



U.S. DEPARTMENT OF COMMERCE

MAURICE H. STANS, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

STORM DATA

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DECEMBER 1969

STORM DATA AND UNUSUAL WEATHER PHENOMENA

DECEMBER 1969

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 Colbert, Lawrence, Limestone, Madison, Morgan, Northern Franklin Counties	29-30	6:00 PM- Noon			1	0	6	4		Rain, electrical
					Heavy rains of 5 to 7 inches caused flooding in many localities interrupting utility service, inundating highways, residential and business areas. One person drowned when car was swept into swollen creek. Two houses one in Tusculum and the other near Moulton were destroyed by lightning. Greatest damage in Miscle Shoals where 60 houses and 50 businesses were damaged by flooding. 95% of damage due to rain and 5% to lightning.					
Chatchee, Calhoun County	30	1:45 PM	3	100	0	0	5	0		Tornado
					Tornado sighted near Coosa River then moved east-northeast across Chatchee. One house demolished, a church and 10 houses damaged, and 2 mobile homes destroyed.					
Gadsden, Etowah County	30	2:00 PM			0	2	4	0		Wind
					Wind in southside section of Gadsden overturned 2 mobile homes injuring 2 occupants and damaged roofs and porches of several houses.					
Alaska					None reported					
Arizona					None reported					
Arkansas					None reported					
California					None reported					
Colorado Jefferson, Boulder, Larimer Counties	20	8:30-10:30 PM					4			Wind
					High winds caused widespread but mostly minor damage to roofs, windows, and power lines, and overturned some house trailers, in areas along and just east of the foothills. Wind gusts 60-70 mph were reported in Boulder and at Rocky Flats, and over 100 mph at the exposed NCAR Table Mesa site near Boulder.					
Connecticut Statewide	14-15	PM-AM			0	0	5	0		Snow, thunderstorms
					Major snowstorm produced 5 to 13 inch snowfalls except 2-4 inches along the coast. The storm forced the closing of schools in parts of the northern half of the state. Several scattered thunderstorms, unusual for December, occurred on the 14th.					
East Windsor, Enfield, Suffield; Hartford Co. and Winsted, Torrington; Litchfield Co.	22	PM-Eve			0	0	4	0		Glaze, wind
					Ice laden branches, snapped by high winds, caused extensive power failures. Glazed roadways were responsible for several skidding accidents.					
Statewide	26-27	AM-PM			0	0	6	0		Snow, glaze, rain, wind, thunderstorms
					After a lull of only 24 hours, another and more intense coastal storm began affecting Connecticut on the 25th but major results were postponed until the 26-27th before the storm moved off on the 28th. The storm began as snow but turned to freezing rain and sleet over the interior and rain along the coast on the morning of the 26th after snowfalls of 6 to 17 inches. Storm precipitation totals reached 1-2 inches in the west and 2-4 inches in the east. Flood tides, accompanying the storm, swamped low areas along Long Island Sound and locally serious flooding occurred in scattered places in the interior. The storm brought all business, commercial and educational activities to a halt, was responsible for exceedingly hazardous roadways and knocked out power and communication lines. Several thunderstorms occurred on the 26th and dangerous sheets of ice caused many accidents as late as the 28th.					
Delaware					See data at end of table					
Florida Apalachicola, Franklin County	6-7	early afternoon			0	0	3	0		Damaging Winds
					Winds up to 40 mph sank boats and damaged wharf.					
St. Petersburg, Pinellas County	10	6:40a	150	0	1	5	0			Tornado
					Approximately 100 houses, 3 heavily, damaged in Pinellas Point section before moving out to Tampa Bay. Damage estimate \$200,000.					
Tampa, Hillsborough County	10	6:45a			0	0	4	0		Tornado
					Three homes unroofed, trees and utility lines downed. Winds at Apollo Beach up to 60 mph. Damage estimate \$15,000.					
Sanford, Seminole County	10	morning			0	0	3	0		Damaging Winds
					Ice plant lost most of its roof. Other general damage.					
Orlando Beach, Volusia County	10	morning			0	0	3	0		Damaging Winds
					Winds up to 50 mph damaged two houses, boathouse and several businesses. Damage estimate \$2500.					
Florida (continued)										
Lakeland, Polk County	10	7:35a			0	0	3	0		Damaging Winds
					Winds estimated at 75 mph blew out windows, ripped roofs, uprooted trees and downed power lines. Some hail reported.					
Domech Hills and Lockhart vicinity (7-8 mis. NW Orlando)	10	8:15a			0	0	4	0		Damaging Winds
					Trees downed, some damaging roofs and cars. One house partially deroofed. Damage estimate \$25,000.					
Immokalee, Collier County	10	1:09p			0	0	3	0		Tornado
					House roofs and construction on church damaged. Small trees uprooted.					
Fort Lauderdale, Broward County	10	5:12p			0	10	6	0		Damaging Winds
					Ft. Lauderdale-Hollywood International Airport hit destroying 24 light aircraft and damaging 14 others. Also extensive damage at amusement park and adjacent dock facilities. Many boats and cars heavily damaged. Wind gusts to 80 mph measured at Bahia-Mar Yacht Basin. Damage estimate at \$1-3,000,000.					
Pompano Beach, Broward County	10	late afternoon			0	2	4	0		Damaging Winds
					Approximately 6 homes unroofed and damaged, windows blown out, boats damaged in Cypress Harbor area. Damage estimate \$30,000.					
W. Palm Beach (20 mis. NW), Palm Beach County	10	late afternoon		50	0	0	4	0		Damaging Winds
					Youth Conservation Camp quarters and two trailers damaged; one severely. Damage estimate \$60,000.					
Starke, Bradford County	12	8:00a			0	1	0	0		Lightning
					A 42-year old lineman struck while working during rainstorm.					
Novarre Beach (17 mis. NW Valparaiso), Santa Rosa County	21	10:05a			0	0	3	0		Tornado
					Damage to house trailers. One demolished.					
St. George Island (5 mis. S Apalachicola), Franklin County	21	4:45p			0	0	3	0		Tornado
					Waterspout came ashore. One house trailer overturned, roof damage to another building.					
Bradenton, Manatee County	21	9:30p			0	0	3	0		Damaging Wind
					Four houses sustained roof damage, one home heavily damaged.					
Lake Wales (2 mis. S), Polk County	22	1-2:00a			0	0	4	0		Lightning
					18 units at motel on US 27 completely gutted by fire attributed to lightning. Damage estimate \$15-20,000.					
Milton, Santa Rosa County	25	morning			0	0	4	0		Damaging Winds
					Damage reported to 6 homes and businesses approximating \$10,000.					
Pensacola (5 mis. W), Escambia County	25	9:35a								Waterspout
Pensacola (17 mis. SW)	25	10:00a			0	0	3	0		Waterspout
					Some damage to one home and other minor building damage.					
Pensacola NAS (5-11 mis. SW)	25	1:05-10p			0	0	2	0		Tornado
					Light miscellaneous damage reported; one house damaged.					
Pensacola (8 mis. NW)	25	1:15p								Tornado
					No reported damage as was over open area.					
Pace (15 mis. NE), Escambia County	25	1:25p								Damaging Wind
					Limbs blown off trees. Other small damage.					
Destin (3 mis. NE), Okaloosa County	25	2:20p								Tornado
Panama City (vicinity), Bay County	25	mid afternoon			0	0	3	0		Damaging Winds
					A house-restaurant and fish camp in Southport was unroofed. One mobile home overturned and another blown from foundation in Callaway. Other minor house damage.					
Bristol (30 mis. W Tallahassee), Liberty County	25	4:15p			0	0	4	0		Tornadoes (3)
					Three tornadoes within 10 mile area. Damage estimate \$7,000.					
Quincy (15 mis. NW Tallahassee), Gadsden County	25	4:15p	50		0	0	5	0		Tornado
					One building destroyed and several towers downed near Radio Station WCHS. Homes unroofed, lumber yard hit hard, other businesses had moderate damage. Damage estimate at \$100,000.					
Woodville (12 mis. ESE Tallahassee), Leon County	25	5:30p			0	0	3	0		Damaging Winds
					Damage to several house trailers. Some trees down. An unoccupied building demolished and another damaged.					

