each, mostly in grassland. Very little timber was lost.</p>										RHODE ISLAND									
										None reported									
										SOUTH CAROLINA									
										Alcolu, Clarendon County									
										15 6:30 p-6:35 P 1/2 100 0 0 4 0 Tornado									
										Funnel observed. Moved from west to east.									
										Charleston, 35 miles northeast									
										15 9:15 p 0 0 0 0 Funnel cloud									
										Cloud observed by pilot.									
										Rock Hill, York County									
										16 Afternoon 1/10 10 0 0 2 0 Tornado									
										Small funnel observed as it descended. Disappeared rapidly.									
										Prosperity, Newberry County									
										16 5:00 p 0 1 0 0 Lightning									
										Injury in open field.									
										Timmonsville, Darlington County									
										17 Afternoon 2 1 0 0 Lightning									
										Injury and fatalities in open field.									
										Florence, 20 miles northwest									
										17 5:30 p 0 0 0 0 Funnel clouds									
										Pilot reports indicate funnel clouds aloft dropping down to about 500 ft. and then going back up into the cloud base at 2500 ft. m.s.l.									
										Columbia, Richland County									
										18 All afternoon 0 2 3 0 Severe thunderstorm									
										A series of strong thunderstorms caused wind damage, interruption to services. Lightning caused two injuries and hail was reported in some sections of the city.									
										McCull, Marlboro County									
										18 4:00 p-6:00 p 0 0 4 0 Severe thunderstorm and heavy rain									
										Heavy rain of over 4.5 inches fell in two hours. Considerable local flooding. Lightning knocked out equipment and wind blew down trees and limbs.									
										Near Hilton Head Island, Beaufort County									
										21 7:00 a-7:45 a 0 0 0 0 Funnel clouds									
										Six funnel clouds were observed coming down from a bank of clouds about 1.5 miles east of Hilton Head Island. Two reached water, became waterspouts.									
										Kingstree, Williamsburg County									
										26 night 0 1 2 0 Lightning									
										Contents of house damaged. Occupant hospitalized by bolt.									
										Brownsville, Marlboro County									
										28 2:30 p 1 0 0 0 Lightning									
										Fatality occurred to woman hanging clothes near tree in back yard. Bolt struck tree.									
										Kingstree, Williamsburg County									
										31 Afternoon 1 0 0 0 Lightning									
										Bolt struck tree near which the victim was standing.									
										SOUTH DAKOTA									
										Rochford, Pennington County									
										5 p.m. 1 Electrical									
										Man burned seriously on left side and knocked unconscious by lightning bolt.									
										Eastern Half									
										10- pm of 11th to pm of 11th 1 5 4 Hail, rain, wind, electrical									
										A series of thunderstorms in 24-hour period caused various damage to scattered areas from Campbell County in the north central to Bon Homme County in the southeast. Hail caused an estimated 30 to 75 per cent loss of crops near Harrell, Campbell County, and north of Tyndall, Bon Homme County. Heavy rain of over 2 inches in 20 minutes fell at Redfield, Spink County, on the 11th, causing extensive flood damage to business establishments, homes, and streets. High winds with gusts estimated at 90 miles per hour and some hail damaged crops, utility lines, and heating installations at Tankton on the 10th. Man suffered minor injuries when struck by lightning at Tripp, Hutchinson County. Lightning-caused fires destroyed more than 1,000 bales of hay on two separate farms at Frankfort, Spink County.									
										Minnehaha County									
										11 4 p.m. Funnel Cloud									
										Pilot reported funnel cloud about 20 miles northwest of Sioux Falls.									
