

U. S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary
WEATHER BUREAU
ROBERT M. WHITE, Chief

STORM DATA

AUGUST 1964
Volume 6 No. 8



ASHEVILLE: 1964

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1964

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
ALABAMA									
North and West Central Alabama	4	Afternoon and evening			0	1	5	0	Thunderstorms
									High winds, lightning and heavy rain associated with numerous heavy thunderstorms resulted in scattered damage over widespread areas. Livestock killed by lightning, trees uprooted, plate glass windows broken, signs blown down, porches, carports and garages damaged, small out buildings destroyed or damaged, and extensive damage occurred to telephone and power lines by falling trees and limbs. One person hospitalized in Fayette County due to lightning. Wind caused 90 percent damage, lightning 5 percent and heavy rain 5 percent. Negligible damage to crops.
ALASKA									No report received by printing deadline
ARIZONA									
Southeastern & south-central parts of State	1				0	0	0 ⁴	C	Thunderstorms (rain and wind)
									Thunderstorm activity concentrated mostly over the southeastern and southcentral part of the State causing heavy local runoff. Most of the area between Stanfield and Maricopa was flooded, causing damage to highways and some damage to farmland. Highway damage was also reported near Mesa. In the Douglas area, floodwaters damaged roads and high winds damaged roofs and utilities.
South Phoenix	4	3:00 p.				1	5	0	Wind
									Strong winds associated with a thunderstorm did considerable property damage in South Phoenix to homes and utilities. One woman was injured by flying debris. The storm then moved northward over Luke Air Force Base where several aircraft were damaged.
Southeastern and central Arizona	12	Afternoon			0	0	0 ⁵	C	Thunderstorms
									Scattered thunderstorm activity produced locally heavy downpours in some areas. Most damage was water damage to property damage with only limited damage reported to crops. Casa Grande, Florence and Eloy were heavily flooded with most damage to homes, stores and highways. Farther north, Winslow was drenched by heavy rains with runoff from surrounding mountains increasing the flooding. All patients were evacuated from Winslow Memorial Hospital and all highway traffic as well as Santa Fe railway traffic was halted in the area.
Tempe	13	7:00 p.			0	0	4	0	Rain and wind
									Most damage caused by flooding. Unusually heavy downpour in less than 1 hour caused flooding of businesses, homes, and cars. Some wind damage to trees and utilities.
Peoria	23	Afternoon			0	0	3	5	Hail
									Fairly heavy damage was done to cotton by a hailstorm. Property damage was light and limited mostly to glass breakage.
Tucson	26	Afternoon			0	0	4	0	Lightning
									Lightning caused a fire which destroyed a large construction trailer.
Tucson (4 miles WSW)	27	11:16 a.			2	9	4	0	Tornado
									Tornado moved through an Indian village demolishing four dwellings. This was the first tornado reported in the State causing a death. Most of the property damage in terms of dollar value was to the convent of the nuns of St. Francis. The historic Mission San Xavier, nearby, escaped with only minor structural damage.
ARKANSAS									
Greene Ferry Reservoir, Cleburne County	11	2:35 p. to 3:20 p.	2	* 2	0	0	4	0	Wind, rain and lightning
									Thunderstorms moved southeast. Winds caused considerable damage to boats and boat docks on the reservoir.
Little Rock area, Pulaski County	11	3:00 p. to 4:00 p.	15	* 10	0	0	5	0	Wind and lightning
									Thunderstorms moved southeast. Winds caused considerable damage in addition to numerous buildings struck by lightning. 12,000 customers had electrical trouble for varying periods of time Adams Field reported a wind gust of 61 mph at 5:20 P.M. with one private aircraft upset during this period.
Batesville area, Independence County	11	3:00 p. to 4:00 p.	20	* 10	0	0	5	3	Wind
									South sections of county hit hard by winds with much damage to property in the Pleasant Plains and Flora areas.
Augusta area, Woodruff County	11	3:30 p. to 4:15 p.	3	* 2	0	1	4	0	Wind
									City hit by strong winds with property and trees damaged. Woman injured when hit by two steel chairs in front of her house.
ARKANSAS (Cont'd)									
Newport area, Jackson County	11	3:30 p. to 4:00 p.	8	* 5	0	1	3	0	Wind
									Minor damage in Newport area. Automobile accident 5 miles south of Newport. Driver lost control of car in wind and hit a tractor
Benton area, Saline County	11	5:45 p. to 4:15 p.	2	30	0	3	0	0	Lightning
									Three men injured in front of a church 7 miles northwest of Benton.
Stuttgart area, Arkansas County	11	3:45 p. to 5:00 p.	18	220	0	0	5	4	Tornado and wind
									Winds estimated at 60 mph did considerable property damage most of the county. A parked private airplane was blown over nearby house at Stuttgart at 4:00 P.M. Two tornadoes were observed in the Stuttgart area at 4:00 P.M. They moved in a skipping fashion into the DeWitt area with no major damage. A trailer was turned on its side at DeWitt at 4:30 P.M.
Searcy area, White County	11	3:00 p. to 4:30 p.	30	* 22	0	0	4	0	Wind
									Strong winds over county caused scattered property damage and some disrupted electrical services. Also, 5,000 chickens were killed during the storm.
Blytheville area, Mississippi County	11	5:46 p.	Short	?	0	0	0	0	Funnel cloud
									Funnel cloud reported 6 miles southeast of Blytheville Air Force Base.
Hope area, Hempstead County	11	5:30 p. to 6:15 p.	12	* 3	0	0	4	0	Wind and lightning
									Thunderstorm moved south. Damage to property and electrical system in the area.
Ashdown area, Little River County	22	2:15 a.	3	100	0	0	3	0	Tornado
									Tornado reported on a farm in the Hooks community, 3 miles north of Ashdown. Tornado moved southeast.
Conway area, Faulkner County	25	Afternoon	?	0	1	2	0	0	Lightning
									Man injured while milking a cow at the Pinnacle Springs community, 17 miles north-northeast of Conway.
Marked Tree area, Poinsett County	25	4:30 p. to 5:15 p.	6	* 3	0	1	3	2	Wind and lightning
									Wind caused minor damage. Man slightly injured when lightning struck the car radio antenna between Marked Tree and Paysonway.
Evening Shade area, Sharp County	25	4:30 p. to 5:30 p.	1	880	1	2	0	0	Lightning
									Fatality and injuries occurred 4 miles north of Cave City. Thunderstorms moved northeast.
Jonesboro area, Craighead County	25	6:00 p. to 12 Mid.	40	* 30	0	0	5	4	Wind, rain, hail and lightning
									Widespread damage over county with prolonged thunderstorm activity.
Harrison area, Boone County	27	3:00 a. to 8:00 a.	20	* 10	0	0	5	3	Wind, rain and lightning
									Rain caused extensive damage to roads in northeast part of county.
CALIFORNIA									None reported
COLORADO									
San Miguel County	3	5:00PM			0	0	4		Heavy rain
									Heavy rain in the saw Pit area, about 12 miles west of Telluride, caused flooding in numerous gullies, along the highway paralleling the San Miguel River. Roads and yards were washed and covered with large boulders, trees and gravel. A home was flooded and a pickup damaged.
El Paso County	4	2:30PM			0	0	* 6	C	Heavy rain & hail
									Heavy rain caused flooding of Fountain and Ruxton creeks causing heavy damage in Manitou Springs. Homes, tourist courts and business places were flooded with muddy water. Streets and roads were washed out or blocked by rocks and mud. Hail up to golf ball size damaged vegetation, signs, automobiles and buildings.
Colorado	5	Afternoon			0	9			Lightning
									Lightning struck a Forest Service Trail Construction Camp in the Gore Wild Area at 12:55PM, injuring 6 men. They suffered burns and were badly dazed and shaken up. In the afternoon, lightning struck 2 boys in Denver, while playing ball. One was treated and released but the other boy suffered "second-degree electrical shock and cardiac arrest" and was hospitalized in critical condition for several days. At about 4:30PM, lightning struck a man while he was fishing at the Ramah Dam, northeast of Colorado Springs. He suffered head lacerations and burns.

