

U. S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

STORM DATA

SEPTEMBER 1961

Volume 3 No. 9



ASHEVILLE: 1961

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 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										
Alabama Port, Mobile County	10	2:55	1/2	Narrow	0	0	3	0	Waterspout	
	Waterspout moved inland from bay damaged two houses and a store. Moved northwesterly after moving inland.									
ALASKA										
				None reported						
ARIZONA										
Phoenix, Scottsdale and Paradise Valley	8	1:30 p.	20		0	2	5	0	Severe thunderstorm with possible tornado	
	The damage reports suggest a path for the storm, beginning in South Phoenix and following a northeasterly direction across town to Scottsdale and Paradise Valley. Points of heaviest reported damage were (1) 7th Avenue and Southern Avenue, (2) 7th Street and Broadway, where a witness reported sighting a funnel cloud reaching the ground, (3) 18th Street and Washington, several large buildings damaged, (4) Camelback High School, building unroofed and 2 students injured, (5) Scottsdale, a number of homes badly damaged, and (6) Paradise Valley, a few homes damaged. Total damage about \$50,000, nearly all due to wind.									
ARKANSAS										
Blanchard Springs, Union County	12	1:55 p.	7	7	0	0	4	0	Tornado	
	The storm moved northwestward across the Blanchard Springs Community, on the Arkansas-Louisiana Line, about four miles to the east of Junction City in Union County. One home was destroyed and several houses and other buildings damaged in Arkansas. Some damage was reported on the Louisiana side of the State Line.									
CALIFORNIA										
Northern California	2-3				0	0	5	4	Wind	
	Strong, gusty northerly winds damaged crops, downed utility lines, broke windows, destroyed sign boards, wrecked parked aircraft, and caused major damage to incomplete construction projects.									
COLORADO										
Western Slope and Mountain areas	2-5				0	0	5	5	Snow	
	The first snow of the season began as a thunderstorm and rain in the afternoon of the 2nd and changed to snow during the night. Snow fell generally over the Western Slope except at lower elevations, in mountain areas and in areas just east of the mountains. Snowfall varied from 2 to 3 feet at high elevations to 4 to 5 inches at lower elevations. Many people who went to the mountains for the Labor Day week and were trapped at camp sites, a few until the 5th. Many mountain highways were closed at times or were hazardous for cars not prepared for heavy snow conditions. There were no deaths or serious injuries, although many campers and fishermen suffered frostbite from overnight exposure. Heavy wet snow damaged power and communication lines extensively. Hay, beans, potatoes and other crops were extensively damaged by heavy snow or freezing temperatures that followed the storm in many areas. Many cattle and sheep that were still on summer range at higher elevations were stranded until rescued. Around 8000 sheep were stranded on the Sleepy Cat Mountain Range north of Meeker until rescuers managed to reach them on the 6th, after breaking through 4 and 5 foot drifts. There was considerable damage to mountain aspen trees still in full leaf. This storm broke records for snow and low temperatures so early in the Autumn at many points.									
Lake County	26	3:20PM			0	0			Funnel cloud	
	A pilot reported a funnel cloud, possibly touching ground, on the east side of the Arkansas Valley, south-southeast of Leadville. The funnel receded into a cloud. The cloud was moving north-north east.									
Northern Mountains and northwest areas	20-24				0	0	4	5	Heavy snow	
	The second heavy snow of the month in the northern mountain areas, continuing for several days, resulted in the heaviest September snowfall of record. More than 50 inches of snow fell in the Yampa Valley. Climax reported 50 inches of snowfall, Steamboat Springs and Grand Lake 18", Walden 16" and many other locations had similar or greater totals. Up to 5 feet of snow was reported in the higher ranges. Electric power lines were heavily damaged in some areas and many areas were isolated. Ranchers and farmers suffered losses to livestock, hay and unharvested grain. Hail and rain that preceded the storm, did some damage to fruit and vegetable crops in western Delta County. The continued wet weather damaged the bead crop in southwest Colorado. Precipitation totals exceeded previous records for September in many areas.									
CONNECTICUT										
Statewide	2	2:00p to 10:00p			0	1	5	4	Thunderstorms	
	Unusually violent lightning accompanied statewide thunderstorms with numerous strikes especially in Hartford and New Haven Counties as well as eastern sections of Windham and New London Counties. Power outages occurred in Danbury, Farmington, East Hartford, Hartford, Manchester, Middletown, Mystic, New Britain, Newington, Poquonock, Putnam, Wilson and Windsor. Lightning strike injured youth in Windsor. Fourteen valuable cattle killed in Pomfret. Heavy rain and wind caused to damage tobacco and shade tenting in Poquonock. 3/4 inch hail fell in Windsor and torrential rains caused washouts in West Haven.									
Goshen, Litchfield County	3	PM			0	1	0	0	Lightning	
	Lightning strike injured boy in Goshen.									
Statewide	20-21	8p to 20th to 11p			0	0	4	5	Hurricane Esther	
	Hurricane Esther gave 1 1/2 - 3 inches of rain to Connecticut except 4 inches in the Northeast and up to almost 8 inches in the South-east but stream flooding was absent. Top winds of 35-50 mph with gusts of 45 to 65 mph caused some power and phone interruptions and scattered property damage. The hurricane reached a point about 75 miles southeast of Stonington about noon September 21 before it weakened and moved eastward. Fishes averaged only 4 feet above normal and damage was confined to usually susceptible places. Greatest but spotty damage suffered by crops and especially by apples and corn.									
DELAWARE										
									None reported	
FLORIDA										
Daytona Beach Volusia Co.	3	Unk.							Waterspout	
Key West Monroe Co.	4	1:20 p.							Waterspout	
Boca Raton Palm Beach Co.	4	a.m.							Waterspout	
Pt. Lauderdale Broward Co.	6	8:00 a.							Funnel Cloud	
Miami Dade Co.	13	3:00 p.							Waterspout	
New Smyrna Beach Volusia Co.	14	6:10 p.							Waterspout	
Vanderbilt Beach Collier Co.	15	4:22 p.							Waterspout	
Stuart Martin Co.	15	12:45 p.			0	0	3	0	Wind	
	Strong gusty winds struck Stuart Airport, damaged hangar, demolished one small aircraft and damaged 2 other small aircraft. Damage confined to a small area.									
Daytona Beach Volusia Co.	16	4:50 p.							Waterspout	
Key West Monroe Co.	16	11:50 a.							Waterspout	
Key West Monroe Co.	17	7:40 a.							Funnel Cloud	
Naples Collier Co.	17	Unk.							Waterspout	
Boca Raton Palm Beach Co.	27	9:13 a.							Funnel Cloud	
Key West Monroe Co.	27	Noon							Funnel Cloud	
GEORGIA										
Macon, 15 miles SE Savannah, Chatham County	13	6:00 p.	Short	Narrow	0	0	4	0	Tornado	
	A small tornado moving over parts of Savannah apparently reached the ground in only one area where it blew the roof from a lumber company building. Several witnesses reported seeing the funnel cloud.									
HAWAII										
Honolulu	26	1735-1752p. 1820-1827p.			0	0	0		Water Spouts	
	Two water spouts observed about 8 miles SE of Honolulu International airport. Funnel outlines were pronounced and sea was splashing and rising at base. No movement of either spout observed.									

