

U.S. DEPARTMENT OF COMMERCE

MAURICE H. STANS, Secretary

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION  
ENVIRONMENTAL DATA SERVICE

# STORM DATA

FEBRUARY 1969

Volume 11 No. 2



Asheville 1969

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 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 NE Alabama	15-16	Evening Morning			1	5	0	0	Ice Storm
			Freezing rain, snow and high winds moved into NE Alabama Saturday evening. Widespread damage to power lines and timber. Hardest hit areas were Jackson, Marshall and DeKalb Counties. Many areas were without power during the cold weekend. Estimated 100,000 board feet of timber down. Icy roads hindered rescue and repair operations. One death attributed to storm due to exposure.						
Alaska Nome	27/28				0	0	3	0	Blizzard
			Blizzard conditions prevailed for two days with winds averaging 35 MPH and gusting to 60 MPH, reducing visibility to near zero. There was some minor damage and one airplane was completely demolished.						
Arizona Phoenix (15 mi N)	22	1:45 p.			0	0	0	0	Tornado
			Funnel cloud touched ground briefly in open country near Deer Valley Airport. Funnel moved toward the east.						
Arkansas			None reported						
California West of San Diego	5	9:30 am			0	0	0	0	Waterspout
			Pilot reported observing a waterspout extending from the surface to 1,500 feet.						
West of San Diego	5	2:39 pm			0	0	0	0	Funnel cloud
			San Diego Tower personnel reported a funnel cloud west of the airport.						
Santa Rosa	5	9:00 pm			0	0	5	0	Strong wind
			to midn. Local strong winds caused major damage to buildings, trees, and utility lines at a number of points in the Santa Rosa area. Power was out in some areas for more than 24 hours.						
Central and South Coast	5-6				0	0	4	0	Strong winds
			Locally strong winds caused damage at a number of points along the coast between the San Francisco Bay area and San Diego; damage was reported to trees, buildings, and utility lines as well as to parked aircraft.						
Redwood City	6	3:00 am			0	0	5	0	Strong wind
			Locally strong winds damaged buildings and trees within the Redwood City area.						
From Monterey and Lake Tahoe southward to the Mexican border	20-25				17	2	8	7	Wind; rain, snow.
			Storms covering a period of several days resulted in flooding and slides. Highways and railroad lines were closed for varying periods. At least 12 persons were killed by mudslides and snowslides, and 5 were drowned; 2 were reported injured; at least 4 more are missing and presumed dead. Telephone and power lines were downed, and a gas main was washed out. More than 6,000 persons had to be evacuated from their homes. Extensive areas of farmland were inundated, and there was widespread loss of crops and livestock. Snow depths in the higher mountains exceeded any recent years and approached the greatest of record.						
Stockton	28	3:17 pm			0	0	0	0	Funnel cloud
			Weather observer at Stockton Airport reported seeing a small funnel cloud southeast of the field.						
Colorado			None reported						
Connecticut Statewide	9-10	AM-AM			0	0	5	0	Snow, wind
			Coastal storm of near-blizzard strength produced snowfalls which ranged from 5 inches along the extreme southeastern shore, where precipitation began as rain, to 35 inches in parts of Litchfield County. Most of the state received amounts between 15 and 25 inches. Gale-force winds drove the snow into 6-14 foot drifts which immobilized land and air traffic, stranded thousands of motorists, isolated communities, and disrupted power and phone service. Almost all schools and many business establishments were closed on the 10th. Many schools failed to open on the 11th and some were closed through the 15th mainly because of the lack of equipment to handle the immense drifts and because of the many vehicles which were abandoned on roadways throughout the state. In Torrington, the roof of a building under construction collapsed.						
Statewide	23-25	AM-AM			0	0	5	0	Snow, wind
			The second major coastal storm within two weeks brought 3 to 6 inches of new snow to the west and 6 to 14 inches in the east. Once again, wind piled the snow into drifts and downed power lines. Many schools in the eastern half of the state were closed on the 24th. The heavy wet snow was responsible for a rash of traffic accidents, many more in number than in the storm of February 9-10; but fewer vehicles were immobilized and roads were cleared much faster.						
Delaware Sussex County	18	AM						4	Glaze
			State police reported several accidents, including one fatality, when glaze-covered highways made traveling difficult. Totals from sleet, snow and freezing rain were light.						
Statewide	19-20	PM - PM							Snow
			The season's heaviest snow had totals such as 6 inches at Wilmington (Porter Reservoir) and 5.9 inches at Leves.						
Florida Miami	12	6:00p.	1	125	0	0	4	0	Tornado
			A small rope-like tornado moved eastward from near NE 7th Avenue and 113th Street to Biscayne Bay near 109th Street and North Bay Shore Drive. Damage consisted mainly of the airplane demolished, one boat damaged, and several autos damaged. The tornado dissipated a few minutes after moving into Biscayne Bay.						
Statewide	15	daytime			0	2	0	0	Squall line
			A squall line accompanied by thunderstorms and strong winds crossed the state from west to east. Gale force winds were reported from all sections of the state and gusts of 75 mph were measured in the Tampa area. Rainfall totals were mostly one to three inches. A wall of water about 5 feet high hit the offshore keys of Manatee and Sarasota Counties, causing considerable flooding of waterfront properties. The most serious injury reported was a broken leg caused by flying debris.						
Riverview, Hillsborough County	15	10:40a.							Funnel aloft
Havana, Gadsden County	15	11:45a.	short	narrow	0	0	4	0	Tornado
			One tobacco barn was demolished and several damaged. An eyewitness reported the tornado sounded like a "road full of wagons."						
St. Cloud, Osceola County	15	11:45a.							Funnel aloft
West Palm Beach (8 miles NW)	15	2:18p.							Funnels aloft (3)
Cocoa Beach, Brevard County	15	3:19p.							Funnels aloft (3)
Georgia Vienna, Dooly County	8	7:15 p	Short	Narrow	0	0	4	0	Tornado
			Small tornado damaged several homes and uprooted numerous trees in a residential section of town.						
North	11-16				0	?	5	0	Snow, sleet and glaze
			A winter storm that covered most of north Georgia with glaze, sleet and snow began late on the night of the 11th and continued into the 16th. Light glaze extended as far south as Americus and Dublin and two inches or more of snow and sleet covered the area north of the Atlanta-Athens area. Some areas suffered heavy damage to utility lines, trees and shrubs. Hazardous driving conditions existed over the northern half of the State and numerous automobile accidents and at least 4 deaths were attributed to the icy roads. Many businesses closed early on the 15th, church services were suspended on the 16th and schools were closed in at least 25 counties on the 17th. Area hospitals treated hundreds of minor injuries caused by sledding accidents and falls on the ice. Six inches of snow fell at Clayton and more than a foot was reported at higher elevations. No deaths were caused directly by the storm.						
Southwest	15	a.m.			0	0	4	0	Windstorms
			Strong winds, with gusts exceeding 50 miles per hour, hit several southwest Georgia communities. Damage was reported at Albany where several plate glass windows were blown out, trees uprooted and power lines downed by trees and branches. Several buildings were damaged at Moultrie and part of the roof was blown off the Doran High School. A business building was demolished at Attapulgus in Decatur County.						
Hawaii Windward (Eastern) Oahu	1	Noon to Late Afternoon			0	0	6	0	Rain
			Torrential rains induced by conjunction of low pressure area in upper atmosphere and moist trade winds below overtopped Kamaoalii Stream about 12:30 p.m., sending 3- to 5-foot torrents through Keapuka Subdivision in Kaneohe, forcing evacuation of many families. Civil Defense estimated damage at \$426,000; \$285,000 to 56 homes, including furnishings and personal effects; \$15,000 to 12 automobiles; \$80,000 to Kamaoalii Stream channel invert; \$6,000 for miscellaneous items; and \$50,000 for removing debris after flood. Kahaluu 5 miles to northwest reported \$50,000 damage to 6 businesses and \$20,000 to drainage canal. Rainfall at recording gages in area exceeded 1 inch in each 15 minutes from 11 a.m. to 12:30 p.m.; 1-1/2 inches fell in 15 minutes from 11:45 a.m. to noon; 5.2 inches between 11 a.m. and noon, and about 18 inches from 10 a.m. to 4 p.m.						