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS		
COLORADO (Cont'd)										IDAHO										
Aspen	5	Afternoon			0	0	4		Heavy rain	Wallace	12	7:00 p.							Heavy rain, hail, wind	
		Heavy rain of cloudburst proportions hit Aspen, flooding parks, streets, yards and swimming pools. Extensive damage resulted from mud, rocks and logs which were washed down from Aspen Mountain.																	Rainfall measured at 1.23 inches in 20 minutes and 1.40 for entire storm. Some damage to several basements, including hospital and court house. Hail and wind accompanied rain, but apparently added little to the damage.	
Larimer County	6				1	0			Lightning	Priest River	17	11:15 p.				5			Lightning	
		Lightning struck and killed a woman tourist on Trail Ridge Road, 25 miles west of Estes Park in Rocky Mountain National Park. She was standing near a stone retaining wall along the highway.																	Fire, presumably started by lightning, destroyed large part of lumber mill in North Priest River.	
Western Colorado	11				0	0	5		Heavy rain	Ola (near)	18	Unknown			1				Wind	
		Local heavy rains at various western Colorado points, caused much flooding damage. At Durango, mud and debris covered roads. Sections of the Grand Junction area had bridge and road damage. At Duray, the flooding damaged the water system and closed roads with mudslides and washouts.																	Woman hospitalized in critical condition from injuries incurred when large tree was toppled by wind near Sage Hen Reservoir about 12 miles NNE of Ola.	
Western Colorado	12	Evening			0	0	*6	0	Heavy rain	Sandpoint	28	Late forenoon							Funnel Cloud	
		Heavy rain again caused flooding damage in the Grand Junction, Delta, Montrose, Olathe and Durango areas. Continued rain caused some damage to the waiting barley crop and to roads, streets, water and sewer systems and to private property.																	Well-defined funnel sighted near airport moving slowly in easterly direction. Funnel bottom, estimated about 100 feet in diameter, remained 300 feet or more above ground. No damage reported.	
CONNECTICUT			None reported							COEUR D'ALENE	30	Unknown					4		Lightning	
DELAWARE	26	4:00 p.-6:00 p.			0	0	4	0	Thunderstorm with heavy rain	ILLINOIS									Lightning was apparent cause of fire which destroyed one-story dwelling and most of its contents.	
		Locally heavy rain, estimated at more than 4 inches, flooded many streets with water up to 18 inches deep. Downpour was accompanied by winds, observed at 65 mph. Telephone and power service was temporarily interrupted. No serious property damage was reported. Storm did benefit the community by fully replenishing low water supply.								INDIANA									None reported	
FLORIDA			See data at end of table							Brazil, Clay County	3	5:15 p.			0	0	3	2	Hail, wind	
GEORGIA										Winchester, Randolph County	3	8 p.			1	0	4	2	Wind, rain, hail	
Atlanta Area	4	6-8 pm			0	0	4	0	Thunderstorms										Tents collapsed and one man killed.	
		Severe thunderstorms hit the metropolitan Atlanta area causing widespread power failures, flooding of streets and considerable wind damage. Lightning struck 3 power substations and also damaged several homes. Fulton County Airport reported wind gusts to 55 miles per hour.								Terre Haute	4				1	0	0	0	Heat	
Sapelo Island	8	10:11 p							Funnel Cloud										Man died of heat stroke.	
		Reported one mile off shore by pilot.								Columbia City, Whitley County	11	1:45 p.	6	1 mile	0	0	4	3	Wind, hail	
Columbus Area	12	6:30 - 8:30 p			0	0	4	0	Thunderstorm and Rain										House unroofed 3 1/2 miles east of Columbia City. Two miles farther to the northeast the wind damaged barns, houses, and trees. Marble size hail fell. An aluminum boat was carried 500 feet.	
		Massive thunderstorm caused extensive lightning damage and dumped 2.75 inches of rain on the area. Motorists were stranded by flooded streets and high water required the evacuation of about 25 persons from their homes. Streets and roads were heavily damaged.								Indianapolis, 15 miles northeast	11	2:30 p.			0	0	0	?	Hail (3/4 inch diameter)	
Tifton, Tift County	17	3:30 p			0	0	4	0	Windstorm	Connersville, Fayette County	11	4 p.			0	1	3	0	Wind	
		Sudden Windstorm uprooted numerous trees and damaged several buildings. Moderate damage to electric and telephone lines by wind, lightning and falling trees.								Kingman, Fountain County	22	7:05 p.			0	0	0	0	0	Tornado
Atlanta Area	22	4-6 p			0	0	4	0	Thunderstorm and Rain										Tornado touched ground briefly but caused no damage.	
		Severe thunderstorm caused extensive damage to utilities, causing widespread interruptions of electric and telephone service throughout area. Several fires and other damage caused by lightning while heavy rains flooded streets and caused numerous washouts.								Fremont, Steuben County	28		2		0	0	4	2	Wind, rain, hail	
Near Brunswick	27	12:26 p							Waterspout										Several farm buildings damaged or destroyed. There was some heavy rain and hail.	
		Observed off-shore from Jekyll Island.								IOWA	10	8:00 p					5	4	Windstorm	
Eastern	28-30				0	0	5	4	Hurricane Cleo	Dysart	11	1:00 a	20	4000			4	5	Windstorm	
		Hurricane Cleo had weakened to no more than gale force winds by the time it reached Georgia but torrential rains, associated with the storm, caused very heavy damage in the southeast and eastern parts of the State. Some trees were blown down in the Savannah area by winds that reached 41 mph in gusts and numerous power and telephone failures were caused by lines being blown down or knocked down by falling trees and branches. Storm rainfall exceeded 9 inches in the coastal areas near Savannah and was slightly more than 7 1/2 inches in the Augusta area. Excessive rains fell over most of the eastern third of the State, causing extensive damage to roads, streets and farm land. Numerous bridges and culverts over small streams were washed out forcing the closure of many roads. About 275 families were evacuated in the Augusta area as flood waters became knee deep in some homes. 75 to 100 homes were flooded in one section of Savannah and a number of homes were flooded in smaller communities in the heavy rain area. Cleo moved inland just north of Brunswick around midnight of the 28th after traveling over water from a point north of Jacksonville. It passed a few miles west of Savannah about 9:30 am on the 29th, moving almost due north, and entered South Carolina during the early morning of the 30th near Augusta. A man was drowned south of Brunswick while trying to secure a small boat in preparation for the storm.								Dysart	11	1:00 a						4	Hail	
HAWAII			None reported							Davenport	11	2:00 a							4	Lightning

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
IOWA (Cont'd.) Stratford, Hamilton County	27	9:00 p	1	50			4		Tornado	KANSAS (Cont'd.) Barber and Harper Counties	29	4 - 5 p.				3	3		Hail, wind
7N Charles City	27	10:55 p	1	75			4		Tornado	McPherson, Brown, Shawnee and Wabaunsee Counties	29	Evening			2	4			Golf ball sized hail fell in Corwin and wind did damage in Hazelton. Wind
N of Algona	29	4:30 p	10	100			5	4	Tornado										McPherson and Topeka had the most damage. Two persons were injured by flying debris in the latter city.
2N Fort Dodge	29	4:38 p	2	75			4		Tornado	Newton	30				1	2			Lightning
Ames	29	5:00 p				1	5		Windstorm	Topeka	31	6:30 a. to 8:30 a.				5			Rain, wind
Oakland	29	5:30 p					4		Hail										Heavy rains caused flash flooding, mostly in northern and western portions of the city.
Joice, Worth County	29	5:55 p	10	150			5	4	Tornado	Franklin	31	8:43 a.							Funnel aloft
15 NW Mason City	29	6:00 p	2	100			4	4	Tornado										A funnel cloud was reported south of Missile Site No. 2 near Centropolis.
5N Cedar Rapids	29	10:05 p							Funnel cloud	Russell and Ellis Counties	31	Late afternoon			3	5			Tornado
7NE Washington	29	10:30 p					4		Windstorm										One eye witness at Russell saw five funnels aloft and it appears that at least four tornadoes occurred. One was sighted at 5:20 p. about 1 mile southeast of Gorham; it moved northwestward for 2-1/2 miles, curved sharply northeast and finally lifted off the ground about 4 miles northeast of Gorham. The length of its path was 6 miles; the width, 50-100 yards. Another, approximately 1 mile NNE of Gorham occurred 30 to 45 minutes later hitting a farm house 1/2 mile southeast of the path of the first tornado. A third tornado occurred at 6:45 p. causing damage 7 miles southeast, 5 miles east and 5 miles northeast of Hays and also at Catherine. Another tornado occurred about 7:00 p. 5 miles southwest of Russell.
KANSAS Allen County	5	2:00 a.					4		Lightning										
Central and Eastern Kansas	6					1	4	4	Lightning, wind										
Central Kansas	9	Night					5	5	Wind, hail, rain										
Portis, Osborne County	10	Evening					2		Hail	Russell, Osborne, and Ellis Counties	31	Late afternoon				5			Hail, wind, rain
Fowler, Meade County	13	Evening					4		Lightning, wind										
Hoisington, Barton County	17	4:00 p.					4		Wind, rain										
Near Milan	17	8:00 p.							Funnel aloft										
Haskell and Grant Counties	19	Evening					5	4	Wind, hail										
Eastern one-third of the State	20					1	5		Lightning, wind										
Brown County	20	5:20 p. to 5:50 p.						3	Two tornadoes										
Central Kansas	24	Afternoon					4		Hail										
McPherson and Sedgwick Counties	25	Early morning				1	4		Hail, lightning										
Pittsburg	25	10:30 p.					3												
Mitchell County	27	3:25 p.	20	15			4		Tornado										
Central and Eastern Kansas	27	Afternoon and evening					5		Wind, lightning, hail										

SPECIAL HAIL SUMMARY

Hail Loss Clearing House reports indicate hail was especially severe as follows:

20 Haskell County

24 Marshall and Washington Counties

KENTUCKY

Eastern Counties

3 Noon

Thunderstorms at scattered locations east of 84° longitude and from the northern to the southern State borders occurred from about noon until almost midnight. Wind downed trees and utility lines, overturned a mobile home, damaged a barn, unroofed at least 4 barns or other buildings, downed a number of TV aerials, and damaged crops. Fires apparently set by lightning destroyed at least 3 barns and damaged several others. An Air Force B-47 jet plane at 23,000 feet was struck by lightning about 11:30 p.m. and lost its right wing fuel tank near Batts in Menifee County. In at least three areas hail and wind damaged crops; hail smashed windows and caused other damage.

Eastern Counties

4 Aftn.

Thunderstorms at scattered locations east of 85° longitude occurred during the afternoon and evening hours. Fires apparently set by lightning burned at least one barn and damaged at least one other. Lightning strikes damaged at least 4 homes. Wind and rain caused considerable damage to corn, tobacco and fruit crops in at least one locality.

State

11 Aftn.

Scattered thunderstorms associated with the passage of a cold front through the State occurred during the afternoon and evening. Losses, chiefly to tobacco and corn, due to hail and wind occurred in several areas. In one location hail the size of ice cubes was reported. Wind was responsible for a number of trees and utility lines down. In some areas heavy rain totaled from 2 to 3 inches in 1 to 2 hours. There was minor flooding of business districts and streets in one locality, in western Kentucky. There was flooding of basements and cars and some ground washing (water knee-deep in some yards) in several areas in northern Kentucky. In Bourbon County, a woman was knocked unconscious by lightning. Over the State, two homes were destroyed and one damaged by fire apparently set by lightning; at least four barns burned.