										Southeast									
										14 p.m. 120 3* 5 5 Hail									
										Hail of up to baseball size caused extensive damage from southwestern Beadle County to Lincoln and Union Counties in the extreme southwest. Heaviest damage to crops and property occurred in adjoining portions of Jerard, Sanborn, and Davison counties. From 75 to 100 per cent loss was sustained by ripening small grains and corn in these counties. Six small aircraft were riddled by hail at the Mitchell Airport, while windows, buildings, and barns were extensively damaged in the northern half of this city. Total loss of corn and grain crops occurred in a narrow belt west and south of Alexandria, Hanson County, with accompanying damage to roofs, windows, and cars. Before passing into northwest Iowa, the hail heavily damaged crops on 50 farms near the Lincoln-Union County lines. Losses of poultry were reported at several points in the affected area.									
										Corry									
										31 11:00 A.M. 1/2 50 4 Tornado									
										The eastward moving storm demolished a barn and several other buildings on a farm near Corry. Farm machinery, an auto, 3 cows and a large quantity of newly-stored hay were destroyed by the storm.									

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS				ESTIMATED DAMAGE	CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS		
TEXAS (Cont'd.)										
Fluvanna Community Scurry County	13	4:30 p-6:00 p	5	#2	0	0	0	4	Rain, wind, hail	Up to 5.3 inches of rain fell in 1 hour and 45 minutes in Scurry County, with the heaviest rains falling in the Fluvanna and Camp Springs communities. The heavy rains were accompanied by high winds and hail which damaged the young cotton crop in the area.
Panhandle Carson County	14	6:30 p-8:00 p	11	#3	0	0	4	4	Hail	Hail up to 1 1/2 inches in diameter, and averaging 3/4 inches, damaged grain sorghums in an area 9 miles south to 5 miles east of Panhandle. Some damage occurred to roofs of homes in the area, from the larger stones.
Lockney Area Floyd County	14	evening	?	?	0	0	0	?	Rain, hail, wind	Rain, hail and wind damaged young cotton crops from 50 to 80 per cent in the Sandhill, Lonestar and Cedar communities. Feed grains were not badly damaged.
Near Parnell Hall County	14	8:00 p-9:00 p	5	?	0	0	?	?	Tornado, hail	One farm home, automobile, truck, and several outbuildings were heavily damaged by the tornado which "bounced" along the ground in a skipping action. Golf ball size hail severely damaged approximately 10,000 acres of crops, with heaviest losses in an area 5 miles long and 3 miles wide surrounding the Lakeview Community. Approximately 5000 acres of crops to the south, southwest, and southeast received about 15% damage. The area of hail damage extended northward into Donley County, north of Hedley.
Hedley Donley County	14	8:00 p-9:00 p	14	?	0	0	?	?	Tornado, hail	Tornado moved through the edge of town, blowing away a part of the roof and siding of the Cotton Compress building. Several residences in Hedley, and in the rural area nearby suffered roof damage. 22 trees were blown down along the highway. Golf-ball-size hail rendered 2000 acres of young cotton a total loss and damaged 20,000 more acres of cotton.
Swisher County	14	night	?	?	0	0	0	?	Hail, rain	Hail and heavy rain severely damaged young cotton in the Hals Center and Kress areas. No permanent damage occurred to feed grains. Damage to cotton ranged from 75 to 100 per cent. "Marble"-size hail fell for about 20 minutes.
Hale County	14	11:45 p-12:15 p	30	#4	0	0	2	4	Hail, rain	Heavy hail severely damaged crops in a 30 mile strip running from northeast to southwest across the county. An area 5 miles south and 3 west of Hale Center was the hardest hit with crop damage up to 100 per cent. Hailstones averaged 1 1/4 inches in diameter, and covered the ground to a depth of 2 inches. Largest stones were 2 inches in diameter. From 1:00 to 1:15 inches of rain, and winds estimated at 60 mph accompanied the storm. Damage was mainly to young cotton.
Hookley County	14-15		16	#4	0	0	0	5	Hail	Small hail destroyed from 3000 to 5000 acres of cotton and grain sorghum in an area northeast of Levelland, and another area south of Sundown. Hailstones averaged 1/2 inches in diameter.
McLean Area Gray County	15	5:40 p-7:20 p	15	#8	0	0	5	4	Hail	Hail averaging 5/8 inches in diameter with largest stones 2 1/4 inches heavily damaged roofs, window screens, and knocked out windows in McLean. Most young cotton in the hail area was a complete loss.