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

DECEMBER 1969

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	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							KILLED	INJURED	PROPERTY	CROPS				
Florida (continued)										Kentucky												
Lee (36 mis. S. Valloosta, Ge.) Madison County	25	7:30p			0	1	3	0	Tornado	Central & East	18	a.m.				?	?	?	Ice storms			
Gainesville (8 mis. W.S.) Alachua County	25	8:25p			0	0	3	0	Tornado										Freezing rain made conditions especially hazardous for both pedestrians and automobiles. Injuries and vehicle accidents were reported from over much of the State. News reports from several sections, especially in the more heavily populated metropolitan areas, stated that vehicle accidents were so numerous that police were unable to keep a count. Indications are that there were several hundred injuries and several hundred accidents involving vehicles, exact numbers not available. Preliminary reports indicate that as the result of vehicular accidents there was one fatality, and a number of serious injuries; that most of the injuries were not serious. Preliminary reports also indicate that while there were a number of serious accidents, including several multiple vehicle collisions; that most of the vehicle accidents were of the fender and bumper type. News reports indicated injuries and/or vehicle accidents in a number of counties, some of these being - Jefferson, Fayette, Harlan, Grayson, Barren, Boyle, Jessamine, Scott, Clark, Laurel, Powell, Harlan, Bath, Rowan, Boyd, Mason, Grant, and Campbell. In Fayette County alone it was estimated that there were at least 140 hospital-treated injuries, due either to falls on icy surfaces or to automobile accidents, with an uncounted number of vehicle accidents.			
Lake Monroe (20 mis. N Orlando) Seminole County	25	11:50p							Water spout													
Welparaiso Okaloosa County	30	12:05p							Funnel aloft													
Jacksonville (50 mis. W.S.) Duval County	30	5:57p							Funnel aloft													
Georgia Lee County, SW of Albany	25	4 pm	4	200	0	7	4	3	Tornado	Magoffin County	30					?	?		Flooding			
									Storm moved through a rural area of County demolishing 3 houses and damaged several others. Numerous trees were blown down, including 16 large pecan trees. Three registered cattle were killed. Only one of injured required hospitalization. Storm moved northeastward. Some minor wind damage and hail were also reported in Colquitt and Early Counties on Christmas Day.													Three persons were reported to have drowned when they accidentally fell into flooding tributaries of the Licking River.
Hawaii All Islands	1-2				1	15	6	0	Surf	Southeast	30					?	?	?	Flooding			
	4								Unprecedentedly large and destructive waves from intense low pressure area about 1500 miles to northwest severely damaged beach front homes, businesses, parks, roads, cars and eroded shoreline and choice beaches on north and northwest coasts of Kauai, Oahu, Molokai, Maui and southwest coast of Hawaii late December 1 and early December 2. More than half of total dollar loss occurred along Oahu's 12-mile Waiolu Bay-Kawela Bay coast, where highest surf estimated at 50 feet, and 18 homes demolished, damage minor to severe to 93, and moderate to 6 businesses. In Haleiwa small boat harbor, breakwater and groin damaged and 16 boats, largest 52 feet long, damaged or sunk. One person swept away and drowned, 15 others injured, mainly by collapsing homes.													Major flooding developed on the upper Cumberland River in southeast Kentucky from the headwaters to the upper reaches of the Wolf Creek reservoir on December 30th. Crests were very near those of the major flood of March 1963. Heavy rains of the 28th-30th fell on melting snow cover. Storm total rainfall amounts averaged about 2 to 2.5 inches in the extreme lower portions of the basin, but near 5 inches in the middle and upper sections with a few totals in excess of 7 inches. Most of the flooding occurred in the "flashy" area in the upper Cumberland basin.
									On Kauai's north shore, extensive damage to beach parks, beaches and highways, while on west coast near Kokole Point water swept one foot deep into 15 homes under construction 18-1/2 feet above sea level and normally about 350 feet from ocean.											Verified river stages were not available at the time of preparation of this summary. However preliminary data indicated the crests at Cumberland, more than 3 feet above flood; Baxter, more than 12 feet above flood stage; Pineville, more than 6 feet above flood; Barbourville, more than 15 feet above flood; Williamsburg, more than 8 feet above flood stage.		
									On Molokai, 40-foot surf destroyed concrete mooring dolphin and deposited huge boulders in Kalaupapa barge harbor. Hawaii Island shielded by islands to northwest, except southwest coast, where village of Milolii hit by 20-foot waves which destroyed town's entire fishing fleet (9 fishing canoes and 2 skiffs), damaged 4 homes and only grocery store and washed out 1,200 feet of beach road.												Reports from news reports are summarized below. These data are preliminary only and are subject to amendment following "on-the-spot" surveys: Harlan County. It was estimated that at least 500 families were driven from their homes. More than 500 relief cases were registered. Four homes were destroyed, 39 homes had major damage, and 734 homes had minor damage. One news report stated that damage totals were between \$2 and \$3 million; that there was damage of \$300,000 or more to mines; that there was damage to roads and bridges. Some of the heavier damage was reported to be in the communities, of Sunshine, Loyall, Georgetown. Flood waters 5 feet deep were reported to have inundated most homes in the low-lying Georgetown section. Knox County. The hardest hit section was probably in the Heidrick community, where over one-half of the homes and businesses were either surrounded or inundated by flood waters. Bell County. Rural sections, Pineville and Middlesboro were hard hit. A man was reported to have drowned when he slipped from a foot bridge while observing the flood. It was reported that over 300 families were forced to leave their homes. 35 families were homeless in Pineville and 100 families were affected in Middlesboro. In addition to the damage to homes and their contents, there was damage to roads, bridges and other property. Two homes were reported to have been destroyed, 52 homes to have suffered major damage, and 188 homes to have incurred minor damage. Damage totals not available. Whitley County. Four families were reported to have been evacuated in Williamsburg. Damage totals not available.	
Northwest of Hilo, Hawaii Island	8	1:38 p.-1:45 p.			0	0	0	0	Funnel cloud aloft													
									Small dark cone-shaped funnel cloud extending from small cumulus with base 1,800 feet, and associated with heavy rain shower, moved westward from ocean to land about 20 miles northwest of Hilo.													
Lahaina, Maui Island	25	12:40 p.			0	7	3	0	Wind, possibly dust devil	Louisiana St. Landry Parish	6	12:25 p.							Funnel Cloud			
									Dock-side shed collapsed when apparently struck by remnants of large dust devil observed near it just minutes before and suspected to be one of several seen moving slowly seaward (westward) near Lahaina Shopping Center, each lasting about 10 minutes. Of 7 persons in shed, 2 injured seriously, 5 slightly. Wind in area easterly trade winds gusting to 40 miles an hour.											Sighted 8 miles west of Washington. Apparently did not touch ground.		
									None reported	Lafayette Parish	6	12:45 p.	Short Narrow	0	0	3	0	0	Tornado			
									None reported										Small tornado knocked roof from one barn, collapsed another on farm 3 miles south of Lafayette.			
									None reported	St. Charles Parish	21	5:15 a.	4	65	0	5	4	0	Tornado			
									None reported										High winds, hail and tornado reported by State Police in Bayou Gaudre community. Two house trailers overturned, several utility poles and trees downed. Wind damage also reported at Franklin, St. Mary Parish shortly before 8 a.m.			
									None reported													

See reference notes at end of table.