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
KENTUCKY (Cont'd.)																			
Graves County	18	8:30 p.			0	0	?	4	Wind, hail	Duquessoc	8	PM			0	0	0	1	Hail
Western Counties	25						05	C	Hail, electrical, wind, rain	<p>Stones 3/4 inch diameter.</p> <p>Westernport cooperative weather observer reported 5.80 inches between 7:15 p. and 9:00 p., while the observer at Luke reported 4.54 inches, most of which fell at about the same time. Basements were flooded, washouts spread debris over roads and streets; some buildings and their contents were damaged.</p>									
LOUISIANA										MARYLAND									
Plaquemines Parish	4	11:08 a - 11:19 a.							Waterspout	Westernport - Luke area, Allegheyny County	30	6:45 p. - 11:00 p.			0	0	4	0	Thunderstorm with heavy rain
Southwest Division	5	3:45 p. - 9:00 p.			0	0	4	4	Thunderstorms, wind, heavy rain, funnel clouds aloft	Somerset and Worcester Counties	31	Early morning & afternoon			0	0	?	0	Heavy rain
Allen Parish	6	2:20 p.							Funnel cloud aloft	<p>Locally heavy showers from dissipating hurricane Cleo, giving rainfall totals up to 5.30 inches at Ocean City and at Snow Hill, brought some relief to an area suffering from the prolonged dry weather. No serious damage was reported.</p>									
Calcasieu Parish	7	9:24 a. - 10:50 a.							Funnel clouds aloft	MASACHUSETTS	19	5-6 PM			0	0	4	0	Lightning
Lake Pontchartrain	7	10:23 a.							Waterspout	Northeastern	26	Afternoon			0	0	4	0	Lightning, wind, rain
Lafayette Parish	12	5:00 p. - 5:14 p.							Funnel cloud aloft	Eastern	26	Afternoon			0	0	4	0	Lightning, wind, rain
Vermilion and Lafayette Parishes	14	2:58 p. - 4:00 p.	4		?	0	0	0	Tornado, funnel cloud aloft	Hampden and Hampshire Counties	31	Afternoon			0	0	4	0	Lightning, rain
Richland Parish	18	11:59 a.							Turbulence aloft	<p>Scattered lightning damage to utilities and buildings, including a fire at a Chicopee motel. Some washing and flooding damage from excessive short-duration rains. At Chester more than two inches of rain fell in an hour, from about 7 to 8 p.m., following an earlier thundershower which dropped more than one inch in the 45 minutes ending about 1 p.m.</p>									
Jennings and Eunice areas	19	a. - 4:00 p.			0	0	4	C	Heavy rain, Thunderstorms	<p>Buildings and utility lines damaged by lightning. Trees felled and utility lines damaged by wind. Also scattered local excessive rains flooded cellars and streets. A path of tree damage through Seekonk and the southern part of Rehoboth suggested the passage of a small twister.</p>									
Rapides Parish	21	Afternoon			1	2	0	0	Lightning	<p>Hampden and Hampshire Counties</p> <p>Scattered lightning damage to utilities and buildings, including a fire at a Chicopee motel. Some washing and flooding damage from excessive short-duration rains. At Chester more than two inches of rain fell in an hour, from about 7 to 8 p.m., following an earlier thundershower which dropped more than one inch in the 45 minutes ending about 1 p.m.</p>									
Lake Pontchartrain	22	5:44 p. - 5:50 p.							Waterspout	<p>Lightning induced fire destroyed large barn and contents of hay and machinery near Iron River and barn with hay contents near Daggett. Damage to several homes and contents reported due to fires caused by lightning. High winds wrecked large 4H building at Escanaba State Fairgrounds with estimated damage of 20 thousand dollars. Numerous wind felled trees caused damage to buildings and homes. Heavy rains in excess of 4 inches caused road washouts and some crop damage. Power service disrupted to hundreds of homes, buildings and businesses due to the storm. Small 32 foot lake cruiser damaged when hit by lightning on Lake Michigan near Escanaba.</p>									
Tangipahos Parish	30	5:30 p.			0	1	0	0	Lightning	<p>Entire Lower Michigan Area</p> <p>2-3 2:30 p. 2nd 6:00 a., 3rd</p> <p>Detroit youth was killed and his 3 young companions were injured when struck by lightning while seeking shelter beneath a tree. Elderly man killed when struck by lightning while standing in his back yard in Detroit. Man injured by storm felled tree limb at Utica. Lightning strike destroyed Drive In theatre movie screen at Mio with estimated damage of \$20,000.00. Fire due to lightning strike caused estimated 5 thousand dollars damage to hardware store building and contents at Riverdale near Alton. Several homes damaged due to fires caused by lightning. Large modern farm barn and contents of 900 tons of hay destroyed by lightning induced fire in Northfield Township near Ann Arbor with damage estimated at 35 thousand dollars. One horse burned to death in this same fire. Wind felled trees caused damage to homes, buildings and cars and in some instances blocked streets and roads. Numerous small boats, dock facilities and boat houses on inland lakes reported extensive damage due to high winds. Roads, streets and basements flooded with considerable damage reported. Power service disrupted to numerous homes and buildings throughout the entire area due mostly to high winds and lightning.</p>									

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MICHIGAN (Cont'd) Central and Southern Lower Michigan	11	1:00 a. 9:00 a. 1:00 p. 6:00 p.			1	5	C		Thunderstorms with heavy rains, high winds, hail and lightning
									Lightning caused numerous fires which destroyed several large modern farm barns with contents of hay and machinery and damaged many homes and buildings with contents. Woman treated for burned hand caused by lightning induced fire in Muskegon. High winds felled numerous trees with resultant damage to buildings, homes and cars. Roads and streets blocked in some areas due to the wind felled trees. Heavy rains in excess of 14 inches flooded streets, roads, highways and basements with resultant damage. Hail damaged crops in Lenawee and Monroe Counties with amount damage unknown at this time. Power service disrupted to hundreds of homes and buildings throughout the area due to the thunderstorms with high winds and lightning.
Escanaba	16	4:30 p.							Funnel Aloft
									Funnel aloft sighted near Rapid River and about 10 miles north of Escanaba.
Southern Lower Michigan	22	1:00 p. 9:30 p.			6	5			Thunderstorms with lightning, high winds, and heavy rains.
									Six persons were cut and injured by flying glass when high winds broke a large plate glass window in a restaurant in Battle Creek. High winds ripped roof and porch off of a home in Allegan. Wind felled trees caused damage to numerous homes, car, and buildings in the area. Considerable window breakage reported due to the high winds. Olivet and Eaton Rapids areas reported heavy damage due to the high winds and heavy rains. Power service disrupted to numerous homes due to high winds and flying debris cutting the power lines. Heavy rains caused some flooding of roads, streets and basements with resultant damage.
Southeastern Hillsdale County	22	2:25 p.	10	100	0	0	4		Tornado
									Tornado moved along a northeasterly path about 10 miles long. Tornado demolished barn and garage on Bird Lake Road, silo on Tuttle Road, and some steel cribs on South Waldron Road. Another barn was damaged on Tuttle Road and additional barn and feed room damaged on Burt Road. Roof and various portions of some of these farm buildings were ripped off and tossed or carried by tornadic winds some distance away. Numerous trees were uprooted along the ten mile path of the tornado. People in the area stated they heard a loud roaring noise.
Lenawee County	22	2:35 P.	?	?	0	2	4		Tornado
									Tornado struck and demolished farm home of Mr and Mrs R. Moore on Springville Highway who were inside the house at the time. They were both injured when tossed into the air and out of the house and subsequently hospitalized.
Lenawee County	22	2:40 p.	?	?	0	0	4		Tornado
									Tornado struck near Ridgeway and lifted roofs from several buildings and garages. Numerous trees were uprooted. Apartment house building damaged by felled trees. House trailer, chicken coup and sheds damaged by the tornadic winds.
Battle Creek	22	9:00 p.	7	?	3	5	C		Tornado
									Tornado first struck in Pennfield and Convis Township areas about 7 miles southeast of Battle Creek where a small house was lifted off its foundation and lifted and carried 80 feet away. Two people inside received minor injuries. Two barns and a garage were wrecked. New car demolished after being lifted into the air and then hurled into the ground. Numerous trees were uprooted including apple trees in the T. Grevers orchard. Large power tower wrecked which disrupted power service to numerous homes and buildings in the area. One minor injury reported which did not require medical treatment. Long wall of large factory building blown down with damage estimated at 30 thousand dollars.
MINNESOTA Worthington TNNW Nobles County	10	6:00 p.	2	75	0	0	4	3	Tornado
									A cornado, with visible funnel cloud, skipped through a rural area damaging or destroying buildings on three farms. Some livestock killed, one house damaged and trees shredded. Storm moved southeast.
Murray, Nobles and Jackson Counties	10	6:00 p.	?	?	0	0	?	4	Hail
									Hail up to two inches in diameter damaged or destroyed crops in scattered areas in three counties. Hail path up to three miles wide in places. Some property damage reported.
Ada (near) Norman County	27	6:30 p.	?	?	0	0	?	4	Hail
									Hail up to 2 1/2 inches in diameter damaged crops in an 8 square mile area west, north and south of Ada
Fosston, Polk County	27	7:30 a.	?	?	0	0	4	5	Hail
									Hail up to 1 1/2 inches in diameter stripped trees, damaged crops, broke windows and damaged roofs, siding and automobiles. Storm covered an area 10 miles long by 6 miles wide with principal damage near Fosston.
MINNESOTA (Cont'd.) Zumbro Falls 4E Wabasha County	28	1:00 a.	3 1/2	50	0	0	5	3	Tornado
									Tornado damaged or destroyed buildings on three farms. Trees twisted off and corn fields flattened. Storm moved north-northeast.
Canby 13NW Lac Qui Parle County	29	1:15 p.	?	?	0	1	0	0	Electrical
									Man injured slightly by lightning strike while talking on telephone.
MISSISSIPPI South Central Division	14	Afternoon			0	0	4	0	Thunderstorms, heavy rain, lightning
									MARION COUNTY: Foxworth, about 1 p., lightning set fire to 7-room residence, burned all its contents and destroyed cabin cruiser. Columbia, approximately 4 - 5 p., thunderstorm moved from SW towards NE, lightning set fire to barn, 3,000 bales hay and other contents burned. PIKE COUNTY: McComb, rain started about 2 p., flash flood put about 14 inches water in downtown streets in period of about 45 minutes. Before it stopped, water had run in several stores. Airport reported series of thunderstorms 1:50 p.-4:45 p., from N and NW moving SE and eastward, with total precipitation 2.10 inches.
Harrison County	15	9:55 a.- 10:00 a.							Funnel cloud aloft
									Biloxi: funnel cloud to NW observed moving ESE.
Leflore County SE to Leake County	15- 16	p.- a.			0	0	5	C	Heavy rain, wind
									Many places received over five inches of rain within six and one-half hours; some reports of heaviest rainfall in such a short time in recent years. Edinburg: 4:25 inches fell from 11:00 p.-1:00 a. Damage done by high winds and rains to streets, highways, farm crops, and private homes and property. Many acres of cotton, particularly in low land, knocked down by water that flooded fields. Some bridges washed out. A 10-ft. rise in the Pearl River occurred at Edinburg on the 16th. The one-day rainfall measured at 7:00 a., 16th, at Carrollton was 6.40 inches.
Leake County	21	5:45 p.							Funnel cloud aloft
									Fifteen WNW Union: pilot reported funnel cloud.
Newton County	23	4:05 p.							Funnel clouds aloft
									Twelve W Meridian (32.4° N Lat., 89.0° W Long.), Patrol reported several funnel clouds aloft, also observed on Meridian radar.
MISSOURI Campbell, Dunklin County	4	late afternoon							Thunderstorm
									Several homes damaged, large trees uprooted. Equipment at power plant registered steady winds of 60-70 miles per hour, with gusts up to 90-100.
Southeast Missouri	4	late afternoon							Thunderstorm
									One-inch hail and damaging winds at Kennett and Ste. Genevieve.
Hilliard, Butler County	11							minor	Thunderstorm
									Hail, with occasional hailstones weighing one-half pound.
DeKalb, Daviess, Grundy and Sullivan Counties	20	7:30 - 8:30 PM							Tornado
									Tornado first touched down on a farm one mile north of Amity, in DeKalb County. Several farm buildings were damaged. The farm family heard a roaring noise, and a number of athletic trophies which were on a table near a window were sucked out of the window and found later in a field some distance from the house. Storm damage was reported at about 8:30 pm in and near Cameron. Sometime about 8:30 pm, tornado damage was reported on a farm 3 miles west of Edinburg, in Grundy County. There was a similar report from a point two miles northeast. Later in the evening, several farms west and east of Milan, in Sullivan County were hit by a tornado. It is not possible, with the evidence at hand as this is being written, to state definitely that these reports of damage were the result of a single tornado. It is interesting to note that the locations and times indicate a definite path of some parent thunderstorms, which may have spawned several funnels as they moved along toward the northeast.
St. Joseph, Buchanan County	20	6:30-7:30 PM							Thunderstorm
									Trees, power and telephone lines down. Wind measured at 50-60 miles per hour. Many basements flooded and some lightning damage to homes.
Kansas City, Clay County	20	9:00 PM							Thunderstorm
									Damage to power, telephone lines. Some wind damage to homes.
Dexter, Stoddard County	21	0:40 AM							Funnel Aloft
St. Louis, St. Louis County	30	1:30 PM			5	minor			Thunderstorm
									Trailer upset by wind.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1964