Darrousett Lipscomb County	15	7:05 p	10	#3	0	0	4	?	Hail	Hail up to 2 1/4 inches in diameter fell in an area from about 6 miles southwest of Darrousett to 4 miles northeast. Hailstones averaged 1 1/2 inches in diameter. Little damage occurred to crops since the hail occurred "between seasons."
25 S Marathon Brewster County	15	7:30 p	?	?	0	0	?	0	Flooding	Flash flooding down a normally dry creek bed washed out a highway bridge 25 miles south of Marathon.
Parker County	16	6:00 p-7:00 p	?	?	0	0	0	4	Wind	Strong thunderstorm winds estimated at 50 mph damaged corn and begeri in the area north of Weatherford.
6 N Palacios Matagorda County	19	9:00 a							Funnel aloft	
LaMarque Galveston County	19								Funnel aloft	
Wilbarger County	21	2:00 p-7:00 p	8	#7	0	0	?	?	Heavy rain, flooding	Up to 8.75 inches of rain fell in the area from Oklaunion east to one mile east of Harrold and north from both towns to the Red River. Heaviest rain reported in the area was 5 inches. From 700 to 800 acres of top soil were washed away and more than 1000 acres damaged. About 500 acres of young cotton destroyed and over 1000 acres damaged. Flood water was 7 feet deep over U. S. Highway 287 just west of Harrold and 9 feet deep over a country road through the area. One bridge was washed away and carried 300 yards. Hundreds of terraces were broken and some fences washed down.
TEXAS (Cont'd.)										
Dawson County	21	2:30 p-9:00 p	3	#1	0	0	?	4	Hail, windstorm	Hail wiped out small strips of crops southwest of Lemasa and strong winds caused some damage in several areas. On the Leaky farm, 5 miles southwest of Lemasa, 125 acres of cotton were destroyed and feed grains badly shredded. A large four-wheeled trailer on the Leaky farm was picked up, twisted, and slammed on top of a chicken house. At the Stephen's farm, across the road, a sheep barn was lifted off its foundation. Winds were estimated at 50 mph. A total of about 1500 acres suffered severe crop damage from the hail.
25 N Adilene Jones County	21	5:24 p							Funnel aloft	
Wichita Falls Wichita County	21	5:59 p-6:02 p	short narrow	0	0	2	0	0	Tornado	A small tornado touched ground briefly in the eastern part of Wichita Falls, about 3 miles southeast of the airport. The storm damaged outbuildings, chicken coops, and did minor damage to roofs. The tornado moved toward the east, and a column of dust extended from the ground to the cloud. The tornado was associated with a line of thunderstorms that produced very heavy rains in the Wichita Falls area.
E Nine Mile Mountain Nolan County	21	night							Funnel aloft	
3 N Odessa Ector County and Midland County	21	?	short narrow	0	0	?	0	0	Tornado, wind, heavy rain	A small tornado touched ground briefly 3 miles north of Odessa and tore a roof off an outbuilding and knocked down several power line poles. In both Midland and Odessa, winds measured at 50 mph, uprooted trees and blew out windows in all sections of the cities. 4.02 inches of rain fell at Midland, flooding a number of homes in West Midland with up to 3 feet of water. Lightning set fire to an oil storage tank in the Magnolia tank farm just east of Midland.
San Antonio Bexar County	22-23	night	?	?	1	0	?	?	Rain, flooding	A 16-year-old boy drowned when swept away into San Pedro Creek at Houston Street in downtown San Antonio by flood waters resulting from 5.12 inches of rain the night of the 22nd. A 35-year-old man was also swept into the creek at the same time but was rescued. The flash flooding sent water into some downtown stores and the San Antonio public library and washed one city bus from the road in the 1100 block of Ruiz. 3.90 inches fell at the Weather Bureau. Up to 1.80 inches of rain fell in the city on the night of the 23rd. One bridge was washed away. Strong winds accompanied both storms, with hundreds of trees reported blown down in the Derringer Heights section. In the west section of San Antonio, flooding occurred along Alazan and Apache Creeks.