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS	
IDAHO									
Jerome County, Paul area	1	4:00 p.				3	3		Strong winds and rain
	Frontal weather moved from west to east through the Snake River Basin of Southern Idaho doing considerable damage of a minor nature. A building valued at \$4,000.00 was demolished at Paul.								
Twin Falls County, Clover-Filer area	11	3:00 p.				3	3		Wind
	Strong winds uprooted trees, destroyed barn and damaged utility poles. Frontal weather moved from west across southern Idaho leaving minor damage from rain and wind as far northeast as Shelley.								
Bingham County, Blackfoot area	16	6:00 p.				3	3		Hail and lightning
	Three cows killed by lightning. Brief flooding of fields.								
ILLINOIS									
Sterling	1	8-9p	short	100	0	0	4	3	Tornado
	Moved from just southwest of Sterling to northeast part of city. Damage to two homes, numerous outbuildings and made definitely visible path through cornfield.								
Northern	1-2	night			0	0	5	3	Lightning, hail
	Squall line struck northwestern Illinois about 8p and wind of 8p of 1st and moved eastward across northern third of state during night. Lightning caused major damage with 2 barns and contents completely destroyed (one near Wauconda and one near Elgin), 13 cows killed at one stroke while under trees northeast of Rockford and numerous other strikes with lesser damage. Hail at several points including golf ball size in Pekin and Bloomington areas.								
Chicago	12	2:38p							Funnel aloft
	Funnel aloft sighted by several people 8 NW of Midway Airport								
Chicago	12	afternoon			0	2	?	?	Lightning
	1 youth hospitalized and another treated and released after lightning struck while they were standing together under a tree.								
Chicago	14	day			1	1	?	?	Wind
	Wind blew helicopter tail into two mechanics at Midway Airport killing one and injuring another.								
Northern half	13-14				0	0	?	?	Local flooding
	Local flooding from 3 day rain (last 2 Carla influence) caused heavy damage to property and crops; especially in northwest, west central and northeast. Streets and basements flooded, bridge approaches and some small bridges washed out.								
Manhattan	22	4p	2	800	0	0	4	4	Tornado and hail
	Several families saw funnel in Will County. Started northeast corner of Manhattan and moved directly east. Path of damage was about 1 mile wide and 5 miles long but much of this was hail damage to crops and tornado path judged narrower.								
Mokena	23	1a	short	?	0	0	0	0	Funnel cloud
	Only damage was short path of tree tops "snapped off" in area in Will County where funnel had been sighted during night.								
Marissa	24	3-4p	5	?	0	1	4	4	Tornado and hail
	Two funnels sighted. Extensive damage to cabins and boats in Marissa recreational area (2 1/2 miles east of Marissa). Moved northeast from that point for about 5 miles. Hail, some golf ball size, from this storm and a second about 3 hours later, did most of crop damage.								
Grafton	24	5p	short	?	1	0	3	4	Tornado and hail
	Tornado sighted 3 miles west of Grafton. Woman drowned when trapped under cabin cruiser which was capsized. Hail accompanying storm did considerable crop damage.								
Effingham	24	1p	1/4	50	0	0	3	0	Tornado
	Characteristic roar reported and while damage not extensive a definite path was left from northwest to southeast.								
Northeastern and East Central	22-24				0	0	5	6	Hail, wind and local flooding
	A series of squall lines moved across Illinois during the three day period. Extensive crop damage in much of northern two thirds of state but especially high in northeastern and east central. Hail did greatest damage (20 counties) although wind and local flooding were also factors.								
Jasper and Cumberland Counties	24	2-3p	12	800-1200	0	0	4	5	Hail
	Greatest damage in northern Jasper County from 5 miles west of Hidalgo east to Yale. Marble to golf ball size hail accumulated to 1 foot deep on the level to 2 1/2 feet against buildings in some places.								
Leland	30	12:30p	5	narrow	0	0	4	3	Tornado
	Sighted just southwest of Leland and moved northeast destroying several farm buildings and damaging equipment and stored grain. Some livestock in buildings killed and injured.								
Batavia	30	1-2p	1 1/2	narrow	0	0	4	3	Tornado
	First hit 2 miles east of Batavia, damaged some farm homes, destroyed or damaged several farm buildings with some livestock killed in barns.								
Harval	30	1:45p	short	150	0	0	4	3	Tornado
	Destroyed several farm buildings and cut path through cornfield.								
ILLINOIS (Cont'd)									
Pontiac	30	1:55p	1/4	narrow	0	0	3	0	Tornado
	Was seen to touch briefly with damage confined largely to trees, utility pole and TV antennas.								
INDIANA									
Elwood	6	1 p.			0	0	0	0	Funnel cloud
	Police observed the cloud two miles southwest of Elwood.								
Indianapolis	6	2 p.			0	1	1	0	Lightning
Batesville	6	4 p.			0	0	0	0	Funnel clouds (3)
Delaware and Randolph Counties	24	4 to 6 p.	45	*3	0	1	5	5	Tornado, hail
	Tornado first touched ground at Daleville, passed through Progress, Cowan, New Burlington, and the outskirts of Parker and Farmland to Union City. Near Daleville a five acre swath was cut through trees. In Progress a house was "blown away" and a garage was scattered over a city block. Near Cowan the roofs of two barns were stripped, the city streets were strewn with tree limbs and a 40-foot house trailer was tossed 25 feet. A child was injured when a tree fell on a car. In 50 sections of southern Delaware County hail destroyed 50% of the soybeans and comstock, and 20 to 30% of the corn. Crop damage was estimated at \$250,000.								
IOWA									
2 NW of Dumont	1	6:00 p	28	25		7	6	5	Tornado
	Losses over \$1,000,000. Moved ENE ending in NW Bremer County.								
Moulton	1	6:00 p	1	30			5	4	Tornado
Sumner	1	7:25 p							Funnel
Calhoun & Webster Counties	2	7:00 p					5	4	Windstorm
	Damage heavy in Fort Dodge.								
Rolfe	2	Night				1			Heavy rain and wind
	Heavy rain and wind obscured vision of autoist who drove off a boat ramp and was drowned.								
Cresco	2	10:30 p	1	40			4	3	Tornado
1 S Walnut	6	8:30 p							Hail
	Ground covered.								
Craig	10	6:00 p				2			Lightning
	Two knocked unconscious when lightning struck a nearby tree.								
Dubuque	29	6:00 p.				1			Lightning
	Minor injury.								
5 NNE Nevada	29	10:30 p					4		Lightning
West Union	29	10:30 p				2			Lightning
	Several persons at a football game stunned by lightning of which 2 required doctor's care.								
KANSAS									
Eastern Half of Kansas	3	1:00am-11:00am				1	4		Electrical
	Severe thunderstorm conditions over much of the eastern part of the state resulted in numerous lightning strikes, especially in the northern counties and in the southeast. Buildings were damaged as follows: in Hiawatha at 1:16am, Leavenworth 4:30am, 3 homes in Fort Scott in early morning, one house in Coffeyville and poles, lines, and fuses were damaged at 32 places in town, near Fredonia a man was injured when lightning struck nearby where he was telephoning about 8:30am, and at 11:00am a farm house near Minneapolis was struck and burned with a loss of \$15,000.								
Eastern Counties of Kansas	13	Midnight to 9:00am				5			Heavy rain and wind
	Heavy rains and strong winds accompanying the passage of Hurricane Carla resulted in severe crop losses over much of the area east of a line from Chautauque County to Shawnee County and south of the Kansas River. The flash flooding from a fall of 4 to 7 inches of rain in 6 hours damaged crops on low ground. The high and persistent winds of 35 to 50 mph flattened upland crops on the soggy soil. Many highways were covered by stretches of water and impassable. A family of 4 were drowned when their car was swept from the road by surface floodwaters a short distance north of Haverly. A man was also drowned near Fort Scott when his car was swept into a tributary of the Marmaton River.								
Thomas County	20	Probably between 10:00am-11:00am				1			Electrical
	A man was fatally injured when struck by lightning while operating a tractor near Colby.								