See reference notes at end of table.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 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	
Hawaii (continued) Kahaluu, Oahu	14	3:30 a.			1	0	3	0	Rain
	About 200,000 cubic yards of mud, apparently loosened in part by frequent heavy rains, partially buried house killing 1 of 4 persons sleeping inside.								
Islands	20-21				0	0	0	0	Wind
	Long period of strong and occasionally gale-force trade winds from nearby intense high pressure areas did scattered damage, particularly on leeward Oahu, leeward and north-central Maui on 20th and 21st. At Honolulu Airport gusts exceeded 40 miles an hour on 3rd, 15th, 16th, 20th, 21st and 22nd, with peak gust 52 miles an hour at 6:07 a.m. on 21st. In Waianae area of Oahu, roofing stripped from 11 homes and 3 electric poles flattened. Elsewhere numerous trees and power lines downed. In leeward west Maui gale-force trade winds rushing through mountain gorges downed many trees and power lines in Lahaina-Kaanapali area, felled huge eucalyptus tree in Hukoulii, cutting home in two. Greenhouse roof smashed in Paia, north-central Maui. Most damage on Maui appears to have occurred on 21st between midnight and 4 a.m., when plantation wind recorder registered exceedingly turbulent winds gusting to over 75 miles an hour. Kaanapali and Kahului Airports observed gusts to 50 and 53 miles an hour, respectively, later in the day.								
Idaho					None reported				
Illinois					None reported				
Indiana					None reported				
Iowa					None reported				
Kansas Central, Southwest portions	13-14				0	0	4	0	Ice
	Many power and telephone lines were downed in a wide area from Barton and Rush Counties southwest to Finney, Haskell and Seward Counties. Heaviest damage was from Dodge City to Liberal.								
Kentucky West	1				0	0	5	0	Flooding
	Heavy late-January rains forced river levels of the Ohio and several tributaries in western Kentucky to near or above flood stage. Levels continued to rise in February, but had fallen to about normal levels by month's end. The Green River rose to just above flood stage at Galhoun, and the Rough River to just above flood stage at Dundee. Damage stages were not attained along the Barren and Green Rivers except at Lock and Dam 2 at Galhoun on the Green River. There was minor damage and a total of about 20,000 acres flooded along the Green and Rough Rivers. Along the lower Ohio River on the western border of Kentucky the water was near or above flood stage from about the first of the month until past mid-month. More than 100,000 acres were flooded in the several States along the lower Ohio, with damage ranging from minor to moderate. At some locations along the lower Ohio the Ohio River reached its highest February level since 1937. (See February 1969 issue of ESSA a publication CLIMATOLOGICAL DATA NATIONAL SUMMARY for additional details).								
West and south	15				0	0	7	0	Snow
	The snowfall of the 15th and 16th was the heaviest of the season to date, totaling 12 inches or more at several southern locations. Among these were Elkton, in Todd County, and Cumberland, in Hartan County. There were unofficial reports of falls ranging from 12 to 15 inches in Logan and Simpson Counties. At several of these locations these totals were almost twice the average annual totals. This heavy snow resulted in hazardous driving conditions, closing of a number of schools, and in the temporary closing of some airports in some areas.								
Louisiana					Data will be delayed				
Maine State	3-4				0	0	4	0	SNOW, WIND
	Storm yielded 10 to 15 inches snowfall with a few heavier amounts in the north. Winds of gale force caused high drifts. Driving extremely hazardous. Numerous highway accidents. Most of snow fell on the 3rd. Highest winds were on the 4th.								
State	9-10				0	0	6	0	SNOW
	Storm yielded 1 to 2 feet of snow. Huge drifts closed many highways by the 10th. Many business and governmental activities halted and schools closed. Drifts up to 9 ft. were reported on Rte. 113 in Steep Falls. The new snow, added to already deep cover, resulted in the deepest snow on ground in some areas since 1935. At Greenville, that amounted to 63 inches, of which 13 inches was new. Stranded motorists were rescued from cars marooned in drifts. One or more died after exertion from shovelling or battling the snow.								
Maine (continued) Coastal	19-20				0	0	4	0	WIND
	Surf driven by a storm centered far at sea pounded the coastline, severely in areas south of Portland, such as at Kennebunkport. Water crashed over sea walls to tear away sections of roads and damaged shore properties.								
Central and South	24-27				0	0	7	0	SNOW
	This, for many areas the greatest snowstorm of official record, dropped mostly 2 to 4 feet over central and southern portions. Totals ranged down to near 1 1/2 feet in the Eastport area but up to nearly 5 feet in the Sugarloaf Mt. area in the northwest. The 57 inches at West Forks became a new official state storm record. Farther north, snow totals rapidly decreased to only a trace in the extreme north. Drifts nearly buried single story homes. Weight of snow collapsed many roofs, both urban and rural, including one at Colby College at Waterville. Transportation halted or extremely difficult or limited to snowshoes or snowcats. Social and business activities cancelled one or more days, and many schools closed all week. Several deaths were attributed to exertion in storm. Heavy toll of trees and shrubs from weight of snow. Many utility outages. Total snow on ground 6 ft. deep at Rumford.								
Maryland State					Snow				
	Storms on the indicated dates gave such snow totals as the following: on 8th-9th, up to 7 inches in Frederick and eastern Washington Counties and traces or none south of a line extending from southern Prince Georges County through eastern Cecil County; 12th-13th, up to 12 inches in Garrett County area; 20th, up to 4 inches in upper Southern Maryland and central Eastern Shore and traces or none from central Washington County westward; and on 23rd up to 7-8 inches in Carroll and Baltimore Counties and traces or none south of a line extending from southern Prince Georges County into Cecil County.								
Southern Eastern Shore	18	AM					4		Glaze
	State police reported at least 10 minor traffic accidents as roads and sidewalks were made hazardous by a coating of ice.								
Massachusetts State	3-4				2	0	5	0	SNOW, WIND
	Storm yielded 5 to 10 inches of snow in the Berkshires and diminishing amounts eastward. Wind gusts to 50 and 75 mph were reported in some areas. Falling trees downed utility lines with widespread outages. Numerous highway accidents. Two were killed in a Springfield area collision when one car was possibly blown from its lane. Several large plate glass windows were blown in at Pittsfield. Schools were closed in most Berkshire communities. Most of the snow came on the 3rd with highest winds on the 4th.								
State	9-10				0	0	7	0	SNOW, WIND
	For most of the state, this was the heaviest and most devastating snowstorm in years. Winds gusting to more than 70 mph was another factor in the great damage inflicted. Only extreme southeastern sections and Cape Cod escaped the heavy snow. Excepting these areas, snowfall ranged from 1 to 2 feet and somewhat more in parts of the Berkshires. In the central and west, where temperatures were lower and the snow drier and lighter, huge drifts accumulated. Across the state many thousands of cars were abandoned on highways and streets. This made plowing and snow removal extremely difficult or almost impossible. Upwards of 40 persons died from heart seizure perhaps resulting from shovelling or battling the snow. Other indirect storm casualties include 27 persons who lost fingers in the snowblower operations. Many thousands of homes lost utility service. Damage to trees was estimated as the greatest in some decades. Toward the end of the storm and for several days after reports accumulated of roof and building collapses due to snow weight. In a case at Natick, a million dollar loss was involved. Stranded motorists on the Turnpike and other highways were rescued by snowmobiles. Logan Airport was closed for more than a day. Stores, businesses and schools closed. During and following the storm, the National Guard was called to aid in removing abandoned cars.								
Coastal	19-20				0	0	4	0	WIND
	Surf driven by a storm centered far at sea pounded the coastline, topping sea walls, washing roadways, and damaging shore properties. Some streets and lawns littered with rocks hurled from the beach.								
State	24-28				0	2	8	0	SNOW
	This, for some areas the greatest snowstorm of official record, dropped from 3 to 4 feet in many northeastern sections, with amounts decreasing to less than one foot in much of the western half and to very little in the extreme southeastern part of Cape Cod, where precipitation fell as rain or melting snow. In the heavier snowfall areas, this was the								