1/2 SE Lufkin Angelina County	24	12:20 p	short narrow	0	0	3	0	0	Tornado	Small tornado touched ground on U. S. Highway 60, 1/2 mile south of Lufkin, demolishing one automobile and a three-car garage.
15 NE Conroe San Jacinto County	26	5:03 p							Funnel aloft	
10 S. Navasota Grimes County	31	?			1	0	?	0	Lightning	Lightning struck and killed a woman while she was hanging up laundry on a clothesline in her backyard. Lightning from the same storm set fire to a home in Navasota, destroying 2 rooms.
UTAH										
None reported										
VERMONT										
Southern	2	Midday			0	0	4	3	Lightning, wind	Thunderstorms hit several areas severely. Two barns were struck by lightning and burned near Manchester and wind flattened crops in scattered areas.
Berlington	3	11:35 a.			0	0	0	4	Hail	Hail up to 1" in diameter severely damaged apple crop.
Barre	10	3 p.			0	0	3	4	Hail, rain, lightning	Heavy hail damage to apples and gardens in relatively small area by stones up to 3/4 inch size. Hail covered ground so some walks had to be shoveled. Flooding rain damaged storehouse and other basements and lightning caused minor power failures.
St. Albans	18	5:30 p.	short narrow	0	0	3	2	0	Tornado	Barn roof damaged. New mown hay swirled into the air.
Norton	21				1	4	0	0	Lightning	One man killed and four others burned by lightning.
Poultney	21	1 p.	very narrow		0	0	3	2	Tornado	Circular motion shown by damage path through cornfields. Path of damage across one building was only one yard wide. Windstorm damage to trees locally elsewhere in State, particularly at Richford and in White River Valley from Bethel to Norwich. Some reports of large hail.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JULY 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
VERMONT (Cont'd.)									
Northern and central	24	Afternoon			1	0	4	2	Lightning, rain Man killed in Colchester by lightning. Some livestock was killed in Westmore, and farm buildings were burned near Irasburg. Torrential rains in Orleans Co. caused washing and flooding damage and was reported as the worst flood locally since 1927. Cottages were flooded and roads were washed out. Some damages in other northern counties. 4.85 inches rain fell at Reading Hill, with 4 inches in 2 hours.
Weston	29	Afternoon			0	2	0	0	Lightning Two suffered burns from lightning strike.
Sutton	29	3:30 p.			0	0	4	0	Lightning Barn destroyed by fire from lightning.
U.S. VIRGIN ISLANDS			None reported						
VIRGINIA									
Northern Albemarle County	2	2:00 p.	?	?	0	2	2	?	Tornado A small tornado blew down trees, unroofed a house and overturned a house trailer, causing two minor injuries.
Staunton, Augusta County	2	4:00 to 6:00 p.			0	0	*4	C	Thunderstorm, hail, wind and heavy rain Lightning struck a furniture factory, starting a fire which resulted in \$15,000 to \$20,000 damage. Hail damaged a number of gardens and heavy rains caused minor flooding in low areas. Several trees were blown down.
Lovington, Nelson County	5	8:00 p.			0	0	?	?	Thunderstorm, hail and wind. Thunderstorm with hail lasted thirty minutes. Large trees were blown down, one crushing the rear of a two-story hotel.
Western Lunenburg County	6	?			0	0	0	5	Heavy rain, hail and wind Heavy rain, hail and winds destroyed about 75 acres of tobacco crops, causing approximately \$80,000 damage. Corn and garden crops also suffered considerable damage.
Northern Frederick County	13	4:00 p.	?	?	0	1	3	3	Possible tornado A man was cut by a flying board in a windstorm classified by residents as a tornado. It unroofed a shed, carried farm machines thru the air, smashed an automobile and flattened crops, causing in all about \$3000 damage.