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KANSAS (Cont'd.)									
Central and North Central Counties	29	4:00pm-10:00pm							Wind, electrical, hail and sleet
									Local crop and property damage resulted from thunderstorms. Hail up to 1/2 inch in size fell twice at Beloitville. Similar hail was reported at Beloit, Concordia, and Russell. Wind caused window breakage in days. Lightning destroyed a stack of baled hay near Russell. About 10:00pm a brief sleet storm hit the Lovewell Dam area.
Shawnee County	29	11:00pm			1				Wind
									A man was struck and killed by an automobile when a strong gust of wind blew him into the path of the car as he walked along the roadside of Highway 47D west of Topeka.
KENTUCKY									
									None reported
LOUISIANA									
									No report received by printing deadline.
MAINE									
Skowhegan	4	About 5:10 p.m.	1/4	Narrow	0	0	5	0	Tornado
									Tornado ripped 250 foot roof off grandstand at fair grounds and carried it 100 yards through the air. Roof crashed against 2 homes, destroying one and severely damaging the other. Trees in vicinity of grandstand were uprooted. Downed power and phone lines cut these services in several sections of the town. Several automobiles were damaged by falling trees. Damage was confined to a small area in the northwestern section of Skowhegan.
East Coast	15	Morning			0	1	4	0	Tornado, waterspout, wind
									This was a fast-moving small tropical storm that lashed the Machias area with winds up to 70 mph or higher. The storm apparently contained several tornado cells, and several funnel clouds were reportedly observed. At Beale, a waterspout was observed on the east side of the Beale Bridge and presumably moved onshore as a tornado which lifted a new 26 x 52 ft. boatshop and deposited it 15 ft. away. In other parts of Machias and surrounding areas, wind caused considerable damage to power and communication lines. Roads were clogged with felled trees and limbs and at least 2 houses were damaged when struck by falling trees. One man was hit and injured by a wind-blown plank.
South-Central and Northeast	25-26				0	0	5	0	Rain
									Hurricane Esther's energy was largely spent over the North Atlantic when it reached the Maine coast near Brunswick. Moving north-northeastward, it crossed that state, exiting through northeastern Aroostook County. Attendant winds were only of moderate velocity but rainfall yields of 2 to more than 4 inches over a 20 to 50 mile wide path marked its progress through the state. This resulted in widespread local flooding of cellars, low roads, and underpasses. Some washouts on secondary roads were reported and traffic was delayed by detours.
MARYLAND									
Charles County, 2 miles west of Waldorf	3	afternoon 2-3	?		0	0	?	4	Hailstorm
									A violent hailstorm accompanied by strong winds and torrential rains caused heavy damage to tobacco crops west of U.S. Highway 301 between Waldorf and Matthewsman. On one farm 15 acres of tobacco was completely destroyed. Another 65-70 acres were seriously damaged.
MASSACHUSETTS									
Franklin, Hampshire, Hampden Counties	4	Mid-afternoon			0	0	4	0	Electrical, wind
									Widespread thunderstorms concentrated over western portions of these counties. A number of buildings were struck by lightning, starting fires in some. Damage was of a minor nature in most instances. Wind felled trees downed power and phone lines in some communities. Some TV antennas were also blown down.
Southeastern and coastal areas	15	Early morning			0	0	5	4	Wind
									This was a small but violent tropical storm. Southeastern sections took the brunt of it. Winds gusting up to hurricane force caused widespread heavy damage in felled trees and power and phone lines, broken display windows, downed TV antennae and damaged small craft. At Westport, the roof of a small seaplane hangar was ripped off by a gust of wind. Many roads were clogged with fallen limbs. In Attleboro, radio station WARA was knocked off the air for 2 hours. Apple orchards and vegetable farms were hit by the storm. Apples were about 2 weeks short of full maturity. Late corn lay prostrate in many fields in the storm's wake.
Eastern and South-eastern Sections	21	Morning to evening			0	0	5	5	Hurricane Esther
									Storm stalled and intensity weakened swiftly when center was about 50 miles south-southeast of Block Island, R. I. Storm then moved slowly eastward and southeastward south of Nantucket following a clockwise arc that eventually was to trace a looped track crossing the original one a short distance southeast of Nantucket on the 25th. During the early morning winds increased to near hurricane velocity along exposed areas of the outer Cape and off-shore islands. Chatham reported the highest gust of 70 mph. These areas took the diminishing brunt of the storm. Elsewhere along the coast and in the southeast winds were between 50 and 65 mph. Other parts of the affected area experienced speeds of 40 to 50 mph. As a result of the storm's sudden weakening and turn to the
MASSACHUSETTS (Cont'd.)									
Coastal (north of Cape Cod)	25-26	Daylong 25th to early a. 26th			0	0	6	0	Rain
									east, this area was spared the much greater damage that was earlier anticipated. Though wind force was maintained at gale or near gale speed during much of the day, peak velocities came generally after the time of high tide. This was another mitigating aspect of the storm. Most of the storm damage was of a minor nature, consisting of downed trees and broken limbs tangling with power lines, and flooding of cellars, low roads, and underpasses. Many communities lost power and phone services for brief periods. Locally, further damage resulted from downed TV antennae and broken display windows. Rainfall yields of 5 to more than 6 inches were recorded over the area extending from just southwest of Boston to the Rhode Island line. Other sections of eastern Mass., except the Cape area, received from 3 to 5 inches. Cape Cod and the off-shore islands reported yields of 1 to 3 inches. At Nantucket Island, a causeway road to Smith Point was washed out, isolating that section as an island.
MICHIGAN									
Southern Lower	2	Early morning						4	Electrical
									Lightning induced fires destroyed several large farm barns with contents plus damaged a few homes.
Traverse City	13	3:12 p.m.	15	(?)	0	0	4	c*	Tornado
									Tornado with black rotating funnel cloud observed 3 miles east of Traverse City along Highway 72. Witnesses reported hearing very loud roaring noise. Funnel cloud touched down to ground every 2 to 4 miles. Numerous trees including cherry trees were uprooted. Several houses were damaged.
Lower Peninsula	13-14	7p., 13th 7a., 14th						5	c* Heavy rains and high winds
									Excessive rains caused by Hurricane Carla with amounts up to 8 inches were reported for the 12 hour period ending at 7 A.M. Flooding caused heavy damage to highways, streets and basements. City owned dam at Traverse City was washed out. Area west of line from Cheboygan to Grand Rapids received the heaviest rain amounts.
Grand Haven	14	6:00 p.m.						1	High winds
									Eighteen year old youth drowned when washed off pier into Lake Michigan by 10 to 12 foot waves.
Marne	22	5:20 p.m.	15	1-1 1/2 miles				1 4	Tornado
									Funnel shape cloud witnessed by many people and several reported hearing flying debris from the tornado which struck north of Marne and traveled to 5 or 6 miles southwest of Sparta at Peach Ridge. The general location of the area is 12 miles northwest to 12 miles north of Grand Rapids. House trailer and a home were completely destroyed. Several buildings and a barn were also damaged. Young boy was injured by flying glass.
Ottawa and Kent Counties	22	4:00 p.m. 7:00 p.m.						4 6	Thunderstorms w with hail, high winds and heavy rains
									Hail ranging in size from walnuts to 2 inch diameter accompanied by high winds pelted and cut orchard fruit crops resulting in almost complete loss of the fruit crops. High winds also damaged buildings, homes and felled trees.
Petoskey	22	Evening						4	Heavy rains
									Flooding caused heavy damage to highways, streets and basements.