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	
					KILLED	INJURED	PROPERTY	CROPS		
MONTANA Tampico-Lerslan-Opheim area, Valley County	1	Evening	40	8*	0	0	0	5	Hail	
			Hail damage was spotty throughout the area with most damage around Tampico and Lerslan. The storm reached into southwest Daniels County. Some hailstones golf ball size.							
Wolf Point, Roosevelt County	1	Early Evening	?	?	0	0	0	0	Tornado	
			Storm small and did very little damage. A few tree limbs were twisted off and some cottonwood trees knocked down.							
Sidney, Richland County	16	4 P.M.	?	?	1	0	0	0	Lightning	
			A man was killed by a lightning strike while standing under a large tree during a thunderstorm.							
Central Montana	18	Night	?	?	0	0	0	4	Lightning	
			Lightning strikes set a large number of range fires in Musselshell, Garfield, Phillips, Choteau, and Blaine Counties. The largest one was north of Loring (Phillips County) where 13,000 acres of range were burned.							
Wibaux, Wibaux County	29	Forenoon	?	?	0	1	2	0	Lightning	
			A service station attendant was stunned when a bolt of lightning hit a nearby building.							
NEBRASKA McCook	5	6:30 p	Spot	Spot	0	0	5	0	Lightning	
			Elevator and grain burned after being struck by lightning.							
Staplehurst	5	Morning	Spot	Spot	0	1	0	0	Lightning	
			Woman knocked unconscious when lightning struck near the farmyard.							
Northeastern Nebraska	10	3:30 p - 5:00 p	30	80*	0	0	5	5	Damaging Winds, Hail	
			Hail and damaging winds reported from Clearwater to Allen. Individual storm cells moved southeastward across the area leaving strips of damage up to 2 miles wide and 10-15 miles long. Farm buildings were damaged and trees uprooted. Hail was generally small but ranged up to 3/4" diameter in some areas. Damage mostly from winds and hail but turbulent motion resulted in some vortex activity, and at least one tornado as shown in next item.							
Belden-Laurel Vicinity	10	4:12 p	Short	Narrow	0	0	4	0	Tornado	
Hamilton County	10	5:00 - 5:30 p	18	1700	0	0	0	4	Hail	
			Isolated strip extending from 2 SE of Giltner to 4 SE Aurora.							
Byron	17	9:00 a			0	0	0	0	Funnel Cloud	
10 N McCook	17	7:15 p - 7:25 p	?	?	0	0	0	4	Hail	
			Stones up to 1" diameter.							
Culbertson	19	7:00 p	Short	Narrow	0	0	4	0	Damaging Winds	
			Roofs damaged, trees uprooted.							
Omaha	20	Afternoon	Spot	Spot	1	0	0	0	Lightning	
			Man killed in yard of his home.							
Southeastern Nebraska	24	4:30 p - 6:00 p			0	0	4	4	Damaging Winds	
			Scattered areas of building and tree damage from near Beatrice to Nemaha.							
10 E Grand Island	27	2:15 p			0	0	0	0	Funnel Clouds	
			Funnel dipped and withdrew into clouds several times.							
Southeastern Nebraska	27	4:30 p - 7:00 p	80	5*	0	0	5	4	Damaging Winds	
			A severe windstorm accompanied by heavy rain broke out near Fairbury at 4:30 p and moved northeastward. Tree and building damage reported in Jefferson, Gage, Otoe, and Cass Counties. Corn stalks broken in some areas.							
Curtis Vicinity	31	5:00 p	?	?	0	0	4	0	Tornado	
			Several farm sites destroyed. Three funnels were sighted aloft; apparently one touched down.							
NEVADA			No report received by printing deadline							
NEW HAMPSHIRE State	8				0	0	3	3	Lightning, wind	
			Scattered and mostly minor damage to utilities, trees, and crops.							
NEW JERSEY			None reported							
NEW MEXICO San Juan County	14				1				Lightning	
			One man struck and killed by lightning while walking near his home in Kinabeto area of the Navajo Reservation, about 50 miles southeast of Farmington.							
NEW YORK Poughkeepsie, Dutchess County	5	4 p.m.					4		Electrical, hail, wind	
			Violent local electrical storm confined to city area. Home extensively damaged by delayed lightning-caused fire. Glass panes in large greenhouse destroyed by marble-size hail. Scattered power failures resulting from trees and lines downed by strong winds.							
Chemung County and Mohawk Valley	8	early a.m.					5		Electrical	
			Early morning thunderstorms resulted in scattered lightning-caused fires in south central and central areas of state. Large dairy barns, each containing farm implements, machinery and/or considerable quantities of hay were destroyed near Elmira, Chemung County, Westmoreland, Oneida County and Salisbury, Herkimer County.							
State, except southeast	11-12	early p.m. to early a.m.					5	5	Electrical, wind, hail, rain	
			Violent thunderstorms with destructive wind and hail struck extreme western counties on afternoon and evening of 11th. Crops riddled by hail and blown over by winds in local areas near Lockport, Niagara County and Hamburg-Eden area, Erie County. Winds destroyed large tent at Fair Grounds near Lockport and unroofed concrete-block livestock shelter and barn near North Collins, Erie County. Five cows killed by lightning near Medina, Orleans County. Widespread damage to trees and power lines in belt of counties near Lake Erie from Niagara southward to Chautauq; also scattered damage in Jamestown, Binghamton and Watertown areas. Thunderstorms moved eastward during night with damage occurring in east central counties. Lightning-caused fires destroyed homes near Cooperstown, Otsego County and rural church in Delaware County early morning of 12th. Locally heavy rains, with some 2.0 inches reported to have fallen in less than two hours, occurred at Plattsburgh about 8 a.m. on 12th. Widespread flooding of streets and basements of stores and homes resulted.							
50 miles west of Buffalo	14	8:25 p.m.							Funnel clouds	
			Pilot reported sighting three funnel clouds over Lake Erie. One hour earlier waterspout reported over Lake Erie, north northwest of Erie, Pa.							
Erie and Broome Counties	18	p.m.					4		Electrical	
			Lightning-caused fire extensively damaged home at Darien, Erie County, during afternoon, while late evening fire destroyed dairy barn and contents near Broome-Delaware County line in south central part of state.							
Poughkeepsie, Dutchess County	22	5 to 6 p.m.					4		Rain	
			Third heavy rain in three weeks confined largely to the city area. From 1.0 to 1.5 inches of rain fell within approximately 60 minutes. Widespread flooding of streets and basements of homes and business establishments. Large section of street pavement collapsed in downtown area.							
NORTH CAROLINA Hertford and Randolph Counties	1	9:10 pm					3	4	Electrical, Hail	
			Lightning struck and partially burned home in Asheboro. Hail damaged tobacco in Hertford County fields.							
Catawba, Forsyth, Surry and Yadkin Counties	2	aftn & evening				1	0	3	4	Electrical, Hail, Wind
			Lightning struck and killed 13-year-old girl in her home at Newton. Home slightly damaged. Hail and wind did scattered damage over parts of three counties.							
Alamance, Beaufort, Buncombe, Cabarrus, Davidson, Durham, Guilford, Haywood, Hertford, Martin, Mecklenburg, Rockingham, Vance, Wayne, Wake & Wilkes Counties	3	aftn & evening					4	0	Electrical, Wind	
			Widespread thunderstorms caused minor damage in many areas. Lightning started numerous fires, and disrupted power and telephone service several places. Numerous trees were blown down, a few falling on and damaging houses and autos.							
Forsyth, Franklin, Moore and Stokes Counties	4	aftn & evening					4	5	Electrical, Hail	
			Lightning killed seven cattle at Franklinton, and damaged a church at Robbins. Hail damaged tobacco in Forsyth and Stokes Counties.							
Alamance, Granville, Halifax, Hertford, Iredell, Person and Vance Counties	8	aftn & evening				1	0	4	4	Electrical, Hail, Wind
			Man killed by lightning in Henderson while attempting to repair television antenna. Lightning also set several fires in widely separated areas, and killed four cows in Alamance County. Hail did scattered damage to crops, mostly tobacco; wind blew down trees, damaging roofs and autos.							
Mecklenburg County	10	5:45 pm	short	narrow			2	3	Small Tornado; Hail	
			Shed demolished at Mint Hill. Funnel reported seen, and roaring sound heard. Hook reported on FAA radar. Accompanying hail damaged crops in area.							

