



U.S. DEPARTMENT OF COMMERCE

MAURICE H. STANS, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

STORM DATA

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FEBRUARY 1970

STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 1970

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			None reported						
Alaska			None reported						
Arizona			None reported						
Arkansas			None reported						
California									
Stockton	17	3:45 p.m.			0	0	0	0	Funnel cloud
									Observer at Stockton Airport reported a funnel cloud to the west moving southeastward.
Southern California	13-17				0	0	4	0	Santa Ana wind
									winds gusting to 65 mph or more downed power lines, toppled signs, damaged beach, overturned parked planes, broke windows, and caused temporary closing of Interstate 10 to some types of vehicles.
Colorado									
Northern Foothills	2	3PM-Midnight			0	0	4	0	Wind
									High winds caused scattered damage along the eastern slope foothills from the Golden area northward to Fort Collins. A mobile home near Fort Collins, and a garage in Boulder were demolished. Broken windows and roof damage were reported in Golden. Wind gusts reached 65mph at 7PM at Fort Collins, were reported at 60 to over 100mph in the Boulder area between 3 and 9PM.
Connecticut									
Statewide	2-4				0	1	5	0	Heavy rain, wind, glaze, snow
									Torrential rains and rapid thaw combined to cause major flooding, rock slides and washouts on the 3rd. Precipitation totals for the storm ranged from 1.7 to 3.6 inches, the greater part of which occurred over short periods on the 3rd. Most streams throughout the state and rivers in the east and south overflowed their banks and storm sewers in many communities failed to take the excess water. Above normal tides flooded coastal sections especially in the east. In Meriden there was a storm related death when a 27 year old man was electrocuted as he tried to pump out his basement. High winds which reached hurricane force downed trees and power lines, damaged roofs and destroyed plate glass. Precipitation changed to freezing rain and sleet late on the 3rd and to snow in the interior on the 4th with extremely hazardous driving conditions. Most schools were closed on the 4th.
Delaware									
State	14-15	AM of 14th to PM of 15th			0	?	4	0	Snow, freezing rain
									Light snow and freezing rain made roads and highways hazardous for driving. Police were called to investigate more than 170 minor accidents.
Central portion	17	Most of day			0	0	3	0	Freezing rain
									Freezing rain covered roads, trees, shrubbery, etc. with a thin coat of glaze for the second time in three days.
Florida									
Crestview Okaloosa County	1	6:15p			0	0	3	0	Damaging wind
									Mobile home damage estimated at \$1500
Santa Rosa Island (21 mis. WSW Valparaiso) Okaloosa County	1	7:30p			0	0	3	0	Damaging wind
									Trailer park damaged.
Pensacola Beach (15 mis. SSE) Escambia County	1	7:30p			0	0	3	0	Damaging wind
									One dredge and a 30' boat sank at marina. 100' section of fishing pier destroyed.
Pensacola (8 mis. E)	1	7:30p			0	0	3	0	Damaging wind
									Store damaged, plane overturned.
Navarre (17 mis. WSW Valparaiso) Okaloosa County	1	7:45p			0	0	3	0	Tornado
									Store broofed. Damage estimate at \$1500.
Panama City (vicinity) Bay County	1	night			0	0	4	0	Damaging wind
									Mobile home and service station damaged, new construction was collapsed, boat house destroyed, trees and utility lines downed.
Apalachicola (vicinity) Franklin County	1	night			0	0	4	0	Damaging Winds
									Seventy small oyster boats, docks at numerous oyster houses from East Point to about 17 miles west of Apalachicola damaged. Two shrimp boats beached. Estimate of damage at \$50,000.
Florida (continued)									
Milton Santa Rosa County	2	8:30p							Hail
									Heavy fall of up to 1" hail as temperature dipped into low 20s.
Pensacola	2	8:50p							Hail
									Hail up to one inch diameter.
Jacksonville Duval County	3	early morning			0	0	5	0	Heavy rain and flooding
									Streets, highways, and sewers damaged after 6.15" deluge followed by hard freeze. Damage estimate between \$500,000 and \$1,000,000.
Gainesville Alachua County	3	2:45a			0	0	4	0	Tornado and flooding
									Trailer overturned, trees downed damaging parked cars. Local flooding in low areas resulted from 12-hour 6.53" rainfall. Flooding damage estimated at \$10,000.
Apopka Orange County	3	7:30a			0	0	3	0	Tornado
									Equipment shed destroyed, trees and utility lines downed.
Venice Sarasota County	3	7:35a			0	0	5	0	Tornado
									Nineteen planes damaged or destroyed. Mobile home park damaged. Damage estimate at \$250,000.
Wausatch Hardee County	3	8:30a	200		0	0	4	0	Damaging wind
									Strong winds toppled tower and walls, downed trees, damaged roofs, utility lines downed.
Arcadia (vicinity) De Soto County	3	8:30a			0	0	5	0	Twister
									Poultry farm buildings destroyed, hens killed. Trailer home damaged, camper demolished, barn severely damaged. Damage estimate to poultry farm at \$100,000.
Melbourne (vicinity)	3	8:30a			0	0	3	0	Tornado and damaging wind
									Winds up to 65 mph collapsed four walls which were under construction. Motel deroofed by brief tornado in Palm Bay area.
Nocatee (30 mis. N. Ft. Myers) Lee County	3	8:40a			0	0	3	0	Tornado
									House trailer overturned, general damage.
Sebring Highlands County	3	9:00a			0	0	3	0	Tornado
									Service station north of Sebring damaged; estimate at \$700.
Ft. Myers (vicinity)	3	9:00a			0	0	5	0	Damaging wind
									Fifty-five foot tower-antenna at NASA tracking station blown down. Winds estimated at 65 mph. Greenhouse structures at Alva mangled causing \$10,000 damage.
Pellamere Indian River County	3	9:45a			0	0	4	0	Tornado
									Two mobile homes totally destroyed and two others damaged.
Lake Placid Highlands County	3	11:00a			0	0	3	0	Damaging wind
									House deroofed, other light damage to porches, trees and outdoor furniture.
Belle Glade (32 mis. W Palm Beach) Palm Beach County	3	11:15a							Damaging wind
									Gusts to 70 mph.
Palm Beach (15 mis. ESE)	8	12:25p							Waterpouts (2)
									Funnel aloft
Georgia									
Waycross	25	4:15 p	10	100	0	2	5	0	Tornado
									The storm moved from west to east through the southern part of Waycross, causing damage in seven different areas. A survey team reported that 13 homes were destroyed, 7 suffered major damage and 41 had minor damage. Two business buildings were destroyed and 7 were damaged. Several trailer homes were demolished and hundreds of trees were destroyed. Utility lines suffered heavy damage in the affected areas. Two people sustained minor injuries when their trailer home was destroyed. Heavy rain and one-half inch hail occurred just before the tornado.
Brunswick	25	5:27 p							Funnel Cloud
									Seen over northeast Brunswick by an FAA observer. Since no damage was reported, believed to have remained aloft.
Hawaii									None reported