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MICHIGAN (Cont'd.)									
Southern Lower	24	3:00 p. 6:00 P.			1	5	C*		Thunderstorms with high winds, heavy rains and lightning
			Lightning induced fire and high winds destroyed lumber yard at Monroe. High winds with gusts to 67 MPH damaged a hanger, 3 aircraft and numerous cars at Detroit Metropolitan Airport. Numerous TV antennas were blown down plus building damaged caused by flying debris was reported throughout the area. Heavy rains with amounts up to 3 inches reported caused serious flood damage to roads, streets, buildings and basements. One person in the Detroit area was hurt by flying glass. Numerous power lines were severed disrupting service to hundreds of homes in the area.						
Benton Harbor	25	1:55 P.							Funnel aloft
			Civil Air Patrol reported funnel aloft 12 miles south southwest of Benton Harbor.						
Southern Lower	25	2:00 p. 9:00 p.				4	5		Thunderstorms with heavy rains high winds and lightning
			Several lightning induced fires caused serious damage to farm barns with contents and homes. High winds felled numerous trees, and TV antennas with resultant damage to homes and buildings. Heavy damage due to flooded roads, streets and basements was reported. High winds in the vicinity of Michigan City beached and damaged numerous small boats. Power service to numerous homes in the area was disrupted due to severed power lines. Tomato crop damaged by heavy rain.						
Southern and Central Lower	30	4:00 p. 8:00 p.				4	C*		Thunderstorms with high winds, heavy rains and lightning
			High winds felled numerous trees with resultant damage to homes, buildings and cars. Numerous power lines were severed due to lightning and high winds which disrupted service to hundreds of homes. Several lightning induced fires damaged homes and buildings.						
MINNESOTA									
Baudette, Lake of the Woods County	1	5:15 p.	16	25	0	1	4	0	Tornado
			Tornado funnel first sighted northwest of Bracton caused minor damage in Bracton. Traveling east southeast it touched down in Baudette where one house was unroofed, garages damaged, trees and TV antennas downed and docked boats smashed. One man was injured when blown from a tractor.						
Thief River Falls, Pennington County	24	9:00 p.			0	0	0	3	Hail
			Hail up to one inch in diameter reported in Thief River Falls area with unofficial winds estimated 50 mph at local airport.						
MISSISSIPPI									
No report received by printing deadline.									
MISSOURI									
West Central Plains, Northwest Prairie, Northeast Prairie	11-15					6	5		Heavy rains
			The remnants of Hurricane "Carla" moved through Missouri, dumping heavy rains over a large area, (from 3:00 to over 8:00 inches). Heaviest amounts fell in the Lees Summit and Pleasant Hill area, and in the Brookfield area. Flooding occurred on the Missouri river and most tributaries in western and central Missouri; with heavy damage in suburban areas east of Kansas City.						
Caledonia Washington County	24	7:55 PM							Funnel Aloft
De Soto Jefferson County	24	9:30 PM							Funnel Aloft
Vichy Maries County	24	3:32 PM							Thunderstorm
			Hail, up to 2 inches in diameter.						
Caledonia Washington County	24	7:55 PM							Funnel Aloft
Boonville Cooper County	28					4			Thunderstorms
			Flooding, Some lightning damage, fires.						
MONTANA									
Wolf Point, Roosevelt County	7	1:45 pm	50	* 1	0	0	5	0	Wind, Hail and Rain
			The storm extended from two miles west of Wolf Point to 10 miles east of Poplar. Most damage was at Wolf Point from hail. There was some wind damage in area. Hailstones up to one inch in diameter reported in Wolf Point. Crops were harvested, no damage.						
Great Falls, Cascade County	12	12:45 pm							Funnel Cloud
			The funnel cloud was 10 - 20 miles west of Weather Bureau Airport Station. It did not touch ground.						
NEBRASKA									
Southeastern Nebraska	2	5:30 p.- 9:00 p.	?	?	1	0	4	0	Wind, lightning
			Damaging winds, severe electrical storms, local heavy rains, and some hail struck scattered areas of southern Lancaster, Gage, Pawnee, Johnson and Otoe Counties. Wind blew down trees, small buildings, power lines, etc., and rolled over a house trailer killing an occupant. Lightning did considerable damage to power lines, house wiring, etc. and killed 11 head of cattle. Wind damage 75%, lightning 25%.						
NEVADA									
15 miles west of Wendover, Utah	14	6:40 PM							Hail
			Half inch to one inch hail reported by aircraft. Hail reached ground in uninhabited areas.						
Las Vegas and Charleston	16	8:00 PM			1	31	6	0	Wind and hail
			Strong winds along path 1-1/2 miles wide. Severe damage to Las Vegas Strip and West Charleston areas. Trailers wrecked; signs destroyed; windows knocked out by hail up to 1-1/4 inches which lasted three minutes. One man electrocuted by fallen high voltage power lines. One seriously injured by falling radio antenna. Some reports of funnels. Damage estimated over \$2,000,000.						
Near Reno	17	1:50 P.M.							Funnel cloud
			Funnel cloud not touching ground.						
NEW HAMPSHIRE									
None reported									
NEW JERSEY									
Mainly coastal locations	21	Most of day			0	3	6	C	Hurricane ESTHER
			Property losses "less than \$1,000,000" according to preliminary report of National Board of Fire Underwriters.						
			Hurricane ESTHER winds and storm surge damaged shore locations, wrecked boats, downed trees and power lines. Only slight crop damage, mainly apples. Heavy rainfall but no stream flooding.						
NEW MEXICO									
None reported									
NEW YORK									
East-central counties	2	evening			0	0	5		Thunderstorms, high wind, heavy rain
			Albany area, Amsterdam, Johnston area - severe thunderstorms with tornadoic type winds, heavy rain and destructive lightning. Blown down trees resulted in greatest damage to cars, buildings and power lines in Albany area. Lightning-caused fire destroyed saw mill in the Fulton County community of Lasseville at an estimated loss of \$150,000.						
Cattaraugus County	3	morning			1	0	5		Thunderstorms, torrential rain
			Severe thunderstorms with torrential rains resulted in extensive small stream and lowland flooding and loss due to lightning strikes. Homes were damaged, campers isolated, roads washed out, bridges demolished, power lines downed, and livestock struck by lightning. Extensive damage in the community of Little Valley. 3.61 inches of rain at Allegany State Park, most of which fell between 4 and 9 a.m. Sunday morning. One woman was swept away and drowned in Great Valley Creek when she went out to round up milk cows.						
Putnam-Rockland counties southeastward through Long Island	21				0		6	C	Hurricane Esther
			In the counties north of New York City there were winds of 40 mph with gusts up to 60 mph. Trees were knocked over, heavy drop of fruit with some areas losing 50% or more, tides 3 to 5 feet, interruption of power and communication facilities and heavy damage to marine properties (principally pleasure boats), some crop damage to late vegetables and corn blown down. Over-all damages in the area under one million dollars. On Long Island the principal area of severe damage was eastern Nassau and Suffolk counties where damage was due to high tides (3 to 5 feet above normal), high winds (up to 108 mph on the eastern tip of Long Island) and pounding waves of unusual height (up to 35 feet). Damage in this area was principally due to flooding, pounding of pleasure boats, heavy crop losses and interruption of power and communication facilities. Structural damage was relatively light. Over 300,000 homes were without power from a few hours up to 12 to 24 hours. Dollar figure is difficult						