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					KILLED	INURED	PROPERTY	CROPS	
Louisiana (continued)									
Vermilion Parish	25	4:30 a.	1 1/2	100	1	8	5	0	Tornado
Tornado swept through block-wide path on outskirts of Kaplan. One woman killed, 8 persons injured, 3 seriously enough to require hospitalization. Eight homes destroyed and 25 homes damaged. Wind damage also reported at Youngsville, Lafayette Parish where two houses demolished.									
Iberville Parish	25	6:45 a.	15	50	0	1	4	0	Tornado
Tornado moved SW to NE through Bayou Sorrel settlement, Bayou Goule, and White Castle areas in southern Iberville Parish. Parish Civil Defense Director reported seven houses demolished, 6 house trailers damaged, 4 sheds demolished, 2 stores and church damaged. Trailer home destroyed by wind gust about 6 a.m. 3 miles north of Loteauville, Iberia Parish.									
Rapides Parish	29	2:15 p.			0	0	3	0	Wind
Strong thunderstorm winds caused damage at Kolin and Deville where trees blown over, store and home damaged, garages and outbuildings unroofed.									
Catahoula & Concordia Parishes	29	2:15-3:30 p.	30	200 to 2 mi.	0	2	5	0	Tornado
Catahoula Parish Sheriff reported extensive damages to destruction of about 20 trailer homes in the Glade community approximately 10 miles south of Jonesville at 2:45 p. Funnel apparently touched down 3 times moving from southwest to northeast. Concordia Parish Sheriff traced discontinuous path of damage from near Lismore to Vidalia-Friday highway, where several trailers turned over and roofs damaged, about 3:20 p.									
Maine									
Coastal and southern	11				0	0	4	0	Wind, tides, rain
Wind drove tides up to 3 feet above normal, damaging coastal installations and roads. Rain caused flash flooding along the Sandy River and Temple Stream at Farmington.									
Southern half	22-23				0	0	6	0	Glaze
The worst ice storm in many years. Major damage to utility wires. Many accidents occurred on the icy roads. Thousands of ice-laden trees and limbs toppled, making utility wires with them. Falling trees also damaged homes and blocked highways. Downed live wires added to the danger. The freezing rain changed to rain before ending. Underpasses and other low spots flooded and many cars stalled.									
Central and southern	26-28				1	0	6	0	Snow, glaze, rain, lightning, wind
A devastating "northeaster." Heavy snow totalled mostly 6 to 18 inches on 26th before changing to sleet, freezing rain, and rain. Trees and limbs broke by the thousands, with devastation compared to that of the 1938 hurricane. Utility wires were downed, disrupting service to many communities, some for the second time the same week. Heavy rain further weighted the snow, causing many roofs to collapse or leak. Some buildings collapsed. These included some barns in Franklin Co. in which several cows were killed. The combination of snow and rain caused severe flooding. The town of Phillips was completely cut off, while all major routes into Farmington were also closed by water. At Farmington, the storm was said to be the worst in memory of even the oldest citizens. Cellar flooding was common, putting more furnaces out of service. Storm precipitation totalled mostly 2 1/2 to 5 inches but locally greater, with nearly 10 inches at Farmington, and 6 inches as far north as Jackman. Lightning on the 25th struck a home in Wiscasset. Death of a man in Rumford was partially blamed on the storm, which prevented help from reaching his burning home. Wind also contributed to the devastation. A plate glass window was broken at Rockland, where gusts to 80 mph were reported. Piers, boats and coastal installations were battered by wind and high surf. Beach erosion was extensive in the Biddeford-Saco area. Damages in Waldo Co. alone were estimated at over a half-million dollars. Much milk had to be dumped by dairymen due to loss of power or lack of transportation. One death in the Portland area from exhaustion by the storm.									
Maryland									See data at end of table
Massachusetts									
State	10-11				0	0	5	0	Wind, rain
Widespread but mostly minor damage. Wind gusts to 78 mph recorded at Blue Hill Observatory. At Chester, gusts to 60 mph were recorded. Downed trees and limbs and associated utility outages were the major losses. Several construction trenches were washed out in the Framingham area. Storm yielded 1 to 2 inches of rain. Strongest winds were on the 11th.									
Massachusetts (continued)									
State	14-15				0	0	4	0	Snow
This was the first major snowstorm of the season to affect most of the state. Average storm yields were 4 to 8 inches and up to nearly a foot in the Springfield area. Many skidding accidents.									
Central and western	22				0	0	5	0	Glaze and snow
A severe ice storm, especially in southern counties. Trees and limbs breaking under the weight of ice downed utility wires. In Clinton some cars were damaged by falling trees. Power outages were widespread. Many Christmas decorations were victims of the ice. In the north and northwest precipitation was mostly snow, accumulating to 16 inches at North Adams.									
State	25-28				2	0	6	0	Snow, rain, glaze, wind
A devastating "northeaster." Snow began late on Christmas Day, accumulating mostly 1 to 2 feet over state. Some higher totals in Berkshires, locally to 3 ft., where storm continued mostly as snow. Elsewhere storm changed to freezing rain, sleet and rain during the day of the 26th. On Cape Cod and the immediate coast, snowfall ranged mostly from only a trace to 6 inches before changing to rain. Weight of snow and rain collapsed roofs. New record 24-hour precipitation totals for December were received as over 4 inches fall in parts of eastern Mass. Total storm precipitation ranged from about 2 inches in much of the western portion to 3 to 5 inches in the east, with some locally over 6 inches. The snow hampered drainage, causing severe local flooding from the rain. Many roads flooded, as did cellars. Some homes had to be evacuated with water 4 ft or higher in yards. In Boston the Christian Science Monitor publishing plant was flooded. A dam was partially washed away in West Bridgewater. The rain soaked snow was especially hard to plow or shovel, and all forms of transportation were slowed or halted. Heavy snow and glaze on trees broke limbs or caused whole trees to topple in the wind, causing utility outages. Wind was strongest in the Cape Cod area, where gusts to nearly 100 mph were reported. Two deaths in the greater Boston area were attributed to exhaustion by the storm.									
Michigan									None reported
Minnesota	5th thru 10th				0	0	0	0	Snow
Unusual period of almost continuous snow started in southern Minnesota on afternoon of 5th and continued until late on the 10th. Minneapolis-St. Paul Airport reported (8-23) consecutive hours of snowfall. This amounted to a 14.2 inch snowfall. The snowfall across the State was generally 3-9 inches in western half and 10-18 inches in eastern half of State.									
Mississippi	21	7:45 a.	3	120	0	0	3	0	Tornado
During cloudy and rainy weather with thunderstorms, a small twister (funnel not observed) moved northeastward. There was scattered wind damage along a 3 mile path "east on west end of Choctaw St., from intersection of Church St. and east on Mayo St., and in a north-east direction over downtown Moss Point" where the storm "was aloft" and "at the time of the storm the clouds turned black and windy." Most of the damage was confined to a 3-block area in northwest section of Moss Point (lat. 30.4 N, long. 88.3 W). Two houses shifted from foundation blocks and received extensive roof damage, a church lost some shingles, several horses lost parts of roofs; a boat house at end of Choctaw lifted from foundation and deposited destroying boat house and heavily damaging boat. A number of trees were blown down, power and gas lines cut for a while. Police Department reported no deaths or injuries, damages \$5,000.									
West and Northern Mississippi	29	10:45 a.-4:45 p.			0	0	?	0	Thunderstorms, Funnel Clouds Aloft
At 10:45 a.m. radar indicated numerous moderate thunderstorms in line 15 miles wide from . . . Lake Providence, La. to Hollandale, Miss., to Indianola, to Oakland, Miss.; this line was moving to SE. At 12:35 p.m. radar indicated severe thunderstorms near Redwood and Yazoo City; these were moving to NE; by 1:30 p.m. they had weakened. At 3:30 p.m. radar showed a line of showers and thundershowers extending from just E of Vicksburg, NE to near Habel, to near Tupelo. Thunderstorms in this line were moving rapidly NE and the line was drifting towards the E. At 3:45 p.m. radar indicated a solid line of heavy thunderstorms, 25 miles wide, from between Headville and Natchez northward to between Edwards and Vicksburg; to over Yazoo City; to Winona, to Eureka; this line was moving towards the SE. At 4:30 p.m. radar indicated most of the thunderstorm activity confined to an area extending from Natchez NE to the Jackson area and NE to near Tupelo. At 4:45 p.m. radar indicated a solid line of heavy thunderstorms, 22 miles wide, from between Jackson and Raymond, N to Flora, to between Ploken and Yazoo City, to Durant, to 20 SE Winona;									