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

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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	
Idaho			None reported						
Illinois			None reported						
Indiana			None reported						
Iowa			None reported						
Kansas			None reported						
Kentucky North	14				0	7	7	0	Ice storm
			<p>From a trace to 6 inches of snow fell on Kentucky on the 14th, followed on the 14th and part of the 15th by freezing rain over much of the State. The ice which accumulated on objects made it the most severe ice storm since at least January 1951 in the Louisville area, and in a reported 30 years or more in some other northern areas. Thousands of homes were without electricity, heat, and telephone service as the weight of the ice snapped utility lines, or caused tree limbs and/or trees to fall upon the utility lines, breaking them. It was estimated that power outages, failure of service to customers, of utility companies, totaled at least 55,000; this total was obtained from utility company statements (47,000) and news reports from some of the affected areas, reports from a number of areas being unavailable. Utility reports indicated that the worst conditions (outages) to be mostly in the Ohio River Valley from west of Pendleton County to the Mississippi River with the most severe conditions in Jefferson County (20,000 outages). There were relatively few outages east and south of a line from Maysville to Winchester to Stanford to Leitchfield to Madisonville. Some of the other counties having large numbers of outages were Shelby (8750), Henry (5360), Scott (4800), Fayette (1800), Clark, Woodford, Franklin, Grayson. The number of outages reported in a number of cases indicated a high density of customers of utility companies, rather than differences in severity of icing. Loss of trees and shrubs was reported to have been considerable in some of the areas of heavier icing. Overall economic loss was difficult to assess since reports from many areas were unavailable. As an indication of one type of loss, cost to the utility companies, news reports stated that one utility company in the Jefferson County area expended 60,000 man hours in restoring service to that area.</p>						
Kentucky State	15				1	0	?	?	Minor flooding
			<p>Heavy rains and snow-melt about mid-month resulted in higher stream levels in most sections of the State, and in minor flooding with relatively minor damage in several areas. In southeast Kentucky, the death of a three-year-old child was attributed to flooding; it was reported that the child was standing on the bank of a creek (Dry Fork Creek, a tributary of the North Fork of the Kentucky River near Whitesburg in Letcher County) which collapsed due to the eroding action of high water in a usually almost dry creek. In eastern Kentucky there was minor flooding at Hazard on the 15th; at other points along the Kentucky and Licking Rivers levels rose to near flood stage. On the Cumberland River there was minor flooding at several locations, the river climbing about 2 feet above flood stage at Barbourville; and to within 1/2-foot of bankfull at Williamsburg. At several points along the Tug and Levisa Forks of the Big Sandy River, levels rose to several feet below flood stage and to near flood stage in at least one location. In western Kentucky flooding was minor, mostly to farm lands for several days at several points along the Green River, and at several points along the lower Ohio River.</p>						
Louisiana Southern half of State	1	9:45 a.-4:00 p.			0	20	6	0	Winds, rain
			<p>Strong squall line, with winds of 40 to 55 mph - locally near 100 mph - developed ahead of a low pressure area in east Texas and moved across the southern half of the State, followed later by the low. Extensive damages were reported from scattered areas throughout the southern parishes. Utility poles tilted or toppled, signs toppled or bent, roofs damaged or blown off, plate glass shattered, small storage buildings and barns unroofed, trees snapped off, trailers overturned, Mardi Gras float overturned. Two-mile section of Louisiana 82 between Holly Beach and Cameron 60 percent destroyed by wind-driven water. Although 'tornadoes' reported several places, no funnel clouds were sighted, and post-storm surveys (didn't supply conclusive evidence of tornadoic winds. Damage in following parishes: Cameron; Calcasieu; Acadia; Iberia; St. Mary; St. Landry; Vermilion; Lafayette; Ascension; Terrebonne; E. Baton Rouge; St. Helena; Tangipahoa; St. Tammany; Washington; Orleans; Plaquemine.</p>						
Louisiana St. Martin Parish	15	5:48 p.							Funnel cloud
			<p>Pilot report 20 miles northeast of Lafayette.</p>						
Maine Southern and Eastern	2-4				0	0	5	0	Wind, rain, glaze
			<p>Strong winds, with peak gust intensities reaching 70 to 75 mph on the 3rd in many southern portion areas. Toppling trees and limbs caused utility failures. A car was crushed in Ellsworth. Many roofs were damaged and some buildings were demolished by wind. Scores of ice fishing shacks were</p>						
Maine (continued)			<p>demolished. At Bangor a church chimney fell into the pews. Plate glass windows, signs, antennae, etc. were broken. Heavy rain, generally 2 to 4 inches but locally greater, caused washouts and flooding of many roads and cellars. Ice jams formed in rivers to cause flash flooding. Some families had to be evacuated, while others were instructed for a period. Precipitation changed to freezing rain late on the 3rd or on 4th in many areas before ending with a small amount of snow. Roads became very treacherous and schools were cancelled in some areas. The weight of ice on twigs and wires increased the damaging effect of wind.</p>						
Maine Southwest and South-central	10-11				0	0	5	0	Rain, wind
			<p>Heavy rain, mostly 2 to 4 inches, caused extensive washing and flooding. Some highways were closed and many roads damaged. Many cellars flooded. Ice jams on rivers combined with the heavy rain to cause or increase flash flooding. Much property damage by flooding in the Rumford and Bangor areas. Several families were evacuated. Wind damage mostly minor.</p>						
Maine Southern	15				0	0	0	0	Snow
			<p>Heavy snow, totalling mostly 4 to 8 inches but up to 10 inches at Rockland, was wind drifted, hampering traffic.</p>						
Maine	23				0	0	4	0	Wind
			<p>Strong gusty winds caused instances of mostly minor damage. Rumford reported gusts to 65 mph.</p>						
Maryland Central Eastern Shore	2				0	0	4	0	Wind, ice
			<p>Strong winds, estimated up to 50 miles per hour, brought damage to scattered areas; included were two barns demolished. An ice floe, about 250 yards by 1000 yards, was driven by the wind up Eastern Bay into Kent Narrows where it sank two boats, a large oyster "buy" boat and a clam workboat and damaged a number of piers and pilings on both sides of the Narrows. A veteran oyster packer said that it was the largest amount of ice he had seen piled up along the shore.</p>						
Maryland Emmitsburg (near)	3				0	0	3	0	Wind
			<p>Strong winds were blamed for tipping over a tractor trailer. Damage was estimated at \$900.</p>						
Maryland Garrett County	9-13						?		Wind, snow
			<p>Strong winds and snow, up to 13 inches, created blizzard-like conditions during the period. It was most difficult and at times impossible to keep roads and highways open. Some schools were closed at least three days.</p>						
Maryland Central areas, including Eastern Shore	14-16	AM of 14th to AM of 16th			0	?	5	0	Snow, freezing rain
			<p>Snow and freezing rain made roads hazardous for driving during period. Police officials serving Anne Arundel County alone reported a total of 89 traffic accidents; the injury total reached 22 with no deaths reported. Both Cambridge and Royal Oak weather observers reported glaze on trees during the 15th; the thickness at Royal Oak was 3/8-inch.</p>						
Maryland Central Eastern Shore	17	Most of day			0	0	3	0	Freezing rain
			<p>Freezing rain covered roads, trees, shrubbery and automobiles with a coating of glaze for the second time in three days.</p>						
Massachusetts Eastern	2-4				0	12	6	0	Wind, rain, glaze
			<p>Wind caused major damage on 2nd and 3rd, reaching peak gust speeds of 70 to 75 mph in many areas on 3rd. On Blue Hill, in Milton, gusts reached 92 mph on 2nd and 102 mph on the 3rd, with a "fastest mile" averaging 70 mph on the 3rd. A gust to 88 mph was observed at the end of Wing's Neck in Pocomsett. Toppling trees and limbs caused utility failures to around 40,000 homes and crushed several cars. Many roofs were damaged and some completely blown off, while some buildings and sheds were wholly demolished. Some buildings under construction collapsed, one damaging 8 vehicles nearby. Hundreds of windows broke, including many of large plate glass. Breaking glass caused several injuries. Other injuries were from falling limbs and from objects blown from buildings. A workman was blown from a staging in Quincy, while a woman in Braintree was blown from a porch, breaking a hip. A ship</p>						