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					KILLED	INJURED	PROPERTY	CROPS	PROPERTY	CROPS	
Massachusetts (continued) State											most in any storm since 1869, 100 years ago. In some sections it may have been the worst since the February 1717 storm famed by Whittier's "Snowbound." This poem title was especially apt for this storm also in parts of Essex County, as drifts up to 15 feet or even more practically buried houses and completely cut off roads in some sections for much of the week. In much of the state business and other activities ceased for one or more days. Many schools closed for the entire week. Weight of snow collapsed many buildings and roofs, both urban and rural, including schools, warehouses, and shopping centers. A roof section in Allston failed under a 102 pound per square foot measured load, while some unofficial reports of even higher loading were heard. By extreme luck, most areas were free of people at time of collapse, but two persons were injured by a roof collapse at Otis Air Force Base. Many awnings and marquees also fell. This storm added tremendously to the damage already inflicted on trees and shrubs by previous storms. Altogether, Boston suffered a 25% loss of trees. In some areas, damage to trees exceeded that of the 1938 hurricane. Falling trees cut utility lines. Power outages lasted several days in some communities. Churches and schools were used as public shelters for those in need. Many deaths followed storm exertions and many were injured operating snowblowers. Military units aided the worst stricken communities. Available public and private equipment was inadequate to keep roads open. The prolonged storm broke down much equipment and exhausted their operators. At Boston snow fell during 101 consecutive hours.
Michigan Central and Northern Michigan	February				0	0	4	0			Snow Loads
											Substantially above normal precipitation from November through January produced heavy accumulations of snow and ice on summer cottages. This accumulated weight has caused the collapse of many cabin roofs, carports, and flat-roofed buildings during February. Total damage near Harrison in Clare County is estimated to be \$40,000.
Minnesota											None reported
Mississippi Coastal Area	14	p.m.			0	0	?	0			Wind, Heavy Rain
											A low pressure wave formed off Texas and its movement brought strong winds, heavy rains and tides above normal along the Mississippi Gulf Coast. Some damages reported, mostly minor; scattered power or telephone outages; no injuries or deaths. Dauphin Island Bridge, Alabama at 9 p.m., reported winds from East at 60 mph. Large sections of the Mississippi Coast were covered with sand, pine cones, acorns, leaves, tree branches and trash (on 15th). HANCOCK COUNTY: Newspaper reported winds to 50 mph., torrential rains, and 3-4 feet (above normal) tides invaded County at night with substantial water damage several areas. Tide at Bay St. Louis at 8:30 p.m. reported 3.7 feet above normal. Flooding reported in Anselv area, at Bayou Gandy and on North and South Beach Roads in Bay St. Louis. High winds knocked out some power lines; outages ranged from about 30 minutes in parts of Bay St. Louis to some 5 hours in parts of Waveland; Bay St. Louis police estimated 3/4 of town blacked out. County Board President said many county roads flooded (some still on 15th), at least 2 small bridges washed out, several homes and at least 4 cars received flooding damage. HARRISON COUNTY: Newspaper reported winds at Gulfport Municipal Airport at 7 p.m. averaged 35 mph. with gusts to 55 mph. Coast Guard cutter reported tides reached 4-foot above normal in Gulfport inner harbor. Hessler AFB, Biloxi reported top wind velocity 53 mph. Particularly from Henderson Point area to Long Beach, pier along beachfront broken apart in large sections and washed ashore. In extreme western part of County, rising waters brought by heavy winds coupled with sporadic torrential rains entered several Pass Christian Island area; roads there were covered and impassible in some sections. In Pass Christian small craft harbor, 30-ft. shrimp boat was sunk; many skiffs were swamped, some stacked upon each other, many blown into NW corner of harbor. Off Edgewater, 4 coal-laden barges anchored when blow came up, cables snapped, 2 ran aground near Gulfport, others rounded up and taken to Gulfport ship harbor. At Gulfport small craft harbor some boats torn from moorings; damages reported slight. In Gulfport, wind overturned office-trailer. In Biloxi, shortly before 7:20 p.m., water oak with tree trunk diameter about 4-ft. was toppled by wind. Biloxi Police reported water over several roads, some from high tides. The weather activity reached its peak about 7 p.m.; the winds began to subside about 9 p.m. JACKSON COUNTY: Ocean Springs Police Department reported 2 small trees blown down at night during wind storm, a few individual power service lines were downed. Heavy rains and high winds hit Pascagoula area in afternoon. Power company spokesman indicated portions downtown Pascagoula business area had power interruption at 5:10 p.m., service partially restored at 6 p.m., and rest by 7:30 p.m. Some lowland flooding reported and several streets in Pascagoula and Moss Point under water (also on 15th). Pascagoula Civil Defense about 9:35 p.m. reported tides 1 1/2 to 2 feet above normal, winds 30-35 mph. with gusts to 45 mph., some trees down at Luceville.