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS			
Mississippi (continued)									<p>WARREN COUNTY: Vicksburg Police Department reported pilot of aircraft saw small funnel cloud 10 N Vicksburg at 12:40 p.m., over Redwood. No touchdown tornado associated damage located. LEAKS and ATTALA COUNTIES: Man reported tornado cloud between Thomastown and Gallia on Leake-Attala Counties line (lat. 33.1°N, long. 89.9°W); it did not touch ground; occurred at 4:35 p.m.; said to be moving W or NW. Highway Patrol checked Leake-Attala Counties line and no damage was detected, funnel was in air.</p>		
Northern Mississippi	29-31				0	0	?	0	Heavy Rain	<p>Windy, wet and turning colder weather moved its way across the state. Heavy rains produced some initial local flash flooding with all the creeks and rivers showing rapid rises. Most sections totaled over 3 inches and some over 5 inches of rain. The headwaters of the Tombigbee River soared out of their banks affecting sawmill operations and cattle pastures. In the Big Black River drainage area, flooding was confined to low lying farms and timber lands adjacent to the river. Over the headwaters of the Pearl River, it remained below flood stage. There was some interruption to phone service in parts of northern Mississippi due to moisture in the equipment, wet cables or lightning strikes. A band of one-day rain amounts of 4 inches or more occurred near a line from Issaquena County northeastward to Itawamba County. Some of the large amounts measured on the 30th and noted by divisions: LOKER DELTA 5.59" Onward. CENTRAL 5.04" Winona. NORTH CENTRAL 5.60" Calhoun City. NORTHEAST 5.75" Fulton. EAST CENTRAL 5.50" Van Vleet. OKTIBBEHA COUNTY: Two families were harrowed by high waters in Sun Creek Bottom near Phaba and had to be rescued morning of 30th. At the Oktibbeha County Lake flooded concession and picnic area, a mobile home was evacuated. MONROE COUNTY: The mayor noted there was some damage to "houses where the water entered." Some residents in the worst flooded areas were forced to seek drier quarters.</p>	
Missouri									None reported		
Montana Northwestern Valleys	1st week				0	0	?	0	Hoarfrost	<p>An extended period of foggy weather caused the heaviest accumulation of hoarfrost in recent years. The frost was particularly heavy in the Flathead and Mission Valleys as 6 to 8 inches of frost accumulated on utility lines causing numerous lines to short out or break.</p>	
Judith Basin Co.	31 Morning				1	0	0	0	Cold, Snow	<p>A 51-yr old man was frozen to death northeast of Raynesford attempting to walk from his parents' ranch to highway in snowstorm.</p>	
Nebraska									None reported		
Nevada									None reported		
New Hampshire State	22				0	0	5	0	Snow, glaze	<p>Storm yielded more than a foot of snow in northern sections and heavy icing in the south. Widespread power failures, traffic jams and many skidding accidents occurred.</p>	
State	25-26				1	0	6	0	Snow, rain, glaze, wind, lightning	<p>A devastating "northeaster." Snow accumulated mostly 10 to 20 inches deep on 25th before it changed to sleet, freezing rain and rain. Spectacular glazing in north coating twigs and wires with 1 to 2 inches of ice. Trees and limbs broke under the weight, in some areas with damage comparable to that of the 1938 hurricane. Utility lines were felled, disrupting service to whole communities, some for the second time in the same week. Rain further weighted the snow, causing many roofs to collapse or leak. Some barns and other buildings collapsed. A church and gas station were affected in Dover. Especially in the southern portion, heavy rain caused flooding of roads and cellars, in part due to poor drainage on account of the snow. Lightning accompanied the storm on the 26th in some areas. One death from exhaustion occurred in the Concord area. Wind added to the devastation of trees and, in Hampton Beach, windows were blown out. Considerable damage to shoreline and coastal installations from high wind and surf, with flooding of some coastal roads. Much milk had to be dumped by dairymen in state due to lack of electricity or transportation. The storm precipitation totalled mostly 3 to 5 inches but some heavier in the White Mt. area.</p>	
New Jersey Statewide	25-26	Overnight						4	Snow and rain.	<p>A severe coastal storm on the evening of the 25th and the morning of the 26th brought from 6 to 12 inches of snow to the northern half of the State, and from 2.0 to 1.2 inches of rain to the southeastern counties. Transportation in the northern counties was severely hampered.</p>	
New Jersey (continued)										<p>Northern and Central Counties</p>	
New Mexico										None reported	
New York Hudson and Mohawk Valleys and Eastern Plateau	22	All day						4	Snow, freezing rain	<p>First major storm of the winter in eastern sections produced heavy snowfall between the Susquehanna River watershed and the Hudson River Valley. Snowfall totals of 10 to 14 inches in Hudson Valley from Poughkeepsie to Glens Falls and in eastern Mohawk Valley produced hazardous highways, snarled city traffic and many skidding accidents. Several incidents of large freight and gasoline trucks overturned or jack-knifed on highways. Eastern Plateau areas as far west as Broome and Chenango Counties blanketed with 8 to 12 inches of snow with up to 16 inches in higher elevations of Catskills. Winds were light to moderate and problems of drifting and blowing snow were minor. One dairy barn collapsed from weight of snow in Sullivan County. Freezing rain occurred in the lower Hudson Valley from Orange to Putnam and southern Dutchess Counties, where scattered, but locally moderate, damage resulted to trees, limbs and utility wires. Power failures lasted up to 48 hours after storm. Rain totalling 1.0 to 1.5 inches fell in New York City and coastal counties. Storm brought 4 to 6 inches of snow to northeastern New York and eastern Finger Lakes and light amounts to areas near Great Lakes.</p>	
Statewide, except extreme west	25-28	p.m. to p.m.			3	8	6		Snow, wind	<p>One of the heaviest snowstorms of the century paralyzed entire State except far western counties and along immediate coast; most severely affected were central, east central and northeastern sections. Following near record minimum temperatures on Christmas morning snow began in southeastern sections evening of 25th. Very heavy snowfall became widespread on 26th as coastal low pressure intensified and moved from Cape May to near Boston by early 27th. Snowfall gradually subsided southern New York on 27th and ended in northeastern sections by evening of 28th. Storm snowfall totals of 20 to 30 inches eastern half of State from a line Ithaca to Poughkeepsie north-northeast to Canadian border with 30 to 35 inches in upper Hudson Valley and wide areas of Adirondacks. Albany, with 26 inches for heaviest snowfall of record except the Elizabet of 1868, was typical of December and all-time snow records broken or approached in a single storm at many stations in eastern half of upstate. Snowfall amounts decreased to 12 to 16 inches from central Finger Lakes to upper St. Lawrence Valley and in lower Hudson Valley, 6 to 12 inches on Long Island and to 1 inch or less along Lake Erie. Temperature reasonable during storm, ranging diurnally between 15 and 25 °F. Winds of 30 to 40 mph. or higher late 26th through 27th caused very severe drifting and added greatly to the paralyzing effects of the heavy snowfall. Surface travel and human activities dependent thereon virtually halted in eastern two-thirds of State as official declaration of snow emergency in some 30 counties continued until 29th. Major highways, including N. Y. Thruway, generally open to traffic by 29th but most rural roads remained impassable for a week after storm. Large cities, especially Albany, had commercial and municipal activities greatly crippled until after January 1st as streets clogged with snow made traffic movement and parking very difficult. State offices closed in Albany 29-31st. Industry and business curtailed throughout area of heavy snowfall as dairy farmers sustained considerable loss from failure of milk plants. Air traffic much curtailed as major airports eastern half closed at least through 28th. Scores of barns, farm sheds and similar commercial structures collapsed due to weight of snow—major incident was airport hangar near Oneonta which demolished five aircraft for loss of \$100,000. Subsequent to storm, many homes sustained water damage from seepage of roof snowmelt into interior walls and plaster. Fatalities from exposure, falling articles and car-pedestrian accidents. In addition to innumerable auto accidents, abandoned cars and trucks and stranded travellers, storm-caused injuries included one man from exposure, four people overcome by carbon monoxide in stalled vehicle and three from collapse of building. Snow changed to rain on Long Island (1.5 inches on 26th) then froze, creating hazardous driving conditions and some flooding.</p>	
North Carolina Henderson County	1	9:30am						4	0	Wind	<p>Building under construction blown down and demolished.</p>
Watauga County	3	9:30am						4	0	Wind	<p>Three house trailers designed as mobile hospital units blown over while moving along highway.</p>
Mountains	7							4	0	Glaze; snow & sleet	<p>Ice storm caused considerable breakage of tree limbs which fell on wires causing power and telephone outages affecting several hundred homes and businesses. A little snow and sleet some areas. Some schools closed for a day.</p>
Mountains	21							4	0	Glaze; snow & sleet	<p>Snow one to eight inches in mountains, with scattered areas of sleet and glaze causing most of the damage. A few localities had considerable breakage in power and telephone lines. Some schools closed.</p>