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INURED	PROPERTY	CROPS	
NEW YORK (Cont'd.)	to estimate but apparently it is in excess of three million on Long Island, nearly one-third of which was crop and land damage. Rainfall in the area ranged from around one inch in the Dutchess County area to 1 1/2 to 2 inches in extreme lower end of Hudson Valley, 2 inches over western Long Island, up to 5 inches over south-central Island area and in excess of 7 inches over the southeast portion of Long Island. No deaths were directly caused by the hurricane, however, one power company man was electrocuted while repairing lines at New Rochelle. Many injuries indirectly resulted from storm conditions.								
NORTH CAROLINA									
Halifax County	2	5:15 pm			0	3	0	0	Electrical
Three women standing near barn struck by lightning and injured.									
Hertford, Perquimans Counties	3	Late aftn					4	0	Electrical, Wind, Hail
Widespread thunderstorm activity caused minor damage to trees, power lines and roofs over a considerable area.									
New Hanover County	4	9-10 pm					4	0	Electrical, Wind, Hail
Evening thunderstorms caused several instances of minor damage in and near Wilmington. Winds to 52 miles per hour reported at Wilmington Airport. Hailstones of golf ball size unofficially reported in area. One home severely damaged by lightning.									
Transylvania County	5	afternoon					4	0	Electrical
Seventeen cattle killed and several others injured when lightning struck in a group of over fifty cattle in an open field.									
Coastal area	20				0	0	5	0	Hurricane
Hurricane Esther passed by at some distance offshore, causing some beach erosion but otherwise only scattered minor damage. Highest winds reported in North Carolina, gusts to 58 miles per hour at Nags Head.									
Surry County	25	Night					4	0	Wind
Garage blown several hundred feet, home damaged, by sudden gust.									
NORTH DAKOTA									
Rugby	8	1:00AM	9		0	0	4	0	Hailstorm
7 Miles Nw Carson	9	4:00PM			0	2	0	0	Lightning
Lightning struck and injured two men working in a field.									
OHIO									
La Grange	6	5 PM			0	0	4	3	Thunderstorm
Heavy thunderstorm activity during the period 5-8 PM EST resulted in extensive damage in the La Grange area, mainly to trees, standing corn, utility lines, and a few houses. Strongest winds were from the northeast, lasting only 3-4 minutes. While locally termed a "baby tornado" investigation failed to substantiate it. No roaring sound was heard, and no funnel cloud seen. Structural damage to houses was confined mainly to broken windows and stripping of shingles.									
Mc Connelsville	25	4:30 PM			0	Few	94	C	Thunderstorm
An unusually severe thunderstorm struck in Mc Connelsville this afternoon traveling in a northeasterly direction leaving a trail of uprooted trees, broken utility lines and damaged buildings. Structural damage was confined mainly to roofs, windows, TV antennae, etc. but one large machine shed was completely demolished. Injuries were caused by flying debris.									
Less severe thunderstorms were scattered widely over southeastern and south central counties, notably in the Portsmouth and Marietta areas as a squall line moved across the area.									
OKLAHOMA									
Cyril, Caddo County	3	About 5p.	8-10	* 1	0	0	2	0	Wind
Straight winds estimated 60 to 75 mph.									
Velma, Stephens County	3	About 7p.	8-10	*1/4-1	0	0	2	0	Wind
Straight winds estimated 60 to 75 mph.									
Wynnewood, Garvin County	3	About 8p.	5-6	*1/4 to 1/2	0	0	2	0	Wind, funnel aloft
Straight winds 60 mph with funnel aloft.									
Hannon, Roger Mills County	23	6 p.	8-10	*1 to 2	0	0	3	3	Hail
One to two-inch diameter hail covered ground with winds around 40 mph.									
Clinton, Custer County	23	7 p.	3	50	0	0	4	4	Tornado
Tornado north of Clinton moved eastward associated with band of strong winds 55 to 75 mph and scattered one-inch diameter hail. Damage to farm buildings.									
OKLAHOMA (Cont'd.)									
Watonga, Elaine County	23	8:15 p.	10-15	*1 to 2	0	0	4	4	Hail
One-inch diameter hail covered ground with winds to 50 mph.									
Enid, Garfield County	23	11:45 p.	3	*1/2	0	0	3	3	Hail
One to two-inch diameter hail, heavy rain and winds up to 50 mph.									
Oklahoma City, Oklahoma County	27	4-5 a.	8-10	*1	0	0	4	2	Wind
Hail one-half to one inch in diameter and wind gusts to 90 mph with heavy rain caused minor damage, some due to local flooding, at Tinker Air Force Base and Oklahoma State Fair Grounds in Oklahoma City.									
Guthrie, Logan County	27	5 a.	5-10	*1	0	0	2	1	Hail
Hail ranging from 1/2 to 1 1/2 inches in diameter, accompanied by heavy rain and winds up to 50 mph, damaged roofs, windows.									
Springer, Carter County	27	Midnight	5-10	*1/2 to 1	0	0	2	1	Wind
Winds 65 to 70 mph, heavy rain and scattered one-inch hail caused some roof, window, and automobile damage. One garage destroyed by strong winds near Springer.									
OREGON									
None reported									
PENNSYLVANIA									
Siglerville	1	Night					4		Thunderstorm
A herd of 21 cows were electrocuted by bolt of lightning.									
Southeastern Counties	2	Afternoon & Evening					5		Thunderstorms
Lightning from numerous thunderstorms fired a number of buildings throughout the area. High winds toppled a number of trees in Berks County.									
Southern Counties	3	Afternoon			1	6	5		Thunderstorms
Lightning associated with severe thunderstorms struck and killed a boy in Carroll, injured a man near Harrisburg and two boys near Phoenixville. Three others were injured at Glenside when strong winds downed a tree under which they were standing. Several large barns were fired by lightning.									
Near Pineville	3	2:50 P.M.	4	10			4		Tornado
Several buildings were unroofed and a farm machine shed was demolished by the strong winds.									
Central Counties	7	Morning			1	1	3		Thunderstorms
Two boys were struck by lightning, one fatally, while picking tomatoes near Newville. Lightning fired a barn near Clearfield.									
Western 3rd of the State	25	7:00 to 8:00 P.M.					5		Thunderstorms
High winds clocked at over 65 mph, associated with the storms, damaged a number of roofs and downed many trees and utility wires. A large feed store and sports shop in Greensburg were demolished by the wind. In Mt. Lebanon a partially completed bowling center was also blown down by the strong winds with damage estimated at \$80,000. Several barns were burned by lightning.									
PURTO RICO									
Moca	30	Afternoon			1	2			Thunderstorm
During a thunderstorm a seven year old girl, taking refuge under a coffee shed, was killed instantly when struck by a bolt of lightning. Her father and another person, lying beside her, received minor injuries. The shed was not damaged.									
RHODE ISLAND									
Statewide	2	2:00p to 6:00p			2	2	5	0	Lightning
Unusually violent lightning accompanied severe thunderstorms with major effect in Kent and Bristol Counties and southern Providence and northern Washington Counties. At least 30 bolts hit marks in these sections causing power failures to 11,000 homes in Coventry, Cranston, East Providence, Exeter, North Kingstown, Providence, Scituate, Warwick and West Warwick. Two persons killed and two injured in Exeter.									
Statewide	15	3:00a to 5:00a			0	0	5	4	Wind and Tide
Small intense disturbance of tropical origin swamped hundreds of small craft, as well as a few larger ferries and barges, from Westerly to Sakonnet and all along Narragansett Bay. Some sunk. Winds reached 70 mph in gusts at Point Judith and 53 mph at Hills Grove and tides were 1 foot above normal even though storm occurred during astronomical low tide. Power to 29,000 homes was interrupted in Barrington, Bristol, Providence, Warren and Westerly and 1200 phones were out in southern sections. Some damage to fruit crops as far north as Greenville occurred.									
Statewide	20	8p 20th to 1a 22nd			0	0	5	5	Hurricane Esther
Approaching Rhode Island from the south-southwest, Hurricane									