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STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1964

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					KILLED	INJURED	PROPERTY	CROPS	
NORTH CAROLINA (Cont'd.)									
Cabarrus, Catawba, Forsyth, Martin, Randolph, Rowan, Surry, Wayne and Yadkin Counties	10	aftn & evening			0	1	5	5	Electrical, Hail, Wind, Rain
									Violent thunderstorms reported several areas. Man injured by lightning in Martin County while using telephone. Large bowling alley burned and several lesser fires attributed to lightning. Heavy rains flooded storm sewers and basements, caused washouts. Hail damaged crops in three counties.
Cabarrus, Cumberland, Forsyth & Montgomery Counties	12	aftn			0	2	3	3	Electrical, Hail, Wind
									Lightning injured man in Concord and woman in Winston-Salem. Power lines damaged one of two areas. Hail caused scattered damage to tobacco in Montgomery County. Wind damaged roofs and antennas.
Franklin and Warren Counties	15	aftn & evening					0	4	Hail
									Tobacco crop damaged in two areas.
Forsyth, Mash and Yadkin Counties	19	7-9 pm					0	4	Hail
									Tobacco crop damaged several areas.
Nash County	20	2:30 am					0	4	Hail
									Tobacco damaged over a three square mile area.
Cumberland, Harnett & New Hanover Counties	24	aftn & evening			0	1	3	3	Electrical, Hail
									Woman knocked unconscious by lightning while hanging out clothes near Fayetteville. Lightning also caused several cases of minor damage to buildings and power facilities. Hail damaged tobacco.
Cumberland, Granville, Randolph & Robeson Counties	25	aftn & evening					4	0	Electrical
									Two mules killed by lightning in Granville County. Several scattered cases of buildings damaged, power and telephone lines out.
Durham, Granville, Martin, Orange, Pitt & Wayne Counties	26	aftn					4	4	Electrical, Hail
									Lightning set several small fires. Hail damaged tobacco crop.
Yadkin County	27	evening					4	0	Electrical
									Feed barn and several livestock burned in fire set by lightning.
Richmond and Scotland Counties	29	2:30-4pm	25	50	0	15	5	0	Tornado
									Tornado moved west-northwestward from East Laurinburg about one-half mile toward center of town, demolishing two churches, six house trailers and a dozen or more frame buildings and damaging others. Skipped about one-half mile and struck again in downtown Laurinburg, unroofing several brick business buildings. Touched down again about 2 1/2 miles northwest, overturning a house trailer and damaging a home and several outbuildings. Funnel seen and roaring sound heard.
Robeson and Scotland Counties	30	4 am	short narrow				4	3	Tornado
									A second tornado damaged several homes in Laurinburg around 4 o'clock in the morning; may have been the same storm that damaged an area near Lumber Bridge several miles southeast at an unknown hour, upsetting some farm machinery and blowing down crops.
Martin & Pitt Counties	31	4 pm	short narrow	0	2	5	0	0	Tornado or Tornadoes
									Damage to two small areas in northern Pitt County and one area in nearby Martin County. Several farm buildings demolished; truck picked up and moved some distance; peanut harvester similarly transported. Funnel seen, but direction of movement not established. Slight but abrupt wind damage at Roanoke Rapids (about 60 miles northwest) about four hours later may have been associated with these storms.
Statewide	29-Sept. 1						5	5	Rain
									Rains of two to eight inches fell with the approach and passage across North Carolina of the remains of Hurricane Cleo. In the south central and northeastern sections and scattered over other parts of the State were areas where flash-flooding of streams occurred, with breakage of farm dams, flooding of storm sewers and basements, and washouts of fields and roads. Considerable crop damage due to washing of fields. Winds were not generally strong; see previous three entries for severe local wind reports.
NORTH DAKOTA									
McIntosh County	17	3:00PM	7		0	0	0	4	Hailstorm
									Egg-size hailstones lay on the ground to a depth of several inches.
Barnes County	27	3:00AM			0	0	3	0	Tornado
									Tornado touched down on a farm near Litchville and destroyed several buildings.
NORTH DAKOTA (Cont'd.)									
Barnes and Cass Counties	27	Early Morning	75	*15	0	0	3	4	Hailstorm
									Hailstorm with hailstones as large as golf balls or silver dollars moved through northern Barnes and northern Cass Counties.
Hettinger County	29	3:00PM			0	0	0	0	Funnel clouds
									Several funnel clouds observed northeast of Burt.
	29	3:00PM			0	0	0	0	Tornado
									A tornado was seen to touch ground north of Mott.
	29	6:20PM			0	0	3	0	Tornado
									A tornado was seen to lift a barn above the trees before the barn exploded.
Oliver County	31	7:00PM							Funnel clouds
									Several funnel clouds observed in the vicinity of Center.
OHIO									
Northern Ohio	11	Afternoon							Funnel Clouds
									Numerous reports of funnel clouds were received from widely scattered locations over northern Ohio during the afternoon in connection with general thunderstorm activity. Some cases of localized wind damage were reported, but none appeared caused by tornadoes.
London	11	Afternoon			1	0			Lightning
									An inmate of the London Correctional Institution was killed by lightning while playing in a baseball game on the prison grounds.
Wellington	11								Large Hail
									3/4 inch hailstones were reported near Wellington in connection with general thunderstorm activity over northern Ohio.
Alvada	22	6:30 PM	Short Narrow		0	0	0	C	Tornado
									A funnel cloud traveling eastward along Route 244 east of Findlay touched down 1 mile west of Alvada, destroying a large cattle shed and several pieces of farm machinery.
Middlefield	22	9:30 PM	Short Narrow		0	0	3	0	Tornado
									A small tornado struck in the western edge of Middlefield during the evening. Without doing more than superficial damage to nearby trees, etc. it completely destroyed a private garage in this residential area.
Bridgewater	22	1:30 PM	Short Narrow		0	0	0	C	Tornado
									Striking during early afternoon, a small-scale tornado demolished a barn and several but-buildings on a farm 4 1/2 miles northwest of Bridgewater. A bull, several chickens, and 2 hogs were killed as the barn was blown down. The house escaped damage but a narrow swath was cut through an adjacent woodlot.
OKLAHOMA									
Stillwater, near, Payne County	11	Afternoon			0	1	1	?	Wind
									One fireman suffered burns when gusty winds caused a grass fire to lash out in his direction. About 150 acres of grassland were blackened by the lightning-set fire.
Ferry Community, Woods County	13	7:25p.-7:50p.	20	*4	0	0	4	0	Funnels aloft and Tornado
									Three funnels aloft were observed moving southeastward across the Ferry Community. At least one tornado was believed to have touched down at the Ferry school where 4 school buildings and a nearby residence received heavy roof damage, bulged walls, blown-out windows and extensive water damage. The storm shelter door was sucked open and a trailer parked in the yard was whirled overhead along with tree limbs and other debris. Three other homes in the area received minor damage.
Osage County	14	Midnight-7:00a.	30	*10	0	0	?	?	Rain
									Heavy thundershowers moved east-southeast across northeast Oklahoma with locally heavy totals of 3.32 inches received at Foraker and 3.05 inches at Pawtucka. Unofficial totals of 5.0 to 5.6 inches were reported along Bird Creek with heaviest total indicated nine miles southeast of Foraker. Some gravel roads in area were partially washed out.
East-Central Oklahoma	14-15	5:00p.-7:00a., 15th			0	0	0	0	Rain
									Moderate to locally heavy thundershowers moved southward over the east-central part of Oklahoma and totaled mostly 3 to 5 inches across Okfuskee, Okmulgee, Creek, Lincoln, Haskell, Pittsburg, and Letimer Counties. Heaviest totals of 7.70 inches were received at Wilburton, 5.32 inches at Chandler, and 4.10 inches at Bristow. No damage reported.

See reference notes at end of table.