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

DECEMBER 1969

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 Carolina (continued)									
Mountains & Piedmont	25-26						5	0	Glaze; snow & sleet
									Frozen and freezing precipitation began over a large area on Christmas Day and continued the following morning. Snow was reported accumulated up to one foot in the southern Mountains and one and one-half to two feet in higher elevations of the northern Mountains as a result of this and the earlier snow. Scattered Mountain areas and much of the Piedmont had a great deal of freezing rain with the storm, causing most of the damage. There were many broken limbs, a few fallen trees, and broken power and telephone lines resulting in outages ranging from a few hours to two days in many areas. Schools closed one or more days in several counties.
North Dakota				None reported					
Ohio	29-31						?		Freezing Rain
Northeast, Central Southwest Areas									Temperatures hovered near the freezing mark from the afternoon of 29th until early morning on 31st. Off and on light drizzle or rain changed most northeast, central, and southwest areas into a huge ice rink. Akron reported 1/2 inch of glaze on exposed surfaces. Trees and utility lines were common victims of the storm. Driving conditions were extremely hazardous.
Northwest Areas	31	Morning					?		Snow
									Nearly all locations north of Ashtabula to Versailles line received more than 4 inches of snow. Snowfall was especially heavy over the northwest where the snowfall averaged 6.2 inches. Van Wert received 10 inches of snow. The return period for a 10 inch snowfall in 24-hours at this location is about 40 years.
Oklahoma	22	Afternoon			0	0	?	?	Wind and dust
Western Half of State									High winds and dust, restricting visibility to less than 1 mile in some areas, followed a fast moving cold front through the State. In the western half of the State, the high winds blew down signs, TV antennas, tree limbs, fences, plate glass windows, and damaged roofs of buildings in a number of areas. A small trailer house was overturned and destroyed at Beaver. Telephone poles were blown down in the Turpin community in Beaver County. A barn was destroyed at Chayenne, but 800 to 1000 bales of hay in the barn remained stacked. A small airplane was overturned at Guyman Municipal Airport. The wind was measured at 80 MPH at the airport in Cordell and 67 MPH at Vance Air Force Base near Enid. At Guyman, winds were estimated at 65 MPH and at Altus 60 MPH.
Entire State	28-30	PM, 28th to PM, 30th			1	0	?	?	Snow and ice
									A strong winter storm left snow accumulated to 4 to 10 inches over most of southern and eastern Oklahoma. In northwestern Oklahoma accumulations were generally 1 to 3 inches. Ahead of the snow, freezing rain produced a heavy coat of ice on southern and eastern sections of the State causing extensive damage to trees, utility lines, TV antennas, and in several areas roofs and awnings on buildings also. Hardest hit was Ada, where an estimated 5000 persons were partially without heat, electricity, and telephone service for a time on the 29th. Most service was restored by the morning of the 30th. City officials at Ada estimated damage at \$1.35 million. Near Altus, in southwest Oklahoma, a man apparently died from exposure after leaving his truck when it became stuck in the snow. Highway travel, heavy during the holiday season, was severely restricted as roads were made nearly impassable by the snow and ice. Air traffic was nearly at a standstill in Oklahoma City during the storm, but was only slightly hampered at Tulsa. Officials in several southern and eastern areas of Oklahoma reported the storm as the worst in 30 years.
Oregon	10-13				0	Few	4	3	Wind, Rain
West of Cascades									High wind began on Oregon coast on 10th, reaching a peak gust of 88 mph and fastest mile of 68 mph at the Newport Weather Bureau on morning of 11th. Unofficial instruments indicate winds of 75-100 mph along most southern Oregon coast. Peak speeds occurred at same time as some of highest tides of the year. Damage was heaviest at extreme southern end of Oregon's coast. Considerable damage to waterfront installations. Much ocean debris left on low-lying streets. Some windows broken, roofs partially blown away length of coast. A few house trailers demolished. Many trees uprooted or broken off causing widespread, though generally brief, power outages. Some damage, and power service interruptions experienced throughout area west of Cascades. Heavy rain produced high water most western Oregon streams but flood damage generally not significant.
West of Cascades	19-21				1	Few	4	4	Rain
									Some high winds in exposed coastal and inland western valley points, but resulting damage insignificant. Heavy rains all areas west of Cascades with most places having 1 or more 24-hour totals of more than 2 inches; some with more than 3. Little or no flooding in main stem rivers but several tribu-
Oregon (continued)									
Pacific	1	Morning			0	0	5	0	High Surf
French Frigate Shoals Tern Island (See, also, Hawaii)									Swell generated by large low pressure area more than 1,000 miles to north-northwest caused estimated 50-foot surf on outer shoals and inundated 300-foot wide Tern Island, damaging Coast Guard structures and necessitating evacuation of entire complement of 19 men. Island intermittently awash from 6 a.m. to early afternoon, and under 2 feet of swirling sea water between 8 and 10 a.m. Damage, mainly to buildings, estimated at \$200,000, including restoration and cleanup.
Gilbert and Ellice, Samoa, Cook, Society and Line Islands (See, also, Hawaii)	4-7				0	0	1	0	High Surf
									Heavy north to northwest swell from large Northern Hemisphere low pressure area moving slowly eastward along about 45° North penetrated to below 20° South, more than 4,000 miles distant. Swell at Christmas Island reported "heavy"; at Gilbert and Ellice Islands, 13 to 20 feet; at Rarotonga, latitude 21° South (south Cook Islands), 10 feet. From 4th to 7th heavy northwest swell, amplitude 10 feet, period 20 seconds, at Papeete, Society Islands, swept French Polynesia. Samoa and north Cook Islands reported unspecified minor damage on 4th.
Pennsylvania	7	Day							Wind
Payette County									Telephones service was interrupted in the mountainous areas of the county. High winds played havoc with Christmas decorations, awnings, the scaffolding of a church steeple, brush cans, shutters, fiber glass siding, roofs, and tree limbs. There was no estimate of damage from the flying debris. A mobile home was toppled and wrecked by winds gusting at 80 to 100 miles per hour. In the Uniontown area winds heavily damaged business establishments and caused considerable damage to homes. Trees were uprooted and power lines ripped down.
Lancaster County	7	10:57 AM			7	34			Snow
									7 persons were killed and 34 injured when a bus skidded on Highway 30 in a three-inch snow accumulation.
Canton, Bradford County	18	Day				5			Snow
									Snowstorm caused many minor accidents as cars skidded on slippery highways. In one accident damages were estimated at \$2,200. Injuries were minor.
Luzerne, Lackawanna and Monroe Counties	22	Day			4	2	3		Snow
									Power failures were common when freezing rain mixed with snow paralyzed the area. Gale-like winds created snowdrifts which caused hazardous driving conditions. The death of four people was attributed to the snowstorm as they were overexerting themselves. Many schools and businesses were closed. Two persons suffered injuries, one a fractured ankle from falling and the other a possible heart attack during snow removal.
Northern and Central Pennsylvania	25-26				2		5	4	Snow
									Two elderly people froze to death in their home near Scranton. Traffic was virtually at a standstill in Scranton as heavy winds drifted roads closed as soon as they were plowed. Driving was extremely hazardous with ice still on the highways from the previous snowstorm. Many locales received over a foot of snow and remained isolated for extended periods. Activities were postponed and some airports had to be shut down. The reported motor vehicle mishaps were of minor nature. The roof of a high school in Blakely caved in. Many limbs and trees broke off as a result of the weight from ice and snow.
Puerto Rico									None reported
Rhode Island	11	3-7 AM			0	0	5	0	Rain, wind
Cumberland, Lincoln, Cranston; Providence Co. and Warwick, Kent Co.									Wind and rain combined to fell trees and down power lines. Heavy precipitation of 1 to 2 1/2 inches in the storm of Dec. 10-11 added to earlier heavy rains of 1 1/2 to 2 1/2 inches on Dec. 7-9 to cause extensive flooding in northeastern sections of the state early on the 11th.
Statewide	14-15	PM-AM			0	0	5	0	Snow, thunderstorms
									Major storm with snowfalls of 3 to 5 inches forced schools to close in many communities in the north and closed the race track at Jarragansett. icy roads contributed to several major traffic accidents including the loss of power in Coventry when a car hit a pole. Unusual for December, scattered thunder activity occurred in a number of places.

