

JANUARY 1977

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STORM DATA



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA SERVICE / NATIONAL CLIMATIC CENTER ASHEVILLE, N.C.

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1977

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									
Chilton County	2	6:30pm			1				Ice Storm
									Freezing rain caused slick roads from Mobile to the Tennessee Valley as an ice storm swept northward through west and central Alabama. One child, six months of age, was killed when struck by a car that skidded on icy pavement. The child was being carried from his parents car that had skidded down an embankment.
Fayette County	2	Afternoon			2				Ice Storm
									A car accident on icy roads claimed the lives of two people.
Jefferson County	2				1				Ice Storm
									A sixteen car accident on the Birmingham expressway. One person injured. Accident due to icy roads.
Jefferson County	18				2				Snow Storm
									Two youths injured in sledding accidents.
ALASKA									
Kodiak Island	3	evening			0	0	5		wind and rough seas
									Southeasterly gales and rough seas in the Kodiak Island waters resulted in the sinking of the 72 foot shrimp trawler "Salu" 2 miles east of Cape Chinitak, about 15 miles southeast of the city of Kodiak. The crew was rescued by nearby vessels.
Anchorage area	3-4				0	0	5		wind
									Strong east winds developed in the Anchorage area as a result of the same weather system that caused the rough marine weather in the Kodiak Island area earlier on the evening of Jan. 3. The winds in Anchorage decreased on the morning of Jan. 4. Peak winds in the Chugach foothills were measured at 90mph at Glenn Alps. At McHugh Creek, on the north shore of Turnagain Arm, peak winds were measured at 85 knots at 5:20AM AST Jan. 4. Power outages and roof damage in the east and south parts of the Anchorage area totalled over \$100,000 in damage.
Cold Bay	5	afternoon			0	0	5		wind
									Strong southeast winds blew over a large FAA antenna and caused some roof damage and minor damage to some parked aircraft. Peak winds at Cold Bay airport measured at 73 knots at 1955 BST Jan. 5. Damage totalled \$150,000.
Anchorage area	22-23				0	0	5		wind
									Strong northeast winds on the morning of Jan. 22 and again on the 23rd caused minor damage to buildings in the east and south parts of Anchorage and some major damage to parked aircraft at Merrill Field and at Anchorage International Airport. Peak winds at Merrill Field unofficially estimated at 50 mph both days. Damage totalled in excess of \$100,000.
ARIZONA									
NONE REPORTED									
ARKANSAS									
Entire State	1-31				?	?	?	?	Winter Storms
									Arctic air spilling south from Canada and a series of winter storms made January one of the worst winter months in many years for Arkansas.
									On the 2nd, snowfall amounts of 1 to 3 inches were recorded across the northwestern half of the state, while the southeast received freezing rain and sleet.
									The night of the 5th and the day of the 6th, another winter storm dumped snow across the northern half of the state with accumulations ranging from 1 to 5 inches.
									With much of the snow from the previous storm remaining on the ground, another snowstorm began on the evening of the 8th and continued throughout the 9th. Snowfall amounts in excess of six inches were common in the northern part of the state, with some areas receiving well over a foot of snow. Amounts of one to three inches fell in central Arkansas, while the south received a mixture of snow, sleet, and freezing rain.
									A large band of freezing rain moving across the state on the morning of the 13th glazed roads over a wide area.
									The night of the 17th and morning of the 18th produced snow in all parts of the state, with most amounts ranging from 1/2 inch to 3 inches.
									On the 30th, a storm system moving south of the state produced snowfall amounts up to 5 inches across the southern third of the state.
									Driving conditions were extremely hazardous during the periods of precipitation. Re-freezing of melted sleet and snow caused additional traveling problems on several nights.
CALIFORNIA									
NORTHERN & CENTRAL									
NONE REPORTED									
CALIFORNIA SOUTHERN									
Santa Barbara	2	2215	?	?	0	0	4	?	Waterspout/Tornado
									Waterspout came onshore near Goleta damaging several "T" hangers and a small aircraft. It also disrupted electrical service for many hours.
Ventura	2-3				0	0	4	?	Heavy rains
									Heavy rains caused collapse of restaurant roof.
Los Angeles	5				0	0	0	0	Lightning
									Two jet liners were struck by lightning. Both landed safely. Lightning also struck numerous power lines causing many failures in the Los Angeles area.
Los Angeles	5	1015	?	?	0	0	0	0	Waterspout
									Waterspout sighted 3 miles west of Huntington Beach.
Los Angeles	7	1000	?	?	0	0	0	0	Waterspout
									Waterspout sighted off coast of Santa Monica.
COLORADO									
Southwest mountains to Northeast plains									
	03	all day			1	0	0	0	Heavy Snow
									Storm left 12 inches of new snow at Durango, and also at the previously dry Crested Butte Ski area. Similar amounts of snow fell at Powderhorn, Purgatory, Wolf Creek Pass, and Monarch Pass. 6 inches fell at Steamboat Springs and Grand Lake; 5 inches at Vail; 4 inches at Gunnison--with lesser amounts in other parts of the mountain areas. Lower elevations of the Northeast plains received 2 to 4 inches. A snowplow driver was killed when his snowplow left state highway 17 near La Manga Pass (40 miles SW of Alamosa) and overturned.
near Ault and Fort Morgan (Weld county)	25				0	1	4		High Wind
									Strong wind caused a house trailer to leave the road, 5 miles East of Fort Morgan on state highway 11. Trailer pulled its attached pickup truck off road with major damage to both vehicles. Driver suffered a broken shoulder.
CONNECTICUT									
Statewide	7	All Day			0	0	4	0	Heavy snow and wind
									6 to 12 inches of snow blanketed the state and drifted about due to 50 MPH wind gusts.
Statewide	10				0	0	4	0	Snow, heavy rain and wind
									An intense winter storm brought snow, heavy rain and strong winds. Many cars were swamped and basements flooded.
Statewide	28	Afternoon			0	0	4	0	Wind
									A strong cold front brought high wind gusts, thunderstorms and rapid temperature falls.
DELAWARE									
Kent and Sussex Counties	4	Early			0	?	?	0	Glaze
									Freezing rain that fell before sun-up responsible for widespread coating of ice with upwards of a dozen or more accidents. Several schools were either closed or delayed opening due to treacherous roads.
Entire State	6-7				0	0	0	0	Snow
									Snowstorm beginning just before midnight and continuing through the morning of the 7th, dumped from 3 to 5 inches of snow as "Nor'easter" moved up the coast. The cost of clearing roads over the state estimated at about \$100,000 in the storm.
									Note: January 1977 was the coldest on record for Delaware with an average temperature of 20.8 degrees. The previous record was set in January 1918 with an average of 21.4 degrees. Injuries due to falls on icy walks were quite numerous with one hospital reporting a possible record number x-rays for casts. Estimate for snow removal and salt spreading operations was "approximately triple" that of the same time last year, according to one city manager.