Missouri											None reported
Montana											None reported
Nebraska											None reported
Nevada Beatty, Las Vegas, Mount Charleston	23-26	Through most of period			0	0	6	0			Heavy snow, Rain Wind
											Continuous snow and/or rain with snow drifts produced one of the worst storms in several years. Eighty-five families were evacuated from Kyle Canyon, near Mount Charleston as drifts 15 feet high closed power lines and supply routes. Snowmelt and rain flooded Las Vegas and Beatty. Parts of Beatty were under 3 feet of water. Fifteen miles of U. S. Highway 95, main highway between Las Vegas and Reno were damaged to require major repairs.
Most of State	23-26				0	0	?	0			Heavy snow, Rain Wind
											Widespread precipitation and snow drifts closed highways and isolated several ranches and livestock. Subsequent below normal temperatures prolonged snow cover.
New Hampshire State	3-4				0	0	4	0			SNOW, WIND
											Storm yielded 5 to 10 inches of snow generally, and up to 15 inches locally in north. Roads became slippery and hazardous. Most of the snow fell on the 3rd. The strongest wind was on the 4th.
State	9-10				0	0	6	0			SNOW, WIND
											Storm yielded 1 to 2 1/2 feet of snow. Huge drifts marooned thousands of cars and, in many cases, motorists had to be rescued. Transportation and travel came to a near standstill. Stores and businesses shut down and schools closed. At Pinkham Notch snowfall totalled 30 inches in 24 hours and brought a total depth on ground of 100 inches. Incomplete reports of roof and building collapses included a barn full of antiques at New London, with the barn completely demolished. Six died from heart seizures after exertion battling the storm.
Coast	19-20				0	0	4	0			WIND
											Surf driven by a storm centered far at sea pounded the coastline, damaging sea walls and shore property.
State	24-28				2	0	7	0			SNOW
											This, for many areas the greatest snowstorm of official record, dropped 2 to 4 feet on most of the state. Totals ranged down to about one foot in some Connecticut Valley areas but soared to over 5 ft. in some White Mt. areas. A new record storm total of 97.8 inches, or over 8 ft., was reported at the Mt. Washington summit, with 77 inches at the Pinkham Notch Base Station. Tall drifts practically buried some homes and overtaxed street and highway depts. Most major highways were kept open, however. Nearly everywhere schools, businesses and other activities closed for a day or longer. Even ski resorts were closed by too much snow. Weight of snow collapsed many buildings, both urban and rural, including schools, warehouses, industrial buildings and garages. Two were killed in separate collapses in Berlin. Many awnings and marquees fell. The storm added much to damage already inflicted on trees and shrubs by previous storms, with devastations as in a major hurricane. Falling trees caused many utility outages.
New Jersey Northern and central counties	9	All day						5			Heavy snow
											Heavy snow over the northern and central counties varied from 5 to 15 inches. Massive traffic tie-ups resulted, rail traffic was delayed, and the airlines were grounded. There was much drifting of the snow due to strong winds. Some buildings suffered damaged roofs, and trees and utility lines were downed by the combination of heavy snow and strong winds.
New Mexico											None reported
New York Lake Ontario and Mohawk Valley	3-6							2			Snow squalls
											Snow squalls affected the eastern lee of Lake Ontario and Mohawk Valley for 72-hour period with conditions especially severe on 4-5th. Snowfall for storm period totaled 20 to 30 inches wide area to eastern lee of Lake with 41 inches at Mohawk Valley and to about 6 inches at Syracuse area and eastern Mohawk Valley and to about 6 inches as far west as Rochester. Winds 20 to 30 mph. with speeds frequently up to 40 mph. caused zero visibility as blowing snow drifted highways to make travel extremely hazardous. Two people killed when struck by cars during zero visibility; rash of highway accidents injured many others. Schools closed in affected area for two to three days. High winds disrupted power scattered areas. Slippery road conditions from light snow in Hudson Valley forced school closures in some communities.