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					KILLED	INJURED	PROPERTY	CROPS	
Massachusetts (continued)									
									was blown aground and a pilot vessel remasted in Boston Harbor. A church steeple toppled in Middleton, and a large flagpole in Reading. Four airplanes were torn from moorings and damaged at Taunton. Parts of a clubhouse roof at Charlton were blown 200 yards. Many chimneys toppled, as did antennae, signs, etc. One sign falling onto an expressway damaged two cars. Precipitation totalled mostly 2 to 4 inches with some locally greater amounts, occurring as rain except changing to freezing rain and to snow before ending. Serious flooding of highways and basements. Rain caused an earthslide at Clinton which blocked Highway 70. Washouts occurred. Glazing on the 4th, beginning in some areas late on the 3rd, made roads hazardous and built up on trees and wires to increase the wind's damaging effect.
State	10-11				0	0	5	0	Rain, wind
									Variable precipitation, totalling 1 to 3 inches in many areas, flooded thousands of cellars and washed out roads. Traffic hampered or halted by flooded streets in many areas. Mostly minor wind damage, including some trees and limbs down.
State	15				1	0	4	0	Snow, glaze
									Heavy snow, totalling mostly 4 to 8 inches, was followed in the eastern portion by locally severe freezing rain in late afternoon. One death attributed to exertion due to storm. Roads extremely hazardous from ice coating.
State	23				0	0	4	0	Wind
									Many instances of local damage to trees, wires, signs, etc., from strong gusty wind, with a few cases of broken windows and damaged roofs. Gusts reached 70 mph at Chester at 10:30 A.M., and at 2:15 P.M.
Michigan									None reported
Minnesota									
Entire State	1st & 2nd	Late pm thru Early am					?		Ground Blizzard & Strong Winds
									A fast moving cold front with strong winds lowered visibilities to near zero particularly in the Pelican Rapids to Crookston areas late afternoon and evening caused many minor auto accidents and stalled hundreds of people in all towns throughout this area. Rothsay had 600 people stranded at one time during the storm. Strong winds with blowing snow across the rest of the State during the night was common. Further-rapid temperature drops from the mid 30's to minus 20's overnight also were common across the State.
Southern Half of State	14th								Strong Winds & Blowing Snow
									Strong winds with blowing snow caused some school closings and blocked roads in south half of State. Strongest winds reported in southwest; (unofficial gusts to 75mph at Worthington, 65mph at Fairmont.
Mississippi									
Central and Southern Mississippi	1	Afternoon							Wind
									Severe thunderstorm activity moved across the state in the afternoon bringing heavy rains, high winds, and some hail to many sections. Reports of strong gusty winds were received from numerous places. Several house trailers were blown over but other damage was mostly confined to small trees, chicken houses, and poorly constructed farm buildings. Additional details follow:
South Central Division	1	Afternoon			0	2	5	0	Wind
									A squall line moved across the Division accompanied by a torrent of rain. Damaging high winds in advance of the cold front. However, with few exceptions (mostly in southern portion of Division) the damage was light. Damages at Summit included in estimate above and also listed separately. SIMPSON COUNTY: Public reported wind damage 1 1/2 NE Shivers (lat. 31.8°N, long. 90.0°W). Highway Patrol investigated and apparently straight line wind blew top off tractor shed and barn partially damaged. PIKE COUNTY (See separate Summit listing.): Newspaper noted "A thunderstorm with tornado-like winds roared across Pike County. . . leaving in its wake heavy damage, particularly in the northern portion. The heaviest reported damage was at Summit. . . . A squall line crossed McComb airport at 2:20 p.m. when winds gusted to 63 m.p.h.; a large section of roof was blown off a small (poorly constructed) tin hangar at the airport, one airplane received slight amount of damage to left wing; the straight line winds blew down some small trees and a couple of power lines in the city. The McComb Mayor said that with few exceptions the damage was light. The heaviest reported damage was to a glass