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

DECEMBER 1969

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	
Rhode Island (continued)									
Statewide	22	Ak-Eve			0	1	5	0	Rain, glaze
					<p>Torrential rains of 1-2 1/2 inches and wind were responsible for power failures in Providence, South Providence and Warwick and for extensive flooding in Pawtucket, Warwick, Cranston, East Greenwich and Wickford. Glaze, the result of a rapid temperature drop, caused extremely hazardous driving conditions. At Tiverton, a gust of wind flipped a compact vehicle onto its back and a passenger was injured.</p>				
Statewide	26-27	Mid-Mid			0	0	6	0	Snow, freezing rain, rain
					<p>Severe coastal storm began on evening of 25th with snow accumulations of 6 to 11 inches on mainland by morning of 26th. Precipitation then changed to freezing rain and rain with storm totals reaching 3 to 4 inches before ending as freezing rain and snow on the 26th. Massive traffic jams occurred on the 26th and many skidding accidents occurred especially from Providence to Kingstown and to Newport. A late afternoon fog on the 26th made driving especially hazardous in South Kingstown and Narragansett. Extensive flooding occurred in Providence, Cranston, West Warwick, Newport, Rumford and North Kingstown. Some communications were lost as water seeped into power lines. Storm halted all activity on land and in the air on the 26th and hampered business and transport on the 27th.</p>				
South Carolina Greenville, Spartanburg, Cherokee, Union Chester & York Counties	25	late evening			0	0	2	3	Freezing rain
					<p>While most of the state had rain and the higher elevations had snow, a six-county area had freezing rain late Christmas night. Principal damage was to trees and limbs and to power lines. Roads and streets were unsafe for driving and several power failures resulted from lines downed by broken trees and limbs.</p>				
South Dakota					None reported				
Tennessee Most of State	25-26				0	0	4	0	Snow
					<p>Snowstorm started in west early on the 25th and ended in east late on the 26th. Snowfall was heaviest in the northeast, atop the Great Smoky Mountains, and on the Cumberland Plateau. Memphis had a trace, central areas 1 to 4 inches, Plateau 6-8 inches, and the east 10-12 inches. Many church services and Christmas Day functions cancelled. Ice accumulation on wires and trees resulted in some minor interruptions of services and limb breakage, but damage was generally light.</p>				
East and Central Tennessee	28-30				3	0	6	0	Rain
					<p>A slow-moving cold front dumped up to 7 inches of rain during a 60-hour period. The rain, combined with snow melt in the Upper Cumberland River Basin produced local flooding on at least five rivers; namely, the Duck River, Harpeth River, Red River, Emory River, Elk River and several small streams. Flood damage to streets, roads, bridges, houses, stores, farmlands, etc., was heavy in several communities with Harriman, Oakdale, McMinnville and Sparta hardest hit. A worker drowned in a water-filled ditch in Nashville. Two persons drowned in swollen creeks near McMinnville.</p>				
Texas 10 SE Palestine, Anderson County	5	Night			0	0	3	0	Lightning
					<p>A barn filled with some 250 bales of hay, was struck by lightning and totally destroyed by the ensuing fire on the Melvin Moore farm about 10 miles southeast of Palestine in the Camp Hill area.</p>				
W. W. Gregory, San Patricio County	19	1:00 p.							Funnel aloft
Near Hampshire, Jefferson County	19	5:00 p.							Funnel aloft
E. Hitchland, Hansford County	22	Afternoon			1	0	0	0	Windstorm
					<p>Robert L. Braidsen died following an 80-foot fall from atop the Frontier Feed Yard Mill east of Hitchland. Wind gusts, estimated at 100 miles per hour, caused the vertical metal leg, on which Braidsen was climbing atop the mill, to buckle, hitting another leg of the mill and coming to rest on a pickup truck parked nearby. Braidsen was dead on arrival at the Memorial Hospital in Guyton, Oklahoma.</p>				
N.E. Groveton, Trinity County	29	1:05 p.							Funnel aloft
Utah									
Eastern Great Salt Lake Valleys	14-20								Fog and clear ice
					<p>A period of persistent dense fog and smoke settled over the Wasatch Front valleys on the 14th and held through the 20th bringing commercial aircraft traffic to a standstill and severely restricted highway traffic. One traffic death due to the low visibility was reported and two aircraft accident deaths. Many minor accidents due to the fog and clear ice on the roads ran damage into the thousands of dollars.</p>				
Vermont									
State	22				0	0	4	0	Snow
					<p>Storm yielded from 1 to 2 ft. of snow. Driving conditions became extremely hazardous in some areas. A skidding accident in Woodstock took one life. Heavy traffic jams were reported in the Newport area. Most scheduled air flights were cancelled during the storm.</p>				
State	26-28				1	0	6	0	Snow, glaze, wind
					<p>A devastating "northeaster." Snowfall totalled mostly 1 1/2 to 3 ft. but up to a new Vermont storm record 4 1/2 inches at Watfield. This closely followed a major snowstorm earlier the same week. The state was officially declared a disaster area by the governor. Drifts commonly mounted up to 6 ft. and in some local areas up to 30 ft., closing roads and halting virtually all transportation except by snowmobile. Storm changed to freezing rain and sleet along the Connecticut River and in the "Northeast Kingdom" area. Ice built up to over 2 inches in many areas with some local reports of 3 to 6 inches on wires and twigs. Devastation of forests and utility lines was described as "havoic unbelievable." Weight of snow and ice collapsed many roofs and buildings, both rural and urban. Dows were killed in two of the several barns collapsed. A poultry house collapse killed most of 10,000 chickens. A number of commercial and factory roofs collapsed in the Middlebury and Rutland areas. One death was attributed to the storm in the Saxtons River area. Dairymen were especially hard hit by loss of power for milking and had to dump thousands of gallons of milk due to lack of storage or transportation. Utility outages were prolonged in many areas, up to a week or more.</p>				
U. S. Virgin Islands									
None reported									
Virginia									
Northwest from a Richmond-Danville line	7-8				0	0	0	0	Glaze
					<p>Freezing rain and sleet observed with numerous minor highway accidents, mainly in the mountain counties.</p>				
Extreme Southwest	18-19				0	0	0	0	Glaze
					<p>Local areas of freezing rain, sleet, and rain.</p>				
Northwest	21-22				0	0	0	0	Glaze
					<p>Local areas of freezing rain along with sleet, rain, and some snow.</p>				
State	25-26				0	0	5	0	Snow, Glaze
					<p>Heavy snow up to 18 inches covered most of Western Virginia with severe drifting after the snow. Most secondary roads became blocked and remained so for days. Meanwhile, glaze covered an area of central Virginia beginning just inland from Chesapeake Bay and extending westward to a line from Dulles Airport southward to Halifax County. Major damage occurred to utilities with 50,000 electric users in Richmond alone without power. Heavy loads of ice caused considerable damage to trees and shrubbery. Numerous mostly minor car accidents were reported over the state, and most airports had to be closed for several days.</p>				
Extreme Southwest	29-31				0	0	6	0	Rain, Floods
					<p>Heavy rains and melting snow caused severe flooding mainly on the Clinch and Powell Rivers with about 1,000 persons being evacuated from their homes. Heavy damage reported to highways from flooding and slides with many roads being closed for days. Several towns were flooded with appreciable water damage to businesses and private homes.</p>				
High elevations North of Lynchburg	29-31				0	0	0	0	Glaze
					<p>Several stations reported freezing rain.</p>				