See reference notes at end of table.

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					KILLED	INJURED	PROPERTY	CROPS		
<b>New York (continued)</b>										
Southeast	9-10	a.m. to a.m.			3					Snow
New York City, Long Island and Hudson Valley areas paralyzed by coastal storm of heavy snow and high winds. Snowfall yields 19 to 25 inches Nassau, Westchester, and Rockland Counties and 12 to 18 inches Hudson Valley and neighboring highlands; New York City 15 inches for greatest snowfall in 8 years. Winds averaging 20 to 28 mph. from evening of 9th through afternoon of 10th at New York City with frequent gusts over 40 mph. were typical of conditions in affected area. Snow accumulation and severe drifting brought surface and air travel to a halt with only partial return to normalcy effected by 11th. New York Thruway closed New York City to Albany for first time in history as travellers snowbound entire section; 1000 or more cars abandoned at Tappan Zee bridge which took many days to unsnarl. New York City and Nassau County close to paralysis on 10th and 11th as several thousand people remained stranded at major airports. Deliveries of mail, food, etc. greatly hampered as City suffered great losses of business and sustained a cost for snow removal estimated at more than \$4 million. Schools closed from Long Island to mid Hudson Valleys, blocked roads also prevented milk pickup at dairy farms over wide area of southeastern New York. High winds caused some power outages and light property damage in widely scattered towns. Snowfall amounts decreased to 6 to 9 inches eastern Long Island, and north of Catskills and to 2 inches or less western and northwestern New York State.										
North Carolina State	3-4					4	0			Wind
General windy weather did scattered, mostly minor damage to trees, roofs and frame structures over a wide area.										
Mountains	9					4	0			Wind
Blow down several trees, at least two of which fell on and damaged autos. Others did slight damage to roofs.										
Most of State	15-16				0	0	7	0		Snow, sleet, glaze
Heavy snow southwest, heavy glazing south central area, tapering off northward to light to none along Virginia border. Mostly rain extreme east. Snow accumulations up to 20 inches southern Mountains. Very destructive ice storm along central South Carolina border and extending into South Carolina. Wholesale breakage of power and telephone lines and poles. One power company reported 100,000 customers (in the two Carolinas) without electricity for periods of one to several days, and over 2000 men required to repair damage. Heavy steel towers carrying high voltage lines crumpled under weight of ice; in one place every tower reported down over a three mile stretch. Many poultry houses and other lightly constructed frame buildings collapsed under weight of ice and snow accumulation on roofs; many birds lost. There were no known deaths or injuries directly caused by weather, but traffic accidents were numerous and at least one death resulted.										
Mountains and Piedmont	22-23					4	0			Snow, sleet, glaze
Widespread frozen and freezing precipitation west portion of state, but damage only scattered and small compared with storm of 15-16. A few trees down, a few scattered cases of power and telephone lines breaking.										
North Dakota Entire state	23-27						5			Severe snow and ice storm
Slow moving storm began in west on 23rd finally moving out of state on 28th. Severe ice storm in southwest and south central caused large number of power and telephone outages and toppled television towers at Dickinson and Mandan. Heavy snow over all of state except extreme east ranged upwards to 12-15 inches in north central and southeast. 30 to 40 mph winds blocked roads in all areas of the state and caused wide spread school closings. Train stalled in drift 1 mile south of Devils Lake. Snow accumulations from previous snow storms and this storm collapsed many roofs and awnings on stores over entire state.										
Ohio										None reported
Oklahoma Northeastern One-Third of State	14-15	6:00a., 14th - 3:00p., 15th			0	0	1	1		Snow
Statewide precipitation turned to snow across most of the northern three-fourths of the State. Snow accumulations were light except in the northeastern one-third of Oklahoma where snow depths varied from 2 to 4 inches. Greatest depths of 5 to 6 inches accumulated in portions of Kay, Delaware, Adair, Sequoyah, and Okmulgee Counties.										
Southwestern One-Fourth of State	17	Midnight-9:00a.	200	*80	0	0	0	0		Snow
A Texas-born snowstorm brushed the southwest one-fourth of Oklahoma where accumulations ranged from 1 to 3 inches. Greatest depth of 5 inches was reported in the western half of Beckham County. Bridges were reported as hazardous.										
<b>Oklahoma (continued)</b>										
Northern Half of State and Panhandle	20	6:00a.- Noon			0	0	1	1		Snow
Early morning rain turned to snow across the northern half of Oklahoma. The heavy snow fell for three hours at most locations and produced glushy accumulations of mostly 2 to 4 inches. Minor auto accidents were reported in Tulsa at the rate of 65 to 70 per hour during the storm.										
Oregon										None reported
Pacific										None reported
Pennsylvania South Mountain, Franklin County	3	Early morning								Freezing rain
Freezing rain was reported between 3:50 a.m. and 7:30 a.m. No damage reports received.										
Bucks County	9	Night				1	3			Snow
The driver of a car lost control of his vehicle when it hit an icy spot and collided with another vehicle. A passenger in the second car complained of pain in the head.										
Slatington, Lehigh County	10	Early morning						4		Wind and Snow
The walls collapsed at the warehouse of a lamp manufacturing company. Additional damage was done when the roof of a neighboring manufacturing building was blown off and landed on the sprinkler system causing flood damage.										
Puerto Rico Rincon - Aguada	28	afternoon			0	0	0	0	0	Wind and Rain
A local wind squall resulting from the passage of a frontal system across the island caused high winds and heavy rains along the western and northern coastal sections of the island. In Barrio Jaguay, located between Rincon and Aguada on the west coast, a severe wind and rain storm caused considerable property and some crop damage. Winds were estimated at 40 - 50 m. p. h. and there are some indications that a water spout formation may have moved inland. Ten houses were destroyed, roofs were blown off 26 houses and 21 others were damaged. Some coffee plantations and some minor crop areas were damaged by the winds.										
Rhode Island Statewide	9-10	AM-AM			0	0	5	0		Snow, wind
Violent coastal storm with rain changing to snow in the south and snow in the north produced snowfalls of only .3 inch at Block Island but falls of 6 to 21 inches occurred on the mainland with the heaviest amounts in the north. High winds drove the snow into huge drifts which immobilized land and air transportation. The wind and snow combined to down power lines so that 65,000 customers were without service on the 9th. Primary and secondary roads were blocked by drifts and abandoned vehicles for several days and several communities were cut off. Many business establishments and industrial plants were closed on the 10th and 11th and schools were shut down for several days.										
Statewide	23-26	AM-AM			0	0	5	0		Snow, wind
The second major coastal storm in two weeks paralyzed the state with new snowfalls of 12 to 23 inches on the mainland and 8 inches on Block Island on February 23-25. While power failures due to wind and snow were fewer than during the storm of February 9-10, air and ground traffic were again halted because of huge drifts and business, industrial and educational institutions were forced to close on the 24th and 25th. Driving was extremely hazardous for several days following the storm. Snow in the north and intermittent freezing rain in the south continued through the 26th with additional snow accumulations of 1 to 7 inches so that many institutions in the north remained closed for the week. Some northern communities received up to 30 inches of new snow from the 23rd through the 26th and totals of up to 52 inches in the two coastal storms and were virtually buried in drifts which could only be removed with extreme difficulty.										
South Carolina Statewide	15-17				2		6	8		Snow, sleet and freezing rain.
The northwestern part of the state had from two inches to more than a foot of snow. Damage was mainly to structures like porches, permanent awnings, marquees, carports, etc., the roofs of which are not too well supported. The counties in the area from Lancaster to Dillon and Marion, from Marion to Orangeburg and from Orangeburg back to Lancaster experienced the greatest accumulation of ice due to freezing rain that anyone can remember. There was some structural damage but the										