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AUGUST 1964

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					KILLED	INJURED	PROPERTY	CROPS	
OKLAHOMA (Cont'd.) Sand Springs, Tulsa County	14	About 6:45p.			0	2	0	0	Electrical
									Two girls were knocked unconscious but escaped serious injury when lightning struck and entered their home.
Harper, Ellis, and Dewey Counties	17	5:00p.-Midnight			0	0	5	4	Hail, tornado, electrical, and wind
									Two major thunderstorms moved southeast across the area between 5:00p. to 8:00p., and 11:00p. to midnight. Scattered hail paths heavily damaged cotton, feed crops, and buildings southeast from Cateby, and northwest and south of Gage in Ellis County. About 1000 acres of cotton and feed crops were ruined in the Leedeey area, Dewey County. Hail averaging 1-inch size with some up to 2 1/2-inch size covered the ground in places up to 1 inch deep and along 3- by 5-mile paths. A small tornado was sighted on the ground briefly 5 miles south-southwest of Cateby, Ellis County, about 6PM with no damage reported. Lightning-set fires destroyed a barn at Selman, Harper County, and a home and contents 4 miles east-southeast of Harmon, Ellis County. High winds damaged roofs and downed power lines and trees in several parts of Harper County, while gusts up to 69 MPH were observed at Gage about 8PM. Hail damage 73% of \$68,000 total, electrical 22%, and wind 3%.
Jennings, Pawnee County	17	About Midnight			0	0	4	0	Electrical
									A lightning-set fire destroyed a six room home and contents.
Oklahoma City, Oklahoma County	20	About Midnight			0	2	2	0	Electrical
									Lightning struck a home in the 8000 block of SW 29th Street. The chimney exploded into an upstairs apartment causing minor injury to two persons. The crashing chimney flue damaged the walls, ceiling, and furnishings.
Blackwell, Kay County	24	9:38p.			0	0	0	0	Hail
									A few hail up to 1 inch in diameter reported 1 mile west of City.
Kay County	24	10:00p.-10:30p.			0	0	4	0	Electrical
									Lightning destroyed a hay barn near Blackwell and another near Ponca City where a home was also heavily damaged. A bolt of lightning ripped into the house walls, blew off the front door, and broke water lines.
Shidler, near, Osage County	24	About 11:00p.			0	0	4	0	Electrical
									A modern farm home located 6 miles east of Shidler was struck by lightning and destroyed by the resulting fire.
Central Washington County	25-26	10:00p., 25th - 2:30a., 26th	10	*3	0	0	5	0	Hail, wind, and electrical
									Heavy 35-minute hailstorm began in the Dewey area about 10PM. Storms averaging about 2-inch size nearly covered the ground with some stones up to 3 inches in diameter. Leaves were stripped from trees with some damage to roofs and cars. High winds buffeted the area after midnight when some trees blow over, power lines broke, and hail up to 1-inch size fell in the northeast part of Bartlesville. Lightning damage caused extensive electric outages for 3,500 customers up to 3 hours.
Mayes and Delaware Counties	25-26	10:30p., 25th 11:20a., 26th	30	*10	0	0	0	0	Rain
									A heavy thunderstorm moved eastward across the northeast corner of Mayes County into the central part of Delaware County producing rains of 5.61 inches at Grand River Dam and 5.20 inches at Upper Spawlnaw Port. Rain elsewhere in these counties totaled over 3 inches. No damage reported.
Nowata, Nowata County	26	Early Morning			0	0	4	0	Rain and wind
									High wind with rain totaling 2.41 inches at Nowata caused water to accumulate on the flat roof of a church. The roof and second floor wall collapsed nearly destroying the building. Numerous trees and power lines were downed in the area and considerable damage to roofs and carports was reported. Many homes were damaged by leaking roofs.
Pryor, Mayes County	26	3:30a.			0	0	4	0	Electrical
									A large barn containing 100 tons of hay was struck by lightning 1 mile northwest of Pryor and totally destroyed.
Pawnee, Pawnee County	26	3:30p.							Funnels aloft
									Residents one mile south of Pawnee observed 3 funnels aloft overhead travelling southeast. The funnels came down about 300 feet below the cloud base 4 different times before finally dissipating. No damage was reported.
OKLAHOMA (Cont'd.) Maysville, near, Garvin County	26	3:30p.-4:45p.			0	0	3	0	Tornado and funnels aloft
									Three funnels aloft were sighted 3 miles east of Maysville where one dropped to the ground briefly as a small tornado and took the tops off of 2 barns with one nearly destroyed. Maize crops one-third destroyed.
Stephens, Jefferson, Carter, and Love Counties	26	6:00p.-9:00p.	45	*10	0	0	5	4	Wind, electrical, hail, and rain
									Severe thunderstorms moved southeast across the area from Velma, Stephens County, into the western part of Love County. An oil well service rig was heavily damaged when blown over at Velma. A lightning-set fire also destroyed a home east of that community while large hail broke windows, dented a number of automobiles and pickups, and knocked paint from buildings. Unofficial measurements of 3 to 6 1/2 inches of rain were indicated for the Velma, Loco, and Ringling areas. Rapid accumulation of rain water caused the roof of a Ringling motor company to cave in, destroying a new automobile and wrecking the building. Strong winds also blew out plate glass windows, destroyed a barn and chicken house near Dundee, and downed utility poles west of Ringling. Wind damage 58% of \$207,800 total, electric 5%, hail 20%, and rain 17%.
Tillman and Kiowa Counties	26	6:15p.-7:00p.	20	*6.8	0	0	5	C	Hail
									The center of a destructive hailstorm moved northeast across the Snyder-Mountain Park area. Hail covering 50% to 75% of the ground at Snyder averaged 1-inch size with some up to 2 5/8-inch size. Some damage was done to cotton and trees, with roof tops, neon signs, and automobiles accounting for most of the damage.
Kay County	27	9:10p.							Funnel aloft
									Two storm watchers first sighted a funnel aloft northwest of Blackwell at 9:10 PM. It changed from a southeastward movement over the Cities Service L. P. Plant and they followed it 15 miles east-northeast to a point near Newkirk. It was described as "really a big one" but never did touch the ground.
Orlando, Logan County	27	10:22p.-10:35p.	5	150-440	0	0	3	0	Tornado
									Orlando fire chief observed a funnel aloft moving east 1 1/2 miles south of the city. The funnel remained 400 to 500 yards above the ground. Others watching saw it dip to the ground momentarily where it tore out electric power lines. Scattered wind damage occurred along the path with many utility lines damaged across the northern part of the County.
Ponca City, Kay County	27	Midnight			0	0	4	0	Electrical
									A 10-room farm home located 1 1/2 miles west of the City was struck by lightning and totally destroyed by the resulting fire.
Greer County	29	3:15p.-4:30p.	15	*6	0	0	3	4	Wind and hail
									A severe thunderstorm moved northeast across the northeast quarter of the County. The wind downed many limbs from trees and damaged farm building roofs a mile north of Mangum. Some damage to awnings, roofs, windows, and trees at Granite. Greatest loss from cotton hailed out on 10 farms along a several mile strip in the Lake Creek area which received damage from 25% to 50%.
Marlow, Stephens County	29	6:00p.-8:45p.			0	0	*3	C	Wind and funnel aloft
									A funnel aloft was sighted southwest of Marlow just prior to high winds which occurred about 6:30p. Windows were blown out, an airplane was pulled from its moorings and tossed onto railroad tracks and numerous trees and electrical lines were blown down to darken parts of the City up to 2 1/2 hours. A barn was heavily damaged southwest of the City and a large number of pecans were blown from trees in the City.
Blackwell, Kay County	29	7:00p.			0	0	?	?	Wind
									A heavy thunderstorm moving southeast across the area produced winds gusting to 52 MPH a mile west of Blackwell. City police estimated gusts of 75 to 90 MPH in the City where large trees were uprooted and limbs, lines, and utility poles were downed which blacked out streets. Drivers reported difficulty in keeping cars on the road.
Sequoyah County	30	4:00a.			0	0	4	0	Electrical
									Lightning was believed to be the cause of a fire which destroyed a drive-in dairy bar located at Elk Creek on Lake Tenkiller.
OREGON									None reported
PACIFIC AREA									None reported
PENNSYLVANIA									
Near Butler	3	7:00 A.M.					4		Thunderstorm
									Lightning fired and destroyed a barn and contents valued at \$10,000.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1964