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 1961

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
RHODE ISLAND (Cont'd.)									
		Ester reached a point about 35 miles south-southeast of Block Island near noon September 21 before it suddenly weakened and turned sharply eastward. Heavy rainfalls of 5-8 inches occurred but only minor flash flooding was recorded especially in the Pawtuxet River Valley. Top winds recorded were 74 mph with gusts to 83 mph at Block Island but on the mainland gusts reached only 65 mph. Nevertheless short power and phone service interruptions occurred in some places. Damage from wave action and tides, which ranged from 4 to 6 feet above normal, was of short duration and confined mostly to smaller craft. Nevertheless sand erosion destroyed a parking lot and some roads were washed out. Greatest damage at Misquamicut and Sakonnet Point. Crop losses were spotty and in the main small suffered principally by apples and corn.							
SOUTH CAROLINA Charleston, Charleston County	5	1:00 p.m.			0	1	3	0	High winds
		Several witnesses heard loud roar. Rain gathered in pattern similar to waterspout.							
Eastern and Central South Carolina	5	3:00 pm-5:00 pm			0	0	4	0	High winds and excessive lightning.
		Considerable accumulation of minor wind and lightning damage associated with the passing of a squall line in the area.							
Swansea, Lexington County	5	Night			0	2	0	0	Lightning.
SOUTH DAKOTA McPherson and Brown County	7	8:25 pm	Short	Narrow			4		Tornado
		Tornado struck farm near McPherson-Brown County line, or about 10 miles east and 2 miles north of Leola, McPherson County. Except for home all farm buildings were destroyed including two chicken coops, granary, machine shop, and two trailer homes. House was pushed about a foot on foundation and had windows broken, plaster cracked, and a part of roof tipped. Farm truck and tractor both blown 500 feet and demolished. Rain up to 2.5 inches and some hail in both counties accompanied storm but damage minor.							
Bullhead, Corson County	9	Afternoon			1	1			Electrical
		Young girl killed by lightning while walking on highway. Small brother accompanying her was slightly injured.							
Webster, Day County	10	1-2 a.m.					5		Electrical
		Large farm implement store destroyed by lightning-caused fire. Many implements, three cars, two trucks, as well as merchandise, were lost. Nearby buildings suffered damage from fire. Heavy rain helpful in reducing spread of the fire.							
TENNESSEE									
Millington, Shelby County	6	Afternoon			0	1			Lightning
		A 1 1/2 year old girl was knocked unconscious by lightning while entering her home.							
Madison, Davidson County	12	4:00 p.			0	1	4	0	Wind and rain
		High winds, accompanied by rain, blew down an unfinished church at Madison.							
TEXAS									
O'Brien Haskell County	3	5:00 p.	?	?	0	0	5	0	Tornadoes
		2 tornadoes touched ground in the O'Brien community, demolishing 5 cotton warehouses and heavily damaging several homes.							
Tom Green County	3-	6:00 p-8:00 a	60	*30	0	0	4	0	Rain
		Cold rain resulted in the death of 3630 freshly shorn sheep and goats valued at \$35,000.							
Lake McQuency Gadoula County	4	2:57 p	1	?	0	0	3	0	Tornado
		Small tornado first touched ground at the dam, then traveled northeast for about 1 mile on the ground. The tornado demolished 2 hay barns about 1 mile apart, and tore down 3 utility poles.							
Houston Harris County	4	4:50 p			0	3	0	0	Lightning
		3 boys were injured, 2 seriously, when lightning struck a large tree in which they were playing.							
Bays County	4	12:30 p							Funnel aloft
		Observed between Buda and Kyle.							
5 E Kingsville Kleberg County	5	10:50 a							Funnel aloft
6 E Harlingen AFB Cameron County	5	10:58 a							Funnel aloft
El Paso El Paso County	8	3:02 p-8:38 p	5	4 1/2	0	0	4	0	Wind, rain
		Thunderstorm winds estimated at 75 mph unroofed one motel, resulting in \$10,000 damage. Heavy rain accompanying the storm caused \$5000 damage.							
Southcentral and Southeast	8-14				34	465	8	8	Hurricane Carla, 8 tornadoes
		This hurricane was one of the most violent storms in Texas history. In Texas, 34 persons died; 8 of these can be attributed							
TEXAS (Cont'd.)									