See reference notes at end of table.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 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		
South Carolina (continued)										
Statewide										<p>principal damage was to tens of thousands of trees in the heavily forested areas. Many trees and limbs were down also in the towns and cities. Ice on the lines and falling trees caused catastrophic disruption of electric power and telephone service. Miles of lines were down, over ten thousand poles were damaged and steel towers holding power lines were crumpled to the ground. Power was not restored to all of the 45,000 affected customers for two weeks or more. The same length of time was needed to restore service to more than 15,000 telephones. Two persons were reported to have been out of doors all night and frozen to death, one in Florence county and one in Orangeburg county. Auto accidents related to hazardous driving conditions resulted in several injuries and at least one known death.</p>
South Dakota	14, 15				0	0	?	0	Heavy snow and blowing snow	
Eastern S. D.									Heavy snow along with winds of 15 to 25 MPH caused blowing and drifting snow which closed many roads. The heaviest snow fell in the southeast part of state where up to 1-1/2 feet of new snow was reported.	
Northern S. D.	16, 17				0	0	4	0	Freezing drizzle and heavy fog	
									Freezing drizzle and heavy fog formed a heavy glaze on utility lines. Many power and telephone lines were broken.	
Eastern S. D.	20, 21				0	0	7	0	Heavy snow and blowing snow	
									Heavy snow along with winds of 15 to 25 MPH caused blowing and drifting snow which again closed many roads. Snowfall amounts of from 6 to 12 inches were common.	
Eastern and North Central S. D.	27, 28				0	0	4	0	Heavy snow and freezing rain	
									Snowfall of up to 15 inches blocked many roads. Freezing rain formed a glaze on many utility lines resulting in extensive damage to the lines. The greatest damage occurred in the north central part of state.	
Eastern and Northern S. D.	1-28				0	0	5	0	Glazing and drifting snow	
									Glazing due to heavy fog and drizzle periodically formed on utility lines in spotty areas causing numerous broken lines. Periodically winds of 15-25 MPH caused drifting snow resulting in many closed roads. Snowplows would open the roads and often drifting snow would soon close the roads again. Frequent use of pusher type snowplows piled banks to 20 to 30 feet along the roads and it became impractical to open the roads with this type of snowplow. Several rotary snowplows were flown in from military airbases outside of the state to open some of the roads in the eastern part of the state. Numerous school closings occurred during month due to snow-blocked roads.	
Tennessee	3-4				0	0	4	0	Heavy rains	
Chattanooga, Hamilton County									Chickamauga Creek overflowed into the drained lowlands during heavy rains. The Tennessee River at the foot of Walnut Street Bridge measured at 29.2 feet. This was six feet eight inches below the 30-foot flood level. Authorities of the Tennessee Valley Authority opened spillways at Chickamauga Dam to prevent flooding. Minor scattered water damage was reported.	
State	15-16				0	0	5	0	Snow, glaze	
									Snowfall accumulation mostly 4 to 6 inches, with a few greater depths locally in high elevations and some lesser depths in southern counties where precipitation changed to freezing rain and rain before ending. Weather was a contributing factor to most auto accidents, with numerous injuries and seven traffic deaths. Trees and branches, awnings and some roof damage resulted by the weight of the heavy, wet snow.	
Texas	13-14				7	0	7	?	Storm tides, torrential rains, windstorms, tornado	
Middle and Upper Coast									Hurricane-force winds, 11-inch rains and monstrous seas - the worst since Hurricane Carla, battered the Middle and Upper Texas Coast late on the night of the 13th and during the early morning hours of the 14th. Seven persons lost their lives in the stormy weather and damage to property exceeded \$5,000,000. A tornado near Arcadia, in western Galveston County, destroyed a barn, but otherwise caused no damage. Three shrimp boats sank in 20- to 25-foot seas off shore, and storm tides that reached 9-2 feet in the Houston-Kemah-Seabrook area of Galveston Bay wrecked coastal installations. Winds gusted to 99 miles per hour at Palacios and to an estimated 100 miles per hour at High Island. Torrential rains of more than 11 inches in the Oden-Sinton area, and more than 6 inches in the area from south of Orange Grove and Bahouete northeastward to the Aransas River in Duces and San Patricio Counties caused major flooding in Oden on the morning of the 14th and along Chilton Creek at Sinton through the afternoon and night. Flood waters entered an estimated 75 homes in Oden and 300 homes in Sinton. Water rose to 2 1/2 to 3 feet in hangers at the Sinton Airport.	
Texas (continued)										