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					KILLED	INJURED	PROPERTY	CROPS	
Mississippi (continued)									
									shop where owner estimated damages about \$20,000 due to a retaining wall from a partially torn-down building next door being blown into the northern wall of the glass shop causing extensive damages to the building and a large inventory of plate glass and mirrors. At Magnolia, the Mayor reported "We did not have a severe storm. . . . We had a few limbs and debris in the streets from the high winds. . . . At 1 1/2 E Ozyka, about 2:30 p.m., the roof of an 110-year-old home was lifted rafters and all, and was deposited in the yard; metal roofing landed in trees and was scattered for long distances; damages estimated \$1,500. A public report was received by the Highway Patrol of a house trailer overturned at 3:15 p.m. at a location between Progress and the Bogue (Chitto) River, one person hospitalized; there to the SE of Magnolia and in an area approximately 5 miles wide and 10 miles long, the Highway Patrol noted "some tin roofing blown off barns in areas" damages were estimated at \$2,000. WAL-THALL COUNTY: Storm moved from SW towards NE. Newspaper noted ". . . extensive damage. . . . Virtually no section of the county went untouched. . . . damage was mainly limited to outbuildings and uprooted timber." Highway Patrol reported strong NE winds at Tyler-town around 2:30 p.m.; few roofs lifted, trailer turned over, 4 cows killed (electrocuted by downed power line). At 2NW Tyler town, rainfall observer clocked wind gusts to 65 m.p.h., around 2:40 p.m. Lasting for about 10 minutes; hail fell in a very small area, partially covered ground and melted with rain as soon as it fell; the wind, hail and rain occurred all at once. At Mega, 2 house trailers overturned, one occupant received cut requiring several stitches. MARION COUNTY: At Columbia (lat. 31.3°N, long. 89.8°W) man reported at 2:30 p.m. gusts to 52 m.p.h., barometer falling rapidly, moderate to heavy rain; at 2:50 p.m. gusts to 69 m.p.h. in thunderstorm with heavy rain. Cooperative observer reported marble size hail just as the storm moved in, then a short period of wind damage. Trees were damaged, a number of these showing damage from Hurricane Camille, were blown down; at 6 N of Columbia a carport was damaged. Scattered electrical trouble in Columbia and nearby, mainly caused by trees falling across power lines to S and E, and at 6 N Columbia. LAMAR COUNTY: Electrical interruptions caused mostly by falling trees occurred at about 50 spots in Lumberton, including the hospital.
Pike County, Summit	1	2:30 p. - 2:45 p.			0	0	5	0	Wind, Rain, Funnel Cloud Aloft
									Newspaper published "The heaviest reported damage (in Pike County) was at Summit where high winds and torrential rains caused extensive losses to Vocational - Technical complex at Southwest Mississippi Junior College and toppled a 100-foot-high water tower in the town of Summit." A man described the path of destructive winds as 5 miles long and 100 yards wide. During rainy weather a watchman in Summit saw the funnel which remained aloft; a man described "sounds like trains for several minutes." There was damage to roofs, water damage to homes and several trees blown down. A cotton warehouse suffered approximately \$5,000 damage due to a combination of wind ripping off one-third of the roof and a deluge of water which poured on the building when a nearby 100-foot, 100,000-gallon water tower built in 1937 collapsed; about 50-60 feet of the supporting legs remain, the rest of the tower was destroyed; replacement cost estimated about \$50,000. The College President said extremely high winds "lifted" large parts of the roof off the two-story front portion of the vocational structure and dropped them on the roof of one of the single story wings; he reported that the water damage was heavy, and water stood ankle deep on the second floor of the building for a time; damages estimated to exceed \$60,000.
Hinds County	1	3:00 p.			0	0	?	0	Wind
									At Hawkins Field, Jackson (lat. 32.3°N, long. 90.3°W) a C 182 aircraft and another small aircraft were overturned; both had been tied down. The newspaper at Jackson noted "the thunderstorm . . . blew limbs off trees, but did no major damage."
Scott County	1	3:15 p. - 3:30 p.			0	0	3	0	Wind
									There was a period of stormy weather in afternoon. Thunderstorms reported moving from SW to NE. On Highway 13 South (of Morton), newspaper noted "Tornado like winds dipped down in the Homestead Community. . . . and damaged a number of (empty) chicken houses, sheds and roof tops." Man there reported during "rainy" weather, 3:15-3:30 p.m., it "seemed as if clouds were on ground" and "very high winds with excessive rains" occurred; funnels "none", straight-line winds touched down in a destructive path with of 100 feet; "3 poultry houses destroyed. . . other. . . damage. . . to timber. . ." and buildings in a 1/2 mile square, estimated \$4,500 damages. Scattered hail reported; Homestead Community, match head size hail partially covered ground; newspaper noted "hail. . . large amounts of hail. . . . No damage was reported."
Forrest County	1	mid-afternoon			0	0	?	0	Wind
									A line squall hit the county in mid-afternoon. Electrical interruptions caused mainly by falling limbs were concentrated in the Glendale area of Hattiesburg with 200-300 homes out and scattered trouble elsewhere. The phone company reported less than 100 phones knocked out with about 50 phones out in the Bawls Springs section due to wet cable. Gusts to 69 m.p.h. in thunderstorm reported at Hattiesburg airport (lat. 31.3°N, long. 89.3°W) before 4 p.m.
Coastal Division	1	Afternoon			0	10	5	0	Wind
									High winds accompanied a frontal system that passed through the Division in the afternoon. Generally there was heavy rainfall, and in many communities, temporary power failure. In most areas, only light wind damage was reported, with mostly trees and limbs blown down; a few blocked roads. Damage and injuries from tornadoes in-