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
PENNSYLVANIA (Cont'd.) Near Shamokin	8	Afternoon				4			Wind
									Strong gusts of wind collapsed steel framing being erected at a new industrial plant. Damage estimated at \$11,000.
	11	Afternoon & Night					5		Thunderstorms
									Lightning from numerous thunderstorms fired and destroyed several barns and their contents with losses placed at \$30,000. Strong winds accompanying the storms downed many trees and utility lines, unroofed several buildings and ripped several fair tents before blowing them down. Total wind damage was estimated at \$40,000.
Nanticoke	12	Early Morning					5		Thunderstorm
									Lightning struck a bakery which was completely destroyed by the fire that resulted. Damage to building and contents, including two bakery trucks and an auto, was estimated at more than \$100,000.
PUERTO RICO									No report received by printing deadline
RHODE ISLAND Providence, Cranston; Providence County	26	12:50 p.			0	0	5	0	Thunderstorms
									Local thunderstorms caused heavy losses in property, merchandise, services and manhours of work as some sections received up to 2 1/2 inches of rain in less than two hours. Road washouts were common. Downtown Providence was especially hard hit as flood waters reached depths of five feet. Water seepage into cables disrupted power to 50,000 customers.
SOUTH CAROLINA Florence, 12-15 mi.S, Florence County	9	7:30 p	very small		0	0	1	0	Tornado
			Slight damage to trees.						
Myrtle Beach, 19 mi.N, Horry County	25	1:15 p			0	0	0	0	Funnel Cloud
South Carolina	29-31	continuous			See tornadoes associated with Cleo	5	5		Tropical Storm
									Tropical storm Cleo approached the vicinity of South Carolina early morning of the 29th near Savannah, then moved to near Augusta by the morning of the 30th - she moved northward to near Greenwood about 8 a.m. on the 30th and left South Carolina early on the 31st from York County. During her passage Cleo caused very heavy rains, especially in the Savannah and Saluda River Basins. Storm rains ranging from over three to over eight inches were widespread, causing scattered local road flooding, especially in Greenwood, Johnston, Sumter and Aiken which damaged property and streets. Some flooding occurred in the western straits of South Carolina - damage from wind was negligible. For tornadoes and funnels associated with Cleo, see below:
Lawton Bluff, Charleston County	29	1:10 a	very small		0	0	3	0	Tornado
			Associated with Tropical storm Cleo.						
Bethersa, Berkeley County	29	1:40 a	very small		0	0	2	0	Tornado
			Associated with Tropical storm Cleo.						
Columbia, 14 mi.NW, Richland County	29	4:00 p	1	90	0	0	5	0	Tornado
			Moving east to west, associated with Tropical storm Cleo.						
Cassat, Kershaw County	29	late aft.	1/8	25	0	0	3	0	Tornado
			Associated with Tropical storm Cleo.						
Darlington, Darlington County	29	9:30 p	1/10	15	0	2	3	0	Tornado
			Associated with Tropical storm Cleo.						
Timmonsville, Florence County	29	12 mid	1/10	20	0	0	3	0	Tornado
			Associated with Tropical storm Cleo.						
Darlington, North, Darlington County	30	1:45 p			0	0	0	0	Funnel Cloud
			Associated with Tropical storm Cleo.						
SOUTH DAKOTA Bison	1	6:00 - 6:30 p	?	?	0	0	4	0	Tornado
									Storm moved from SE toward NW across airport damaging 3 hangars, 2 airplanes and nearby lumber storage building.
NRN Perkins County	4	5:00 - 6:00 p	35	*1	0	0	4	4	Hail
									Hail averaged 1/2 inch with largest 4 inches. Storm moved from NW to SE passing near Lodgepole.
NW Hyde County	5	8:00 - 9:00 p	35	*3	0	0	4	4	Wind
									Storm moved from SW to NE passing SW of Highmore.
NRN Half of State	13	Early AM			0	?			Frost
									Frost damaged row crops in scattered low areas.
Hazel - Hayti Area	17	4:00 - 4:30 p	15	*7	0	0	3	4	Hail
									Hail averaged 1/2 inch with largest 2 inches.
Near Eagle Butte	21	8:30 - 10:00 p	10	*2	0	0	3	4	Hail
									Hail averaged 1/2 inch with largest 1 inch. Storm moved from W to E.
Lead - Deadwood Area	21-22		4	2600	0	0	4	0	Wind and Rain
									Lead received 6.23 and Deadwood 5.24 inches of rain in 24 hours. Storm caused two landslides and extensive damage to utility lines and other property.
TENNESSEE Upper East Tennessee	3	7-9 p.			0	3	4	0	Windstorm and thunderstorm
									High winds caused one injury at Rogersville to a 46-year old man and one injury at Kingsport to a 51-year old man when they were struck by falling trees. Three airplanes and a Hangar were damaged at Johnson City Airport. A tent collapsed at Johnson City and injured one person. Considerable damage to trees, power lines and minor damages to several homes were reported.
Columbia, Maury County	8	PM	2 mi	1/2 mi	0	0	0	3	Hail
									Hail one inch in diameter caused crop damage in Zion Community near Columbia
Bristol, Sullivan County	11	PM			0	1	0	0	Lightning
									A 16-year old boy was struck by lightning while taking shelter in a boathouse at Steele Creek Park.
Dunlap, Sequatchie County	12	3:30 a.	3/4 mi	?	0	6	4	0	Tornado
									Six persons were injured while sleeping when their home was destroyed by a tornado.
TEXAS Kirbyville, Jasper Co.	5	3:45 p	?	?	0	0	?	0	Wind
									Strong winds partially unroofed several homes and buildings in Kirbyville and the surrounding area. A large lumber shed was also damaged extensively.
Jefferson Co.	5	6:20 p	?	?	0	6	5	0	Tornado, wind
									Strong winds and a tornado injured six persons and caused considerable property damage in the southeast portion of Jefferson County. A tornado in the Keith Lake area, about five miles north of Sabine Pass hurled a small foreign car into a ditch, injuring four of the five passengers. The strong winds battered the Port Arthur area, causing \$100,000 damage to a grain elevator, and injuring two persons in the Groves community. A small vacant frame house near Keith Lake was lifted off its foundation by the tornado, and a number of rooftops were blown from houses in Sabine Pass. Trees were toppled and power lines blown down in the area. Wind gusts of 73 mph were recorded at 6:02 P. M., at the Weather Bureau Airport Station at Nederland. The Coast Guard station at Sabine Pass recorded wind gusts up to 109 mph. Total property damage was estimated at more than \$150,000.
Baytown, Harris Co.	5	6:30 p	?	?	0	0	4	0	Wind
									A violent windstorm demolished a hangar at Humphrey Airport on Barkuloo Road off North Main Street and the Youth Fair building on the Fair grounds on North Main Extension. In Baytown, new construction on the Open Door Baptist Church at 1100 Cedar Bayou Road was blown down, and the roof was blown off the Pinzel home at 111 Bellview Drive. Numerous trees and power lines were blown down by the wind, while streets were littered with debris. A number of plate glass windows were blown out.
San Antonio, Bexar Co.	6	7:30 p	?	?	0	2	5	0	Wind
									Thunderstorm winds measured at 30 mph unroofed an apartment house, partially unroofed several other buildings, blew down a 407-foot radio tower, and blew out numerous plate-glass windows in San Antonio. Two persons were injured by flying glass, shattered by the wind. Three airplanes received minor damage at Randolph AFB. Plate glass damage was extensive in the downtown area.
Upper Coast	7				0	0	5	6	Tropical storm Abby
									Tropical storm Abby developed rapidly around noon, August 7th, just off the upper Texas coast, about 40 miles east of Matagorda, Texas. It began to move westward about 10 mph with highest winds estimated at 60 mph in squalls near the center. The small tropical storm moved inland just northeast of Matagorda, Texas around 4:00 P. M. The highest wind observed on shore was 45 mph from the south-southwest, with gusts to 65 mph, at Matagorda at 5:00 P. M. The highest tide was 2.7 feet MSL, observed at Galveston at 1:20 A. M., and at Matagorda at 6:00 P. M. on the 7th. The lowest barometric pressure observed was 29.66 inches at 5:00 P. M. at Matagorda, also on the 7th. The storm moved slowly westward and by 9:00 P. M. was centered over Edna, Texas, and showed some decrease in activity. Abby continued to weaken and by the morning of the 8th had degenerated into an area of showers in the Victoria-Cuero area. Locally heavy rains accompanied the tropical storm across the coastal plain with the largest amounts falling during the early morning hours of the 8th. From five to seven inches were reported from gages in Victoria and Karnes Counties, and from the northern part of Bee County. There were no deaths or injuries from the storm. Property damage is estimated at \$150,000 and crop damage at \$600,000. Most of the property damage was the result of flooding in and around Victoria, Texas. The storm hit in the middle of the rice harvest and near the beginning of the cotton harvest; as a result, both crops were damaged by the wind and driving rain. Crop damage was estimated at \$250,000 in Victoria County and at \$275,000 in Jackson County.
San Antonio, Bexar Co.	7	afternoon			1	0	0	0	Lightning
									A 17-year old San Antonio youth was killed when he was struck by lightning as he delivered newspapers in the 500 block of Marchmont Street.
1 N Claytonville, Swisher Co.	7	5:30 p - 6:00 p	3	*1 1/2	0	0	?	5	Hail
									Small hail resulted in estimated 100 per cent loss to about 300 acres of cotton and 200 acres of maize. Soybean and castorbean crops were also damaged. The ground was completely covered in places, by the hail. Strong winds accompanying the hail storm were estimated at 50 to 70 mph.
25 S Houston, Brazoria Co.	8	9:25 a							Funnel aloft