See reference notes at end of table.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

DECEMBER 1969

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	
Washington Southern Puget Sound Area, King County	12	1412 to 1455 PST	5	75 to 200	0	1	5		Tornado
									Tornado began as a waterspout over southern section of Puget Sound about 1400 PST. The first waterspout was reported in the East Passage near southern end of Maury Island. This waterspout disappeared and a second one formed between Maury Island and Redondo, moving inland as a tornado between Des Moines and Saltwater State Park. A funnel cloud was sighted approximately 8 miles southwest of Seattle-Tacoma Airport at 1442 PST and a hook-shaped echo was observed on the FAA radar at 1415 PST. The tornado traveled northeast from near Des Moines to north of Kent between about 1415 and 1435 PST. Two funnels were reported in some areas. The funnels would touch the ground for short distances, damaging or destroying buildings, then lift for a few blocks before touching the ground and causing considerable damage. Roofs were damaged or destroyed on several residences, windows blown out, garages and other buildings were destroyed. Almost all windows were blown out of a large greenhouse and power lines were down along the path which ranged in width from 75 to 200 yards and extended for a distance of about 5 miles. The most extensive damage occurred near the Green River in the Kent valley. One person was injured when a garage was destroyed. Hail and heavy rain occurred with the passage of the tornado. Hail was reported in other areas during the day. This was the most damaging tornado to strike any area in Washington.
Western	14	0600 to 1300 PST					4		Wind
									A low pressure center near the west coast of Oregon intensified during the early morning hours of the 14th and moved north along the west coast of Washington and into British Columbia by early afternoon. Strong, gusty winds occurred in most areas west of the Cascades. Power outages occurred in numerous localities and ferries on Puget Sound experienced some difficulty in crossing and docking, in some localities, beach installations were damaged by waves and floating logs. Heavy showers occurred in some areas.
Pierce County	22	2300					3		Thunderstorm
									Thunderstorms and strong winds in the Tacoma area during the night resulted in some property damage when trees were blown across buildings and power lines.
West Virginia Oceana, Wyoming County	30	Afternoon			0	0	4	0	Rain
									About 400 persons were evacuated from their homes when Laurel Creek, a tributary of the Guyandotte River, began flooding Oceana, which is located 40 miles south of Charleston. What was termed "minor flooding" by the U. S. Geological Survey occurred in many other low-lying areas of central and southern West Virginia west of the mountains.
Tams, Raleigh County	30	8 p.m.			2	0	4	0	Rain
									Heavy rains which totalled more than two inches December 29-30 melted the snow cover and caused flooding on many of the smaller streams in this area. The rains washed out a dirt road and hurled a car 100 feet down into a flooded creek, drowning the two women occupants. This accident occurred between the hamlets of Tams and Stotesbury, about 10 miles southwest of Beckley.
Wisconsin									None reported
Wyoming									None reported
Delaware Northern Portion	25-26	PM-AM							Snow
									Snow, to depths of 4 to 5 inches, provided the area its first White Christmas since 1966.
State	26								Heavy precipitation
									The precipitation recorded on this date was unusually heavy. This included both the rain and melted snow and sleet. Such long-term weather stations as Dover with its 2.94 inches and Bridgeville 1NW with its 2.52 inches recorded their greatest one-day December precipitation.
Maryland Garrett County Area	1-2	AM-AM							Snow
									Snow to 8-inch depth covered the area. Depths decreased sharply to the east as Cumberland reported but a trace.
Allegheny and Washington Counties	7	All Day							Snow
									Heaviest totals reached 7 inches at both Westport and Frostburg. A number of traffic accidents resulted from slippery road conditions.
Northern Portion	14	AM							Snow
									Snow, to depths of 7 inches in the west and 5 inches in the east, blanketed the area and tapered off sharply toward southern areas.
Western Portion	21-22	PM-PM							Snow
									Snow, up to 9 inches in depth, covered the area; heaviest totals were found in the Garrett County area.
Maryland (continued) State	25-26	PM-AM							Snow
									Snow covered most of Maryland except along the southern Chesapeake Bay area and in southern Eastern Shore. This was the first White Christmas for a great part of Maryland since 1966. Totals to the east of the Blue Ridge Mountains were heaviest in Frederick and northern Montgomery Counties where most totals were over 12 inches. In the western portion totals up to 16 inches in depth were reported although most totals were 8 to 10 inches.
Eastern Shore	26								Heavy precipitation
									Precipitation, mostly in the form of rain, was unusually heavy. Some long-term weather stations recorded the greatest one-day December precipitation.
Northern Portion	27	All Day							Wind
									The snowfall of December 25th-26th was followed by strong gusty winds which brought blizzard-like conditions, especially to the Frederick County area. Hagerstown airport officials reported gusts up to 80 miles per hour. Blowing snow reduced visibility at times to near zero. Drifting snow blocked many primary and secondary roads. Drifts as high as 20 feet were reported in western Maryland. The Emmitsburg weather observer reported that her area was snow-bound four days.

- * 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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STORM DATA AND UNUSUAL WEATHER PHENOMENA