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS	
Mississippi (continued)									
									cluded in totals above and also listed separately. PEARL RIVER COUNTY: All electric service in Poplarville was knocked out and at some 200-300 spots in Piquette, mostly by falling trees. Power company division engineer said "The winds were pretty fierce in Piquette and Poplarville." In Piquette: some wind damage to roofs and canopies; at George Washington Carver Elementary and Junior High School - some roofing torn up and some roof slabs lifted, contractor estimated \$10,000 damage. HANCOCK COUNTY: County Civil Defense reported damaging winds in SE part of county. During rainy weather there was destructive winds along a path 1 mile long and 900 yards wide at Bayside and Shoreline Park Subdivision, Bay St. Louis. Storm began at 2:30 p.m., ended 2:45 p.m., and moved from SW towards NE with damages estimated \$1,000. A "low blanket of dark blue clouds" preceded the storm which was accompanied by "high winds and low clouds;" there were no funnels observed or reported. Newspaper noted "... shingles off a dwelling and twisted trees in Bayside Park; ... Shoreline ... paved a mobile home from its foundation. ... Bay St. Louis. ... unroofed a dwelling on Washington Street near the highway and then deroofed Horne's restaurant on the highway." HARRISON COUNTY: House trailers turned over in several locations. Two near Biloxi (lat. 30.1°N, long. 89.9°W) at 3:15 p.m.; north of Long Beach, on Pineville road, trailer turned on its side, 65-year old woman occupant said she was not hurt; in Gulfport on 73rd Ave. (just outside Ladnier Homes) unoccupied house trailer turned over several times; on state Highway 67 near Williams Grocery 1 trailer overturned. Biloxi Civil Defense office reported high tide of about 5 feet. Rising water closed Pop's Ferry causeway for several hours. U. S. Highway 90 blocked by rain water in several places between Biloxi and Gulfport. A number of structures rebuilt since Hurricane Camille received some wind damage; the Gulf Park College corrugated plastic covering over its walk was blown away again; in Riceville community, a rebuilt hay barn was blown down, about 2,000 bales of hay was soaked by rain. Elsewhere, power lines, television antennas, trees and smaller structures were damaged by the high winds. JACKSON COUNTY: The cooperative observer at Pascagoula noted damaging winds. The Pascagoula Civil Defense indicated "High winds, rain and hail reported in the Pascagoula area. Gusts to 45. Tides at 4 1/2 feet above normal. Flooding in low lying areas of Bayou Casotte. Power out on Market Street for a short time. Some antenna's blown down - - - tree limbs - - -." Newspaper noted "A five foot tide across Belle Fountain beach washed large logs across the beach road stranding several families. . . . Several boats were loosened from their moorings at Port Bayou. Water rose within a few inches of the floor of the fishing camp in the area. In Cherokee Glen water covered the launching ramp and rose high enough to flood a boat house nearby. The lower end of Washington Avenue at the beach was impassable, as was the road encircling the inner harbor." STONE COUNTY: Damage reported as minor; Sheriff noted several antennas twisted. GEORGE COUNTY: The power company manager "... estimated that 'at one point there, the winds must have gotten up to at least 60 miles per hour.' All sources contacted agreed that the brunt of the storm occurred in mid-afternoon, between 2:30 and 4 p.m. . . ."
Hancock County	1	3:30 p.	short narrow	0	0	?	0	0	Tornado
									Tornado touchdown reported by public 3 W Bay St. Louis (lat. 30.3°N, long. 89.3°W). Highway Patrol investigated and noted damages confined to trees and highway signs. Storm reported moving towards NE 50 m.p.h.
Harrison County Pass Christian	1	3:50 p.	short narrow	0	0	?	0	0	Tornado
									Civil Defense Pass Christian (lat. 30.3°N, long. 89.2°W) reported small tornado moving towards NE, some trees and power lines down. Newspaper noted it touched down on Munge Avenue.
Harrison County Gulfport	1	3:35 p.	200	60	0	10	5	0	Tornado
									Newspaper noted "Three structures at the W. M. Ladnier Homes on 28th Street were extensively damaged as a funnel cloud was observed passing through the area. . . a duplex and a two story, four-unit building had their roofs lifted off on 30th Street and another building, a central non-housing building was also heavily damaged. Other less severe damage was reported in the project. No serious personal injuries were reported. . . . A woman living in the project . . . heard the wind coming, grabbed her two small children and got behind a couch for protection. As the storm hit blowing the roof off the upper floor, glass flew about the room. Her daughter had cuts on her hand." The project manager reported that during rainy weather the storm moved from SW towards NE, there was a "loud roar, immediately before the wind had died completely down," damages were estimated \$55,000, and 10 persons injured (mostly elderly, treated for shock and minor cuts).