										<p>The storm tides and high seas, which extended from northern Padre Island to Sabine Pass, were whipped up by strong, persistent easterly winds, the result of an intense low pressure center in the Gulf south of Corpus Christi and a strong high pressure ridge that extended from the Great Lake region to Florida. Hurricane-force winds and torrential rains were generated by a north-south oriented squall line that formed during the evening hours of the 13th and moved eastward to near the Texas-Louisiana border during the early morning hours of the 14th.</p> <p>The Small Business Administration declared the Oden-Sinton area and San Patricio County a disaster area. Damage was estimated at \$500,000.</p> <p>Ralph Brogden, a 12-year-old Freeport shrimp fisherman, drowned when the shrimp boat "Deuces Are Wild" crashed into the Freeport jetty and sank. Three crew members, unidentified, of the shrimp boat "Kit Kat", drowned when swept overboard eight miles east of the mouth of the Colorado River. The shrimp sank. Thomas B. Marshall, Jr. drowned when washed overboard the shrimp boat "Miss Rik" six miles south of the mouth of the Brazos River. Helen Hatcher, 19, a Houston mailman, drowned in the Brazos River west of Angleton when his boat overturned. One person drowned near Corpus Christi. The shrimp "Captain Galjour" sank two miles south of the mouth of the Brazos River, but the two crewmen aboard were saved.</p> <p>Damage to property in the Galveston Bay area was estimated at \$5,000,000. Marinas, pleasure boats, shrimp boats, docks, piers, and homes in the Baytown-Brownwood Addition suffered the most. More than 300 families fled their homes in low lying areas in Kemah, Seabrook, Dickinson and Baytown as a result of flooding from 7- to 9-foot tides. Winds reached a peak of 80 miles per hour at Kemah and 59 miles per hour at Hobby International Airport at Houston at 9:16 p.m. on the 13th. Texas State Highway 146 was underwater at Seabrook and houses on Traville Road near Clear Creek were partially submerged. Peak tides at Buffalo Bayou at Main Street and at 6th Street in downtown Houston were 9.2 and 8.0 feet, respectively. Kemah reported a high tide of 9 feet. The highest tide at Galveston was 4.5 feet at 2:00 a.m. on the 14th. Storm tides sent water up to three to four feet deep into 40 to 50 homes in the Brownwood Addition of Baytown. In Houston, a 20 x 36-foot billboard toppled onto 15 new automobiles at Champion Chevrolet, 2600 Travis Street, and caused an estimated \$30,000 damage.</p> <p>Wind gusts flipped over and damaged three planes at Houston's Hobby International Airport. At the Pearland Municipal Airport a hanger was blown down and four airplanes were damaged by high winds.</p> <p>Seventy miles per hour winds wreaked havoc in the Texas City-La Marque area, knocked down traffic lights, broke plate glass windows and tore boats and barges from their moorings. The strong winds toppled a traveling crane with a 60,000 pound weight capacity. The crane stood during Hurricane Carla.</p> <p>A tornado destroyed a barn at Arcadia about 7:45 a.m. on the 14th. A 350-foot drilling barge with a crew of 32 men went aground on Matagorda Island about 4:30 a.m. on the morning of the 14th. All aboard were saved. About the same time the 95-foot crew boat "Del Tide" ran aground on Matagorda Island also. The 49-foot fishing boat "Mermaid" went aground in the Intracoastal Waterway behind Matagorda Island about 1:30 a.m. on the 14th. The Federal Aviation Agency Flight Service Station at Palacios reported wind gusts of 99 miles per hour. The only highway link between Corpus Christi and Port Aransas was closed after a 50-foot strip of bridge approach at Corpus Christi Pass was washed out by the high tides.</p> <p>Only minor damage occurred in the Sabine Pass-Port Arthur-Beaumont area, but there was so much of it that the total loss was estimated at \$250,000. A peak wind gust of 58 miles per hour was measured at the Weather Bureau Office; a fastest mile of 62 miles per hour from the southeast was observed at 7:15 a.m. on the 14th. The greatest departure from normal tide was a plus 4 1/2 feet at 8:30 a.m., occurring just after normal low tide. The Reserve Fleet at Beaumont on the Neches River reported a water level near 5.0 feet mean sea level about 9:30 a.m. on the 14th.</p> <p>Total property damage along the Middle and Upper Texas Coast was estimated in excess of \$5,000,000 as a result of storm tides, waves, torrential rains, thunderstorm winds, and the tornado.</p>
Houston Harris Co.	21				0	0	4	0	Flooding	
									Heavy thundershowers flooded several subdivisions in Houston and water from two Houston bays backed up into about two dozen homes. Rainfall at the Weather Bureau Office at W. F. Hobby Airport measured 2.74 inches within a 24-hour period on the 20th and 21st. Unofficial sources estimated as much as four or five inches in eastern Harris County. White Oak Bayou backed up into the Arbor Oaks subdivision north of West Little York Road, east of Antoine north of the Houston city limits. Water was 13 inches deep in some homes. Sims Bayou overflowed into two subdivisions. Water was over Decker Drive, the main artery from Baytown to Interstate 10 and Houston, at several points. Property damage was estimated at \$12,000.	
Utah									None reported	