DELAYED DATA

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM	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							KILLED	INJURED	PROPERTY	CROPS	
Illinois	June 1969									Texas	Sep. 1969								
	30	10:45p			0	0	6	0	Lightning	5 NE Bronco, Yoakum County	14	12:30 a	?	?	0	0	?	?	2 Tornadoes
	Seven business buildings destroyed or damaged by fire after lightning struck one of buildings. Damage estimated as high as \$1 million.										Two tornadoes struck within seconds of each other at about 12:30 a.m. on the Buford Dulin farm five miles northeast of Bronco. One of the tornadoes destroyed a barn just north of the farm house and scattered its timber and sheet steel for 100 yards to the northwest. The other tornado blasted apart a barn northeast of the farm house and scattered its debris for two hundred yards to the northeast. Because Dulin and his son had been painting the interior of the farm house, all windows had been left open.								
Minnesota	June 1969																		
Grove City TN, Meeker County	25	4:45pm to 5:00pm	2	50	0	0	4	0	Tornado										
	Small tornado moving northeast touched down 7 miles north of Grove City destroying several farm outbuildings. A funnel on the ground and 4 small funnels aloft was observed.										"I believe that that's the only thing that saved the house", said Dulin; "I heard the twister coming, it sounded like when you take a piece of baling wire and whirl it around your head. Then, it worked up into a higher and faster pitch. Then, it hit. Within a few seconds there was a repeat performance." Interior closet doors of the home were blown open by the winds which blasted through the house and blew in about one inch of rain water on the floor. One of the tornadoes shifted a heavy wooden granary building about six inches on its foundation, but was not damaged otherwise.								
Willmar 3 1/2 NW, Kandiyohi County	25	2:40pm	short	narrow	0	0	3	0	Tornado										
	Small tornado moving northeast touched down causing minor damage to farm buildings. A funnel was observed on the ground and 3 small funnels aloft.																		
Oklahoma	JUNE 1969									Missouri	Oct. 1969								
Mangum area, Greer County	17	10:00p--10:35p	6	*1	0	0	4	4	Wind, hail, and rain	Caledonia, Washington County	11	1:15 AM			1	3			Thunderstorm, Wind
	Hailstones up to 3/4 inch in diameter along with strong winds and heavy rain caused considerable property and crop damage.										One man had his arm cut by glass when a window was blown in. The garage was completely destroyed and the windows on one side of the house were blown in, both upstairs and downstairs. Many shingles were blown from the roof and several bricks from the chimney.								
Pennsylvania	June 1969									Texas	Oct. 1969								
Wayne Co.	20	Day							Lightning	75 Ozona, Crockett County	27	Morning	?	?	0	0	?	0	Hailstorm
	Eighteen cattle were struck by lightning.										A hailstorm struck a narrow strip about seven miles south of Ozona and left an almost unbelievable deposit of ice on roads and in low places. U. S. Highway 163 was a sheet of ice estimated at 18 inches to 2 feet, and bar ditches contained drifts 5 feet and more thick. The hail, about one-quarter inch in diameter and irregular in shape, created an icy deluge that made all roads in the area impassable. Torrential rains and massive piles of ice combined to push over fences in many places. The heaviest hail covered about a four mile strip. The State Highway Department rushed road graders to the area to scrape off the roads. Highways were closed several hours.								
Near Slippery Rock, Butler Co.	26	Afternoon							Lightning										
	Five cows were killed by lightning.																		
Stoneboro, Mercer Co.	26	Afternoon							Lightning										
	Lightning set a house on fire destroying it completely.																		
Tennessee	June 1969																		
Johnson City, Washington County	1	1:30p.			0	0	?	?	Hail										
	Highway Patrol reported golf-ball size hail at a few locations, but no damage was reported.																		
Georgia	Jul. 1969																		
Smyrna, Cobb County	28	pm			0	0	5	0	Heavy rains	Near Seagoville, Dallas County	29	10:30 p			0	0	5	0	Lightning
	Extremely heavy rains caused extensive damage to both public and private property. Streets and culverts were washed out. Yards, fences and outdoor equipment were heavily damaged. Numerous basements were flooded. Damage to public facilities alone was conservatively estimated at \$75,000.										Lightning struck a farm home near Seagoville, about 10 miles southeast of Dallas. The resulting fire destroyed the \$75,000 home. A Seagoville fireman said the lightning bolt hit the power line outside the home owned by Cotton Hartsott, entered the house through the meter box, and spread on the electric lines. No one was at home at the time of the fire.								
Michigan	Jul. 1969																		
Sanford, Midland County	31	1:30 PM			1	0	3	0	Wind	85 Brenham, Austin County	30	4:40 a-4:45 a	3/4	33	0	0	3	0	Tornado
	Couple tried to hold roof on patio when wind began to blow. As the wind lifted the patio roof, one let go, the other hung on and was carried over the house with the roof, landing some 75 feet away. Two hours later the wife died at the hospital of injuries received from the incident.										A tornado cut a path across the farm of W. G. Stein, Cooperative Weather Observer at Brenham. Mr. Stein reported, "It sounded like a freight train was coming through the house. It took some of the roof off the cattle shed and part of the barn of my neighbor southwest of me. At my place it took the roof off the best constructed building I had and did not harm a flimsy roof about 100 feet away from this one. It completely uprooted a large post oak tree in front of my yard, I am told that this tree stood there at least 115 years, and severely damaged several other shade trees in front of my house. After passing over my place it lifted and disappeared." Damage was estimated at \$2,000. The tornado moved from southwest toward the northeast.								
New Jersey	Jul. 1969									Pennsylvania	Nov. 1969								
Mercer County	31	4:45 p.							Funnel cloud	Chester County	14	5:30 - 6:00 PM	touchdown						Lightning, tornado, and hail
	A public report was made of a funnel cloud, not touching the ground, moving eastward, 5 miles northeast of Trenton.										Lightning set a barn on fire in West Chester causing an estimated damage of \$35,000 in livestock and hay. In Keltion a tornado touched down at 6 PM, and traveled a path of about 200 feet flattening a house trailer, tearing loose 3 mushroom houses, and upsetting a converted school bus. The damage was extensive. Winds and in some areas half-inch hail from the tornado were felt in a mile-wide radius.								
Alaska	Aug. 1969		None reported																
New Jersey	Aug. 1969																		
Essex County	5	5:30 p.							Funnel cloud										
	A pilot reported seeing a funnel cloud 10 miles west-southwest of Peterboro Airport.																		
Florida	Sep. 1969																		
Clearwater Pinellas County	30	8:50p			1	0	0	0	Lightning										
	A student at St. Petersburg Junior College (Clearwater Campus) was killed when struck by lightning in a parking lot. Two other nearby students were felled but not injured.																		
Lake Parker (near Orlando) Orange County	30	night			0	0	3	0	Lightning										
	House trailer destroyed by fire which was started by lightning. Damage estimate is \$5000.																		

See reference notes with current data.

409

STORM DATA AND UNUSUAL WEATHER PHENOMENA

CORRECTIONS

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	
Idaho Lewiston 12 ENE, Nezperce County	Jun. 20	1969 3:35 p.	short	narrow	0	0	0	4	Tornado, funnel aloft, and hail
	The date of this storm was originally documented on June 10, 1969 and is hereby corrected to this date of June 20, 1969. Late reports also indicated that damaging hail occurred along this storm path. The main hail path of 1/2 by 1 mile passed just south of Myrtle with hail covering the ground 1 inch deep in places and causing \$30,000 damage to the pea crop.								
Arkansas Harrison - Boone County	Jun. 21	1969 12:30 p.					5		Windstorm
	10 airplanes damaged, 5 of them a total loss at Boone County Airport. A 170 foot section of a 270 foot tower at KHOZ-AM (Harrison) Radio Station toppled. Also minor damage to trees and power lines.								
Eudora-Chicot Co.	1							5	
Calhoun, Bradley, and Ashley Co.	19							6	
Minnesota Jasper, Pipestone County	Jun. 25	1969 12:10pm	(previously recorded as 00:10pm)						
New Mexico San Ysidro, Sandoval Co.	Jun. 16	1969 4:40 p.							Funnel clouds
	Corrects date from 15 to 16.								
Oklahoma Between Hennessey and Marshall, Kingfisher County	Jun. 23	1969 3:55p.							Funnel aloft
	Corrects time from 4:55p. to 3:55p.								
LN Vinita, Craig County	23	10:00p.	1 1/2	Narrow	0	0	3	0	Tornado
Corrects time from 11:00p. to 10:00p. No change in description of storm.									
Arkansas	Jul. 1969	All entries are in Central Daylight Time.							
Iowa Sioux City, Woodbury County	Jul. 4	1969 1:06 a.					4	4	Windstorm
	Temperature rose rapidly to 94° F. (Dually entered in June and July 1969 Storm Data. Delete from June 1969.)								
Oklahoma Mantou, Tillman County	Jul. 25	1969 4:30p.- 4:45p.	1/2	*1/4	0	0	4	0	Wind
	Corrects time from that previously published. No change in description of storm.								
Humphreys area, Jackson County	25	4:30p.- 4:45p.	3/4	*1/4	0	0	4	0	Tornado
	Corrects time from that previously published. No change in description of storm.								
Texas	Jul. 31	1969 Evening	?	?	0	0	?	0	Tornado, windstorm
Near Buffalo Springs, Lubbock County	The following storm was reported for publication as: Near Buffalo Springs, Clay County on July 21. This was incorrect, and the report should have read as follows: A tornado ripped a brick wall from the Ray Chapman home in the Lake Ransom Canyon area near Buffalo Springs. Mrs. Chapman observed the tornado as it approached her home. The Chapman's teenage son, Jack, said the air was "dead still" before the tornado struck. At the lake, high winds capsized numerous boats tossing at least 16 persons into the water. About one dozen 55-gallon empty oil barrels were reported "flying by like so many paper cups".								
Iowa Sioux City, Woodbury Co.	Aug. 8	1969 9:24 p.	Time shown in Daylight Saving Time as published.						
	8	9:25 p.	Time shown in Daylight Saving Time as published.						

See reference notes with current data.