Missouri									None reported
Montana									None reported
Statewide	3				0	0	?	0	Wind
									Strong westerly winds accompanied the passage of a Pacific frontal system across the State. Wind reached 69 mph in Great Falls and 65 in Miles City. Only scattered minor damage was reported.
Nebraska									None reported
Nevada									None reported
New Hampshire Central and Southern	2-4				0	0	4	0	Wind, rain, glaze
									Gusty winds reached damaging speeds at times and at some places on each of the three days. Falling trees and limbs caused utility outages. Some roofs, chimneys, antennae, signs, etc., were affected, most seriously in the extreme southern portion. Precipitation totalling 1 1/2 to 3 1/2 inches over most of this area fell mostly as rain but changed to freezing rain late on 3rd or on 4th and to snow before ending. Considerable local washing and flooding. Roads became treacherous from ice coating and the glaze on trees and wires increased the damaging effect of wind.
State	10-11				0	0	4	0	Rain
									Heavy rain, variable up to 3 to 4 inches in some areas, caused local flooding of cellars and roads.
Central and Southern	15				0	0	0	0	Snow combined with drifting to hamper traffic.
State	23				0	0	4	0	Wind
									Strong, gusty winds caused local and mostly minor damage.
New Jersey									None reported
New Mexico									None reported
New York East Central and Southeast	2-3							5	Wind, rain, flooding
									High winds caused scattered but locally moderate property damage from Herkimer and Otsego Counties southeast to Long Island. Power lines and trees downed, some small sheds unroofed, signs and store windows smashed in towns of Colliersville, Stamford, Manokill, Windham and Hbart in upstate as well as in parts of Nassau County. Prefab house section carried on trailer was blown over by winds on expressway near Herkimer, Herkimer County and also in second incident near Newburgh, Orange County with considerable damage to structures. Snow rait, ice jams and heavy rains caused local overflow of streams, flooding of highways, lowlands and new housing developments in Orange, Rockland, Westchester, Richmond and Nassau Counties. Precipitation as rain totaled from 1.5 to 2.5 inches on Long Island.
New York City (Metropolitan area)	10							5	Rain, flooding
									Heavy rains caused widespread flooding in New York City, Nassau and southern Westchester Counties. Expressways north of city closed for up to 12 hours due to deep flooding of several sections. Severe flooding of streets, basements, etc. reported on Staten Island and in cities of Mount Vernon, Mamaroneck and Larchmont, Westchester County. Railroad and subway trains into New York City hampered by flooded lines and water-caused short circuits. Mud slide near Terrytown blocked main rail line along Hudson River. Precipitation totals mostly 2.5 inches as 2.63 inches in New York City approached record 24-hour rainfall for February. From 0.8 to 1.5 inches of precipitation fell in Rockland and Orange Counties, causing some streams to overflow banks and occasional washouts of highways.
Great Lakes Snowbelt (west portion)	11-12								Snow squalls
									Heavy lake-generated snow crippled western counties between Lake Erie and Genesee River. Snow yields 10 to 15 inches from Rochester area south to Allegheny, Cattaraugus and Chautauque Counties with 20 inches in higher elevations. Amounts decreased to 6 inches in Niagara, Orleans and northern Erie Counties. Strong winds caused severe drifting of highways and near zero visibility at times. Schools closed throughout six-county area of southwestern New York as well as in many communities south of Lake Ontario. Industries crippled in greater Rochester area. Hazardous driving caused many auto accidents, including a few school buses involved in collisions or stalled in drifted highways. Wind and snow caused breakage of power lines in Dunkirk area. Snowfall of 5 to 6 inches along southern tier resulted in hazardous driving and school closures as far east as Broome and Tioga Counties.
Oswego, Oswego County	13-14	6 p.m. to 8 a.m.							Snowburst
									Under conditions of little or no wind the Oswego area received a heavy snowfall during a 14-hour period. Official observer located in eastern part of city measured a total of 24.3 inches while reports of greater amounts came from competent observers on southwest outskirts. This event was a climax of four-day period of lake-effect snows during which interval Oswego received a total of 33 inches.
North Carolina									See data at end of table