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

FEBRUARY 1969

PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED <sup>1</sup> DAMAGE		CHARACTER OF STORM
					KILLED	INJURED	PROPERTY	CROPS	
Vermont State	3-4				0	0	4	0	SNOW, WIND
		Storm yielded 5 to 10 inches of snow. Wind gusted to 70 mph locally. Falling trees and limbs downed power lines. Travel conditions became very hazardous. Most of the snow was on the 3rd and the highest wind on the 4th.							
State	9-10				0	0	5	0	SNOW, WIND
		Storm yielded from 10 to 24 inches of snow across the state except in the extreme northwest where as little as 2 inches fell. Gale winds whipped the snow into huge drifts. The storm left clogged roads and streets, abandoned cars and stranded motorists, closed stores and schools, power and phone failures, and numerous accidents. Marooned autos made plowing of highways extremely difficult or impossible. In Brattleboro, snow collapsed the roof of a service station, and many buildings, both urban and rural were affected elsewhere. Blowing and drifting snow necessitated frequent return plowing of roads.							
State	24-27				0	0	5	0	SNOW
		The second major snowstorm in two weeks. Storm totals broke previous official records at St. Johnsbury with totals mostly two to three feet in the extreme northeast. Most of the state received only 6 to 12 inches with some lesser amounts in the southwest. Most main roads were kept open but with difficulty and many schools and other activities were cancelled. Drifts were high in many areas.							
Virgin Islands	28 afternoon				0	0	4	0	Heavy Rains
		Intense rainfall of short duration caused flash flooding of airport runways and streets at Charlotte Amalie. All flights were cancelled until the following day at the airport and considerable property damage to merchandise occurred in the shops from mud and water. Canal Bay at St. John reported high winds which caused some loss of trees at the hotel area.							
Virginia North	8-9						4		Snow
		Snow late on the 8th and early on the 9th deposited up to 8 inches in northern counties. Widespread but minor electric and telephone interruptions were reported, mainly extending on a line from Albemarle to Fauquier counties and also in Augusta County. Slippery roads were a factor in numerous traffic accidents with several injuries and stranded motorists.							
Washington					None reported				
West Virginia					None reported				
Wisconsin					None reported				
Wyoming					None reported				

- ° Includes crop damage.
- C Crop damage.
- \* Miles instead of yards.
- † Storm damages are placed in categories varying from 1 to 9 as follows:
  - 1 Less than \$50
  - 2 \$50 to \$500
  - 3 \$500 to \$5,000
  - 4 \$5,000 to \$50,000
  - 5 \$50,000 to \$500,000
  - 6 \$500,000 to \$5,000,000
  - 7 \$5,000,000 to \$50,000,000
  - 8 \$50,000,000 to \$500,000,000
  - 9 \$500,000,000 to \$5,000,000,000.

Note: This publication contains our best information on storms but, due to the difficulties inherent in collection of this type of data, it is not all-inclusive. Delayed data and corrections will be carried in the June and December issues of this publication.

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USCOMM-ESSA-Asheville, N. C. -3/28/69-1150