		to a vicious tornado that swept across Galveston Island during the storm. The American Red Cross lists 460 known injured in a 16-county area most directly affected by the hurricane. Property and crop damage is conservatively estimated at 300 million dollars. The evacuation of an estimated 250,000 persons from middle and upper Texas coastal cities kept loss of life remarkably low. High tides began affecting the upper Texas coast on Friday, September 8th. The "eye" of the hurricane, approximately 30 miles in diameter, moved into the Port O'Connor area about 2 P.M. of the 11th. The leading edge of the eye reached Port Lavaca at 3:15 P.M. Carla moved slowly, and was almost stationary at times as she approached the middle Texas coast. From Port Lavaca, the storm followed a northwesterly course that carried the center over Ines, Thakun, and Waelder. No well-defined "eye" was apparent after the storm moved out of the Waelder area about 1 A.M. on the 12th, and it began to weaken rapidly as it followed a more northerly course near Austin, Waco, and Fort Worth. The storm center crossed the Red River into Oklahoma about 9 P.M. on the 12th, with some rainfall continuing into the 14th. The full fury of Carla was felt on September 11th. Highest winds and tides were at Port Lavaca. Peak gusts were estimated at 175 mph. Peak gusts of 150 mph were estimated at Aransas Pass, Austwell, Bina, Port Aransas, and Victoria; and 160 mph gusts were observed at Matagorda. Highest tides were 18.5 feet MSL (estimated) at Port Lavaca, 16.6 feet MSL at Matagorda, 14.6 feet MSL on upper Houston ship channel, and 13.5 feet MSL at Port O'Connor. The lowest pressure was recorded at Port Lavaca, where the barometer dropped to 27.62 inches at 3:15 P.M. on the 11th, and remained at 27.62 through 5:35 P.M. Torrential rains of more than 16 inches fell in a narrow coastal belt from Galveston to Bay City, in the northeast quadrant of the hurricane. Bay City reported a storm total of 17.10 inches. More than 13 inches accompanied the storm as far as 130 miles inland, in a very irregular pattern. In general, rainfall gradually decreased northward, away from the coast, with most of northeast Texas, east of the storm center, receiving as much as 4 inches. Most Gulf drainage stresses east of the storm track reached or exceeded flood stage. Property loss is estimated at 200 million dollars. Crop losses are estimated at another 100 million dollars with most of this damage to unharvested rice and cotton, and lesser damage to corn, pecans and citrus. Livestock losses were heavy in the Matagorda area. Most damage was inflicted to the coastal counties between Corpus Christi and Port Arthur plus inland counties of Jackson, Harris, and Wharton. Damage was classified as severe in Calhoun, Matagorda, Brazoria, and Galveston Counties; and heavy in Funesco, Refugio, Chambers, Jefferson, Victoria, Jackson, Wharton, and Harris Counties. Storm damage was relatively minor 100 miles inland from the coast. Percentage-wise, the greatest destruction occurred at Palacios and Port O'Connor. Port O'Connor was virtually destroyed. Galveston and Texas City suffered the highest dollar losses because of the size of these cities. Much of the storm damage was the result of flooding without wave action. Tornadoes accompanying Carla numbered 8. At 3:15 A.M. on the 12th, a tornado cut a path across Galveston Island between 19th and 25th Streets, leaving 8 dead, 55 injured, and heavily damaging about 200 buildings of which 60 to 75 were destroyed. A second tornado cut across the island at 6:00 A.M., destroying 6 houses and damaging several commercial buildings, but causing no known injuries. In Chamelys, near Houston, a tornado beginning at 5:50 P.M. on the 11th, injured 22 persons, destroyed 18 homes and 6 commercial buildings, and damaged 40 homes, for a loss of \$200,000. A tornado at 1:20 P.M. on the 11th, 2 miles south of Jacksonville, injured 3 persons, destroyed 1 home and damaged 3 others for a loss of \$25,000. A tornado touched ground at 11:47 A.M. on the 11th, 3 1/2 miles ENE of Bay City, wrecking 2 radio towers and damaging several buildings. A tornado at 7:30 A.M. on the 12th, struck the Hardin Community in Liberty County, damaging 6 houses; while one at 4:15 P.M. on the same day destroyed several buildings at Fullbright (Red River County). On the 13th, at 5:05 P.M., a tornado at Letex (Panola County) injured 2 persons, damaged 2 houses and 3 garages for a \$5000 loss.							
Hockley Harris County	13	7:15 a-7:30 a	?	?	0	0	4	0	Wind
		An unusually violent whirlwind damaged several buildings, overturned an 11,000 lb. trailer, and demolished 2 cow sheds.							
Hardin County	13	10:00 a							Funnel aloft
		Observed 25-30 NW of Beaumont Airport.							
Near Rio Grande City Starr County	13	2:30 p-3:00 p			0	0	?	0	Wind, funnel aloft
		A funnel aloft was observed between Roma and Rio Grande City. Strong thunderstorm winds demolished one building and blew the roof off another between these two cities. 3.50 inches of rain fell within 45 minutes.							
Freeport Brazoria County	13	5:25 p							Funnel aloft
Berestow Ward County	19	5:00 p	?	?	0	0	?	0	Tornado
		A small tornado unroofed one home, and heavily damaged 4 barns and an abandoned service station. All were on the south side of U. S. Highway 80 in Berestow. Heavy rain and some hail accompanied the tornado.							
Yoakum County	19	7:00 p-8:00 p	8	*3	0	0	3	4	Hail
		Hail up to 1 1/2 inches in diameter stripped leaves off grain							