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 1970

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
North Dakota									
Entire State	1				0	?			Severe blizzard
	After a balmy Sunday morning, a blizzard suddenly struck the entire state during the early afternoon hours producing 60 mph winds, moderate snow, and zero visibilities. Temperatures dropped nearly 40 degrees during the afternoon and about 60 degrees by the following morning. Repeated no-travel warnings in the morning went largely unheeded and after the storm struck multiple car collisions were common resulting in numerous injuries. Many travelers were stranded along roads and in towns. At New Salem 200 people were stranded at the height of the storm. Fortunately the storm weakened rapidly in 4-5 hours permitting traffic to move again.								
Entire state	3-4								Blizzard
	Winds to 65 mph produced a severe ground blizzard over the state. The strong winds began in the northwest about 6 PM moving rapidly across the state. The blizzard abated by Wednesday morning but numerous travelers were stranded overnight.								
Ohio			None reported						
Oklahoma			None reported						
Oregon			None reported						
Pacific									
Samoa Islands	18-19				0	0	0	0	Tropical storm
	Tropical Storm DOLLY with winds near center estimated 60 miles an hour approached Samoa from south-southwest, veering towards east during morning of 19th when about 180 miles south of Pago Pago, which reported gusts 35 to 45 miles an hour from late morning of 18th to late afternoon of 19th with peak gust 53 miles an hour at 10:57 p.m. on 18th and lowest sea-level pressure of 29.49 inches.								
Caroline Islands	20-23				0	0	6	5	Typhoon
	After reaching typhoon intensity near noon of 22nd, NANCY passed over Sorol Island, 180 miles east-southeast of Yap, at about 7 p.m. on 22nd with sustained winds 90 miles an hour and 35 miles south-southwest of Yap Island at about 4 a.m. on 23rd, with sustained winds 110 to 115 miles an hour. On Yap, most severely affected island, Weather Bureau Office reported gusts to 80 miles an hour, rainfall of 3-1/2 inches and minimum sea-level pressure of 29.118 inches. Damages totalled \$900,000 (preliminary estimates), including \$201,000 to public buildings, facilities, causeways, and roads; \$272,000 to private homes; 240 (200 hatched) destroyed and 60 others (not hatched) more than 50 percent damaged; \$16,000 to businesses, \$11,000 to personal possessions and goods; and \$400,000 to agriculture; bananas 80 percent destroyed (\$200,000), lesser damage to breadfruit, coconuts, other crops. Sorol and Ngulu, 95 miles south-southwest of Yap, damaged to unknown extent. Ulul and Pulwat Islands in Truk District sustained minor damage (\$10,000).								
Pennsylvania									
Montgomery County	2	Afternoon					4		Wind
	Gale-force winds ripped off the roof of the faculty house at a high school in Hatboro.								
Philadelphia	2-3	Night					4		Wind
	Winds up to 46 mph brought down trees and utility wires in scattered sections of the city and suburbs. A billboard was blown down and fell on six automobiles parked in a lot. Two 20-by-30-foot windows were blown out of the Provident National Bank's Mall office.								
Bangor, Northampton County	3	Night					3		Wind
	A 7-by-5 1/2-foot plate glass store window exploded into the street								
Centre County	10	Day					4		Snow
	Heavy wet snow caused fuse blowouts in control boxes affixed to poles and the collapse of lead poles. Skidding collisions due to the wet snow were common and many trees lost limbs from the extra weight of the wet snow.								
Cambria, Somerset, & Bedford counties	11	Day					4		Snow, wind
	A snowstorm that dumped about a foot of snow on the district in less than 24 hours stalled traffic and caused schools to close. High winds which whipped the area left rural roads in very bad condition and many were impassable.								
Puerto Rico			None reported						
Rhode Island	2-4				0	0	5	0	Heavy rain, wind
	Intense storm with heavy rain on February 2-3 caused widespread damage. Local flooding occurred in many communities and abnormal high tides inundated shore installations. Extensive portions of sea walls and fences collapsed under the impact of 18 foot waves in Newport. Winds caused the greatest destruction. Hurricane								
Rhode Island (continued)									
	forde winds occurred on the mainland and wind speeds reached 90 mph on Block Island. The wind blew out much glass, ripped up roofs and shingles, and toppled billboards, signs and chimneys. An 8,000 lb. tractor-trailer was tipped over on Newport Bridge. Trees, telephone and power lines were downed everywhere. Upwards of 20,000 homes lost electric power. Heavy rains added materially to the damage by flooding the interiors of buildings with damaged roofs. Before the storm ended with sleet, freezing rain and snow on the 4th precipitation totals ranged from 2.5 to 3.6 inches but about 2/3 fell on the 3rd.								
South Carolina			None reported						
South Dakota			None reported						
Tennessee									
East Tennessee	2				0	0	4	0	Wind
	Gusty winds caused scattered minor damage, mostly to trees and power lines.								
State	3-4				0	0	4	0	Snow, cold
	Snowfall ranging from a trace to 4 inches fell over the State, the heaviest amounts in mountains was accompanied by near record-breaking low temperatures; zero to fifteen above in west, below zero mountains. Damage to young trees, shrubbery and frozen water pipes was considerable. Many schools and businesses closed. All travel was delayed and hazardous.								
Texas									
Near Richmond, Fort Bend County	1	7:30 a	Short Narrow		0	0	3	0	Tornado
	A small tornado touched down on the Jester Unit of the Texas Department of Corrections near Richmond causing minor damage. Utility poles were knocked down and a poultry house was damaged.								
6 E Houston, Harris County	1	8:25 a	Short Narrow		0	0	3	0	Tornado, Windstorm
	A small tornado touched ground briefly about six miles east of Houston but caused little or no damage. South of Houston, high thunderstorm winds blew the roof off a boatshed near the Friendswood community. Winds also knocked over a trailer house, a large tree and some fences in the area. Wind gusts were estimated at 70 miles per hour. At Hobby International Airport a peak gust of 60 miles per hour was recorded. Three utility poles were blown down in Pearland.								
3 E Winnie, Chambers County	1	9:30 a	**50	40	0	2	4	0	Tornado, Windstorm
	A small tornado demolished a mobile home located in the backyard of the Paul Decuir, Sr. residence about three miles east of Winnie on Highway 73. Paul Decuir, Jr., his wife and 20 month old son were in the mobile home when it blew over. The members of the family suffered scratches and bruises, but were not seriously injured. The Paul Decuir, Sr. residence, located 25 yards away was not damaged. A stack of bricks in the back yard of the home was blown down. In Winnie, a metal garage belonging to Gerald Loper was lifted from over their automobile and destroyed without marring the vehicle. A roof was sucked off a shed belonging to D. F. Fischer in Hamshire. Total property damage was estimated at \$7,500 as a result of the tornado. Minor windstorm damage was extensive throughout the area, accounting for additional damage estimated at \$2,500. The tornado moved from the south-southwest toward the north-northeast.								
San Rayburn Reservoir, Angelina County	15	Morning	?	?	2	0	3	0	Windstorm
	Wayne Townsend, 25, and Gary Brashear, 22, drowned when their fishing boat capsized on San Rayburn Reservoir as a result of thundersqualls. The high winds hit the lake area very suddenly.								
West Point Community, Fayette County	24	7:45 p-8:45 p	?	?	0	0	?	?	Hailstorm
	A hailstorm caused minor damage to property and crops in the West Point Community, west of La Grange. Hailstones averaged one-half inch to three-fourths inch in diameter. Largest stones were one inch in diameter.								
Utah			None reported						
Vermont			None reported						
U. S. Virgin Islands			None reported						