35 miles southeast of Roanoke (in Franklin County)	13	2:50 p.			0	0	0	0	Funnel cloud Pilot reported funnel cloud moving southeastward, but no damage was reported in the area.
South and southeast of Roanoke, Roanoke County	15	5:45 p.			0	0	0	0	Funnel cloud A funnel cloud was observed south of Roanoke by off-duty Weather Bureau personnel. No damage was reported. Moved off eastward until obscured by mountains.
Hampton, Hampton County	17	Late afternoon			0	2	?	?	Thunderstorm, heavy rain and wind Flying glass from a windstorm injured one man, and another man was critically injured when his motor scooter skidded on a wet road and struck a truck following heavy rains. Four other motor accidents resulted from the rains. Lightning set fire to a home and struck several utility poles.
Danville Airport, Pittsylvania County	22	2:20 p.			0	0	?	0	High winds, hail and thunderstorm Five automobiles and one aircraft were damaged by strong winds which reached gusts of 60 knots. A carport roof caved in, crushing one of the cars. Hail of undetermined size caused little damage, apparently.
Buchanan, Dickenson and Tazewell Counties	31	4:00 a.			3	0	*6	C	Heavy rainstorm Torrential rains caused flash flooding in the Bartlick, Prater, Paint and Lick Creeks, causing in the neighborhood of a million dollars damage to homes, business establishments, highways and bridges. Two teenage boys and their father were electrocuted by a downed power line in Bartlick Creek. 250 families had to abandon their homes during the floods. Haysi and Bartlick were most heavily hit by the floodwaters. Upward of 20 bridges were demolished and some sections of highway were completely washed away.
WASHINGTON			No report received by printing deadline.						

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
WEST VIRGINIA									
Mineral Wells, Wood Co.	14	11 AM						3	Thunderstorm with severe lightning Twelve (12) head of registered cattle killed.
Charleston	19	8 PM - midnight					22	U	Flash flood Five inches of rain in 3-1/2 hours did property damage listed partially as follows resulting in its being designated as a national disaster area: 138 homes destroyed, 274 with major damage, another 1100 with minor damage and much damage to streets, hillsides, sewers; main basement water including the State Capitol and State Office Building.
WISCONSIN									
Near Medford	12	7:00 pm						1	Lightning Minor burns and shock.
Burlington	15	5:45 pm							Hail 3/4 inch diameter
Viroqua	15	3-4 pm	10	1000				5	Hail Path from 2 miles SW of Viroqua to near Roadstown. Hail mostly small, although some golf ball size, covered ground 2 to 3 inches in spots. Partial to total loss of crops.
WYOMING									
Casper and vicinity	6	6:00 p.			0	0	0	5	C Heavy rains High intensity rainshowers caused considerable flash flooding in Casper and vicinity with numerous houses, cars and streets damaged. Some crop land damaged.
Cody area	6	Evening			0	0	0	4	C Heavy rains High intensity rainshowers caused flashflooding in an area 5 to 15 miles southwest of Cody with most of the damage to roads, crops and farm land.
Greybull and vicinity	6	Afternoon			0	0	0	4	C Heavy rains and hail High intensity rainshowers with some 1 to 1 1/2 inch hail caused flashflooding in the Greybull area. Damage was to homes, streets, crops and farm land.
Lagrange	11	1:10 p.							2 funnels aloft Two funnels reported by Scottabluuff, Nebr. radar.
Lusk 19 N	17	11:45 a.			0	2	3	0	Strong winds Strong winds caused an automobile accident with two occupants injured.
Sundance 8 S	17	4:30 p.	?	?	0	0	0	0	Tornado A small tornado moved from west to east across a ranch destroying a shed and ripping telephone lines from poles.
Torrington and vicinity	30	Afternoon			0	0	0	4	C Heavy rains and hail. High intensity rainshowers with some 1 to 1 1/2 inch hail caused flashflooding with damage to homes, streets, crops and farm land.

° Includes crop damage.
C Crop damage.
* Miles instead of yards.

† 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.

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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