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

SEPTEMBER 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.)										
										several and damaged roads; knocked balls off cotton plants, and damaged automobiles in the west central section of the county. Automobile windshields and windows were broken. Dwellings suffered roof damage. Very little rain accompanied the storm which moved from SE toward NW. Hailstones averaged 1 inch in diameter.
Near Swenson Stonewall County	2h	4:30 p- 6:00 p	?	?	0	0	3	4	Hail	
										Marble-size hail damaged cotton up to 90% in three areas; 1 mile NW of Swenson; 3 miles SE of Swenson; and NW of Hamlin. Hail stripes were about 2 miles wide, and hailstones covered the ground to a depth of 2 inches. Largest stones were 1 1/2 inches in diameter.
E of Hamlin Jones County	2h	night	5	*1/2	0	0	0	5	Hail	
										Hail accompanied by heavy rains damaged cotton from 10 to 60%. The hail defoliated the cotton, leaving only the larger bolls.
15 E Corpus Christi Nueces County	28	6:15 a								Waterpout
UTAH										
Northwest Utah Valleys	1	P. M.			4	?	4	3	Wind and dust	
										Strong winds afternoon and evening resulted in considerable local damage to power lines, billboards and a few buildings. Severe dust storm along Highway 40 east of Mendover reduced visibility to near zero, and was major factor in three-car accident resulting in four deaths. Peach crop in Weber and Box Elder Counties damaged.
Emery, Kane and Iron Counties	8-9	Various			0	0	3	3	Thunderstorms and hail	
										Scattered, heavy thunderstorms resulted in considerable flooding. Most extensive damage in Green River where over two inches of rain fell in 24-hour period. Heavy thunderstorm afternoon of September 8th produced hail one inch in diameter. Local crop and glass damage.
Virgin River, Zion Nat'l Park, Glen Canyon	17	A. M.			6	0	4	4	Thunderstorms	
										Heavy thunderstorms on upper Virgin drainage resulted in flash flood through Zion Narrows. Party of hikers caught with five deaths. Considerable damage to crops, livestock and highways. Small girl killed in flash flood at Glen Canyon.
Salt Lake City and Delta	18	10:45 AM			0	0	0	0	Funnel clouds aloft	
										Funnel cloud aloft east of Salt Lake City and another 10 miles east of Delta. Neither appeared to reach the ground.
VERMONT										
										None reported
U. S. VIRGIN ISLANDS										
										None reported
VIRGINIA										
Eastern Fairfax County	3	4:15 P			0	0	*4	0	Lightning, hail and heavy rain.	
										Lightning caused a number of fires, including a garage fire which completely destroyed a 1961 car. 3/4 inch hail fell in Alexandria and Annandale. About ten basements were flooded, and major flood damage was sustained in 4 first floor rooms of a parochial school.
Henrico, Roanoke, Giles and Augusta Counties	4	Afternoon			2	0	?	?	Lightning, hail and rain.	
										Lightning struck and killed a girl in Henrico County in a suburb of northwest Richmond. Lightning caused damage to a number of homes in Roanoke and Waynesboro. Heavy rains flooded several basements in Waynesboro and damaged nearby corn crops. One fatality resulted from a non-collision automobile accident in Giles County when a car skidded off a highway made slippery by the rain. "Very large" hail was reported in southern Augusta County.
Princess Anne and Hampton Counties	20	Morning			0	0	?	?	Tropical storm.	
										The eye of Hurricane Esther passed nearly 200 miles east of Norfolk, and damage to eastern Virginia was therefore minor. The "fastest mile" wind at Cape Henry was just 38 miles per hour and at Norfolk 32 miles per hour. The greatest departure of tides in the Hampton Roads area was 2 1/2 feet above normal, or 4.7 feet above mean low water, and no flooding occurred. Except for erosion of beaches due to turbulent seas, no damage was reported in the Eastern Shore-Hampton Roads-Outer Banks coastal section, and no deaths were attributed to Esther in Virginia. The greatest effort was disruption of the coastal area's economic and social life, due to the removal of between 10,000 and 15,000 residents to emergency shelters on the night of the 19-20th. Preparations for the storm were the most thorough in the history of the Virginia coast.
WASHINGTON										
	28						4	4	Wind and dust storm	
										Strong wind west of the Cascades resulted in minor damage to a small airplane, several small boats and other property. East of the Cascades, wind velocities ranging from 40 to 60 MPH over the dry section of the Columbia Basin resulted in a severe dust storm. Visibility was reduced to zero for several hours by blowing dust in some localities. Numerous accidents occurred on the highway and many roads were closed. Several persons received minor injuries in automobile accidents. Unharvested dry beans, hops and apples were damaged by the wind.

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										
South of Clarksburg, Harrison County	3							1		Lightning
WISCONSIN										
West Central	2-3	Late evening and early morning						4	4	Tornadoes
										A family of small tornadoes crossed over the section touching down briefly between Glenwood and Athens. Touched down near Glenwood at 9:30 p.m. on 2nd; touched down north of Fenwood early on the 3rd; touched down 5 miles west of Thorp at 12:15 a.m. on the 3rd, about 14 feet wide and skipped along 3 1/2 mile path; touched down near Athens about 1 a.m. on the 3rd. Damage to farm buildings and crops.
North	3	Early morning							5	Lightning
										Ashland University farm barn struck and burned at 4:53 a.m. Warehouse at Laona struck and burned. A number of farm buildings struck and burned in north.
Whitewater 1 S	22	Near noon	5	Narrow	1	5	4			Tornado
										Damage on at least 15 farms, moved northeast.
Campbellsport	22	1:30 P.M.	4-5	300		3	4			Tornado
										Touched down intermittently along a 4-5 mile path. Moved northeast.
Sheboygan 1 W	22	1:50 P.M.								Funnel
Milwaukee 6 S E	22	2:05 P.M.	1/2	to 3/4						Hail
										diameter.
Central & South	29-30							1		Wind, rain, lightning
										Squall line crossed over section with damaging winds, heavy rain and hail. A number of buildings damaged by lightning.
WYOMING										
Powell	1	Daytime			0	0	0	5		Strong winds
										Strong, gusty winds reaching peak gust speed of seventy-seven miles per hour did much damage to crops, especially windrowed dry beans.
Bear River Divide	2	?			1	0	2	0		Lightning
										A shepherd and his horse were killed by lightning.
Casper	21-22	Evening until morning			0	0	4	0		Heavy wet snow
Casper	23	Evening			0	0	4	0		Heavy wet snow

- ° Includes crop damage.
- C Crop damage.
- * Miles instead of yards.
- ** Yards instead of miles.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
 - 1 Less than \$50
 - 2 \$50 to \$500
 - 3 \$500 to \$5,000
 - 4 \$5,000 to \$50,000
 - 5 \$50,000 to \$500,000
 - 6 \$500,000 to \$5,000,000
 - 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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USCOMM-WB-Asheville - 10/27/61 - 1150