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 1970

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		
Virginia										
Southeast	3				0	0	0	0	Glaze	
		Freezing rain reported with many minor automobile accidents								
State except Southwest Division and eastern Tidewater	15-17				0	0	0	0	Glaze	
		Local areas of freezing rain on the 15th and 16th and over the area on the 17th								
Washington					None reported					
West Virginia										
Southern areas	14-15	36 hours			0	0	5	0	Rain	
	On the morning of February 14, precipitation began moving across the State from the southwest. It began as snow and some locations received 6 inches or more of new snow before it changed to rain during the afternoon. Temperatures rose during the night and rain continued to fall. Precipitation totalled from one to two inches during the two-day period over southern West Virginia. The rains combined with the snowmelt caused minor flooding along the Coal River, the Tug Fork of the Big Sandy River, the Guyandot River, and the Elk River. The Guyandot River at Logan crested 3 foot below flood stage of 20 feet but a culvert which carried Coal Branch under alternate U. S. Route 119 in Deskins Addition in Logan became clogged, sending water over the road and into many business establishments. Damages in the Logan area were estimated by U. S. Corps of Engineers as \$234,000. On February 16, the Tug Fork in Williamson crested at 28.75 feet, 1.75 feet over flood stage; the Guyandot River in Branchland crested at 35 feet, 5 feet above flood stage; and the Coal River in Tornado crested at 28 feet, 3 feet above flood stage.									
Wisconsin					None reported					
Wyoming					None reported					
North Carolina										
Moore County	4	Early am.			1	0	0	0	Cold	
		Woman found dead from exposure near Carthage.								
Wake County	9	5:40 pm.					0	0	Hail	
		Hail fell in various parts of Raleigh and vicinity for about five minutes in connection with a one-hour thunderstorm. Hailstones 3/4 to 1 inch in diameter reported in two areas by Weather Bureau personnel.								
		* Miles instead of yards. † Storm damages are placed in categories varying from 1 to 9 as follows: 1 Less than \$50 2 \$50 to \$500 3 \$500 to \$5,000 4 \$5,000 to \$50,000 5 \$50,000 to \$500,000 6 \$500,000 to \$5,000,000 7 \$5,000,000 to \$50,000,000 8 \$50,000,000 to \$500,000,000 9 \$500,000,000 to \$5,000,000,000.								
		Note: This publication contains our best information on storms but, due to the difficulties inherent in collection of this type of data, it is not all-inclusive. Delayed data and corrections will be carried in the June and December issues of this publication.								
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		USCOMM-ESSA-Asheville, N. C.-3/30/70-1150								