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

AUGUST 1964

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	
					KILLED	INURED	PROPERTY	CROPS		
TEXAS (Cont'd.) Seminole, near, Gaines Co.	11	6:10 p-6:25 p	?	?	0	1	?	?	Wind, hail	
									Winds accompanying a thunderstorm completely wrecked a concrete block storage building on the Wayne Bryant farm about five miles west of Seminole. One man was injured in the collapse of the building. Portions of the building were blown as much as 300 yards to the west by the high winds. Damage to the building was estimated at \$3000. A Stearman crop dusting plane was picked up by the wind and blown about 100 yards, damaging the right lower wing. Farmers in the area reported considerable damage from marble size hail that accompanied the thunderstorm. Crop damage ranged from about 25 to 75 per cent. Most of the damage was in an area of about three square miles.	
Lone Star, Morris Co.	12	7:20 p-7:21 p	**300	200	0	0	3	0	Tornado	
									A small tornado touched ground for about one minute in the Lone Star community and collapsed the entire south wall of a concrete block building under construction. A service station, cafe, and a truck were also damaged. Two large trees were twisted off and destroyed. A roaring sound was heard by one witness.	
5 SW Nederland, Jefferson Co.	13	10:20 a-10:23 a							Funnel aloft	
Beaumont, near, Jefferson Co.	13	11:11 a-11:13 a							Funnel aloft	
Lubbock, near, Lubbock Co.	15	3:50 p							Funnel aloft	
15 NE Palacios Matagorda Co.	16	10:25 a							Three funnels aloft	
E High Island Jefferson Co.	17	9:35 p							Funnel aloft	
Fourway, near, Moore Co.	19	6:30 p	?	?	0	0	?	?	Tornado	
									A tornado about eight miles east and one mile north of the Fourway community in Moore County damaged the porch of a house, a chicken house, and a cattle chute.	
Gail, near, Borden Co.	20				1	1	0	0	Lightning	
									One 11-year old girl was killed, and her 17-year old boy companion injured when struck by lightning while horseback riding.	
Wilford, near, Ellis Co.	21	evening							Two funnels aloft	
20 S Fort Worth, Johnson Co.	21	9:37 p							Funnel aloft	
SS Fort Worth, Tarrant Co.	21	10:15 p							Funnel aloft	
Italy, Ellis Co.	21	night							Two funnels aloft	
Palestine, Anderson Co.	24	3:45 p-4:15 p	3	*1/2	0	0	4	0	Tornado	
									A tornado dipped to earth about one-half mile south of Palestine and traveled across the southeast edge of the city. Several houses were unroofed, a barn and garage destroyed, and numerous television antennae blown down.	
10 S Fort Stockton, Pecos Co.	25	3:20 p-3:42 p	8	*1/2	0	0	0	0	Tornado	
									A thin, ribbon like funnel formed from a single "cloud bank" south of Fort Stockton, then moved southwest to a point about 18 miles south and a little southwest of Fort Stockton. The tornado was almost white in color. Its forward speed was estimated at between five and ten mph. The tornado moved through open ranch country and caused no apparent damage.	
Reklaw, Rusk Co.	25	?			0	0	4	0	Lightning	
									A rural school at Reklaw, 10 miles east of Rusk was destroyed by fire after being struck by lightning during a thunderstorm.	
Nocona, near, Montague Co.	26	9:35 p	**20	10	0	0	4	0	Tornado	
									A small tornado damaged the Prairie Valley School near Nocona. The metal roof was blown off two classrooms. Two other classrooms were badly damaged. The storm moved from northwest to southeast.	
Gorman, near, Eastland Co.	27	7:30 p	short narrow		0	0	0	0	Tornado	
									A small tornado dipped down to earth once on open pasture land northeast of Gorman then retreated back into the cloud.	
UTAH Gunnison, Sevier Co.	28	6 P.M.	3/4	10	0	0	3	0	Tornado	
									About 6 P.M. on the 28th a small tornado moved across Gunnison from the west, in an east-southeast direction. The path width was about 30 feet and extended in a hit-and-miss fashion for about 7 or 8 blocks. The tornado blew out the rear wall of a chicken coop on first contact with the ground and picked up a pipe swing leaving one corner on the roof of an adjacent building. It broke out three large plate glass windows in a garage, resulting in damage to two automobiles, and stripped the roof off another garage before moving out of the populated areas. Damage total was estimated at over \$2000. No injuries were reported.	
VERMONT									None reported	
U. S. VIRGIN IS.									No report received by printing deadline	
VIRGINIA Charlotte, Appomattox and Mecklenburg County	2	PM						?	4	Wind and hail
										Hail and wind damage to tobacco crops was heaviest in the Keysville area of Charlotte, the western section of Appomattox, and parts of Mecklenburg. Over 150 farms were affected with entire crops destroyed at 18 to 20 farms. Hail size ranged from 1/2 inch to jagged chunks over 2 inches in diameter.
South and Southwest	3	Night			1	1	5	C		Wind and lightning
										Thunderstorms accompanying a cold front were especially heavy in portions of the south and southwest. Lightning struck and killed a person near Hopewell and a fire was started by lightning which killed two mules in Mecklenburg. Minor fire damage from lightning occurred in several counties with 1 home completely destroyed at Laurel Grove. High winds occurred in many counties. A falling tree injured a motorist in the Bristol area. A trailer tipped over and was damaged at Charlotte. Wind gusts in excess of 60 mph uprooted many trees, damaged several homes, and tore off a church roof at Chase City. Wind blew over a barn killing 9 head of cattle at Wythe.
East of Patrick Henry	12	7:00 PM								Water spout
Bluefield, Virginia	28	4:30 PM						4	0	Rain
										Heavy rain, over 2 inches in 3 hours, caused flash flooding in the city. Water over 5 feet deep on some streets flooded residential and business basements.
Hampton Roads Area	31-1				3	?	6	0		Tropical storm Cleo
										Storm Cleo intensified as it moved south of Norfolk along the Virginia-North Carolina border on the 31st and out to sea early September 1st. Little wind was left in the system but considerable flooding resulted from very heavy rains in the Hampton Roads area. Rainfall amounts for a 24-hour period which continued into September 1st ranged from 10 to 14 inches in the immediate area. Rains left nearly every street inundated with some under 4 feet of water. Three vehicles were completely submerged in one underpass and downtown showrooms had 6 to 8 inches of water. Three deaths can be attributed to the flooding; two died from carbon monoxide in the rescue truck, and a fireman died from a heart attack. Numerous families were evacuated from low lying suburban areas with 40 persons fleeing their homes at Virginia City. Several thousand homes were without electrical power. Over 50 small crafts damaged at the mooring. At Hampton, the heavy rains caused a roof of a sports arena to collapse. The flooding was a result of the heavy rainfall and not the tides, with the greatest departures only about a foot.
WASHINGTON King County	18	10:45PST	8	30	0	0	0	0	0	Tornado
										A small tornado was observed in the Seattle area east of Kent and in the vicinity of Lake Meridian. The funnel was visible for several minutes before disintegrating in the vicinity of Lake Youngs. The funnel touched the ground in a forest area, picking up debris but caused very little damage. Heavy showers and thunderstorms were reported in the Seattle area at the time the tornado was sighted.
WEST VIRGINIA Southern half of State	3	Afternoon and evening			0	3	5			Frontal thunderstorms
										What has been termed one of the worst electrical and rain storms in years hit late Monday afternoon. More than 4000 individual power outages occurred and hundreds of telephones between Charleston and Bluefield were knocked out. \$50-75,000 damage alone occurred in Williamson to county fair equipment.
Weirton	11	4:25 p.m.			0	0	2	0		Lightning
Bluefield	28	3:30-6:30 p.m.			0	0	4	0		Cloudburst - flash flood
Piedmont	30	8:00-10:00 p.m.			0	0	3	0		Thunderstorm flooding
WISCONSIN Fond du Lac BE	22	1:55 PM	Short	Narrow	0	0	3	0		Tornado
										Destroyed farm buildings. Traveled from SW to NE
Milwaukee 18 NW	22	3:29 PM						3	3	Hail
										Diameters up to 1 1/4 inch.
Fond du Lac	22	3:15 PM	1	500	0	2	5	0		Tornado
										Traveled from SW to NE. Passed through southeastern section of city damaging 17 block section. 200 homes damaged.
Portage County	22	mid after-noon	7	Narrow	0	0	4	4		Tornado
										Through Town of Grant traveling from SW to NE. Touched down and lifted in thinly settled area.
Near Dalton	22	mid after-noon								Hail
										Diameter up to 1 inch. Storm south and east of Dalton.
Dodge County	22	mid after-noon	Short	Narrow	0	0	3	3		Tornado
										Touched down in Town of Lowell.
Port Washington	22	3:55 PM	1	50	0	30	6	0		Tornado
										Began near Highway 22 and traveled from SW to NE through city. 22 homes totally destroyed, extensive damage to 34, minor damage to more than 140.
Oak Creek	22	4:00 PM	2	400	0	0	5	0		Tornado
										Traveled from SW to NE. Major damage to homes.

See reference notes at end of table.

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AUGUST 1964

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED ¹ DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
WISCONSIN (Cont'd.) Barron - Burnett Counties	28	1:45 - 2:00 AM	4 1/2	50	0	0	4	0	Tornado
			Traveled toward NNW.						
WYOMING			None reported						
FLORIDA									
Ft. Lauderdale Broward Co.	2	9:03 am							Funnel Cloud
Miami Dade Co.	2	12:30 pm							Funnel Cloud
Key West Monroe Co.	2	5:10 pm							Waterspout
Ft. Lauderdale Broward Co.	5	Afternoon			0	1			Lightning
Lake Silver Lake Co.	6	Afternoon			1	0			Lightning
West Palm Beach Palm Beach Co.	8	4:50 pm							Funnel Cloud
Tampa Hillsborough Co.	10	6:29 pm							Waterspout
Tampa Hillsborough Co.	11	1:12 pm							Funnel Cloud
Miami Dade Co.	12	5:15 pm							Funnel Cloud
Okeechobee Okeechobee Co.	13	Afternoon			0	5			Lightning
			Lightning injured 5 cattlemen who took refuge in frame building on ranch during thunderstorm						
Miami Dade Co.	13	7:10 pm	Short Narrow	0	0				Tornado
			Funnel cloud touched ground briefly near the Perry airport						
Elliot Key Monroe Co.	14	7:10 am							Waterspout
Gainesville Alachua Co.	16	Afternoon	Short Narrow	0	0				Tornado
			Funnel cloud touched down briefly on Payne's Prairie						
Port Charlotte Charlotte Co.	16	Afternoon			1	0			Lightning
			Young man struck and killed while riding motorcycle						
Fort Myers Lee Co.	17	6:18 pm							Funnel Cloud
Lake Okeechobee Okeechobee Co.	18	5:25 pm							Waterspout
Chuluota Seminole Co.	19	Afternoon			1	0			Lightning
			Lightning struck and killed worker in an orange grove						
Brooksville Hernando Co.	19	8:55 am							Funnel Clouds (2)
Key West Monroe Co.	19	4:23 pm							Waterspouts (3)
Key West Monroe Co.	20	6:18 pm							Funnel Cloud
Gulfport Pinellas Co.	21	11:15 am	Short Narrow	0	0	3			Tornado
			Waterspout came ashore off Boca Ciega Bay and damaged several homes before dissipating.						
Chiefland Levy Co.	24	Afternoon			0	2			Lightning
			Lightning injured two construction workers on the job.						
Titusville Brevard Co.	27	7:00 pm	Short Narrow	0	1	4			Tornado
			Storm moved from southeast to northwest and was associated with hurricane CLEO. Several houses damaged along the storm path.						
New Smyrna Beach Volusia Co.	27	During night	Short Narrow	0	0	3			Tornado
			Evidence of tornado track from southeast to northwest seen in area of trees and damages to homes along a narrow path. This storm associated with hurricane CLEO and occurred several hours before storm center arrived in New Smyrna Beach area.						
Davis Broward Co.	Unk	Unknown	Short Narrow	0	0	7			Tornado
			Tornado path from east to west through an orange grove discovered after hurricane CLEO. Numerous trees uprooted along storm path						

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					KILLED	INJURED	PROPERTY	CROPS	
FLORIDA (Cont'd.) Eastern third of Florida Peninsula	27 & 28				0	1	8	7	Hurricane CLEO
			Hurricane CLEO, a small but very destructive storm, moved northward into Biscayne Bay around 3:00 am on 27th and continued northward a short distance inland and roughly parallel to the Florida east coast all the way to near Jacksonville, reaching the Jacksonville area around midday the 28th. Strongest winds and greatest damages in 20 to 35 mile wide coastal strip from Miami to about Melbourne. Storm intensity north of Melbourne was such that only minor damages resulted those areas. Although geometric eye apparently passed over Virginia Key and reached the west side of Biscayne Bay at about the 36th Street Causeway, damage was minor at nearby Perrine and Homestead, and west of Bird Road and 90th Avenue. There were only isolated reports of flooding anywhere in the state. The storm surge did not reach four feet in the Miami area but was five feet above normal in Fort Lauderdale and five to six feet above normal in Pompano Beach. There was no serious tidal damage reported anywhere in the state. Principal damages were glass breakage in unprotected store fronts, Miami Beach hotels and motels and other unprotected glass. Many buildings and contents suffered water damage after the windows gave away. Other major damages were uprooted trees, disrupted communications and power failures in the southern sections, and blasted buildings and automobiles, overturned parked aircraft and agricultural losses. It was estimated about 10% of the oranges and from 20 to 30% of the grapefruit were lost in the Indian River citrus producing area with the greatest damages in the southern sections. There was little damage to citrus trees. Rainfall connected with this storm was relatively light. Measured storm totals varied from 5 to 8 inches in the coastal areas of north Dade, Broward and Palm Beach counties to mostly between 3 and 5 inches in the coastal areas farther north. Three tornadoes were reported in connection with this storm.						
Tampa Hillsborough Co.	30	5:22 pm							Funnel Cloud
Melbourne Brevard Co.	31	1:18 pm							Funnel Cloud
Punta Gorda Charlotte Co.	31	6:00 pm							Waterspout

° 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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