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					KILLED	INJURED	PROPERTY	CROPS							KILLED	INJURED	PROPERTY	CROPS	
FLORIDA										IDAHO									
Niceville, Okaloosa County	6	8:30PM CST	1/10	10	0	0	2	0	Tornado	NONE REPORTED									
									A small tornado touched down briefly damaging a few roofs and trees. Damage estimate \$500,000	ILLINOIS									
Kissimmee, Osceola County	10	6:50AM EST	1/5	25	0	0	5	0	Tornado	MOST OF STATE									
									A tornado struck a large apartment in Kissimmee ripping the roofs off 20 apartments and damaging several automobiles. Total damage estimated \$200,000.	9-10					2	0	0	0	HEAVY SNOW
Florida	10 to 21				0	0	0	8	Severe Freeze	NORTHERN HALF OF STATE									
									A severe outbreak of Arctic air, climaxing one of the coldest winters ever recorded in the eastern United States, swept into Florida with snow as far south as Homestead, and brought a severe freeze to all of the State's citrus and vegetable crops during the period January 18-21, 1977.	26					1	0	0	0	WINDSTORM
									In Southern Florida agricultural areas, the freeze was one of the most severe of this century. On the night of January 19-20, temperatures dropped to 27° at the Florida Agricultural Experiment station in Homestead, but some farmers in this area reported temperatures near 20°. Temperatures were below freezing for 10 to 14 hours, and 28° or colder for 4 to 8 hours. An unusually heavy frost accompanied these freezing temperatures and extended to the immediate coast. Both West Palm Beach and Miami Beach recorded all-time lows of 27° and 32° respectively.	NORTHERN TWO THIRDS OF STATE									
									Over North and Central Florida temperatures were even lower, but not all areas had all-time record lows. Temperatures reached all-time record lows of 10° at Pensacola and 20° at Orlando. Some other low temperatures from around the state ranged from the upper 20's in the Tampa Bay area to the upper 40's in the Lower Keys.	27-30					3	0	0	0	BLIZZARD
									A U. S. Department of Agriculture report indicated the following crop loss:	ALL OF STATE									
									Citrus.....35% Vegetables.....95-100% Commercial Flowers.....50-75% Permanent Pasture Land.....50% Sugar Cane.....40%	MONTH					0	0	0	0	COLD
									In addition, there was a severe loss to the tropical fish industry. Estimating the total monetary loss is quite difficult. Overall damage estimate from the State of Florida was \$350 million dollars. It is believed the freeze cost the Florida economy \$2 billion dollars.	RECORD OR NEAR-RECORD COLD OVER THE ENTIRE STATE CLOSED NUMEROUS SCHOOLS AND BUSINESSES. HIGH USAGE OF UTILITIES CAUSED EXTREME SHORTAGES OF NATURAL GAS AND OIL. SALT, CHEMICAL AND FUEL SHIPMENTS WERE DELAYED BY IMMENSE BUILDUPS OF ICE ON THE OHIO, ILLINOIS AND MISSISSIPPI RIVERS. MANY WATER MAINS WERE FROZEN.									
GEORGIA										INDIANA									
Athens and Northeast Georgia	3	Morning					3	4	Ice Storm	Northern half of Indiana									
									Ice storm damage to power lines and poles, estimated at \$3,000. Damage to pine trees and others estimated at \$50,000.	28	2 AM - Eve				9	0	0	C	Blizzard
Marion County	9	9:00 Pm			0	0	3	0	Wind	2 to 4 inches of snow fell across northern Indiana late Thursday night and early Friday morning. By 6 AM blizzard conditions had developed over the northern half with winds of 35 - 45 mph and gusts to 55 mph. Visibilities were frequently near zero, especially in open areas. Drifts quickly closed most roads. By late morning temperatures were 5 to 10 degrees below zero with wind chill readings 50 - 70 below. Most activity was at a standstill. Many travelers did not realize the severity of the storm and were stranded on Indiana highways. Conditions were extremely critical near and north of Lafayette. Several deaths resulted from exposure to cold. Other deaths were caused by over-exertion in dangerously cold weather. Some field damage may have occurred due to the strong winds stripping off the top soil. Schools were closed for several days following storm.									
Northeast Georgia	24	Morning					4	4	Heavy Snowstorm	IOWA									
									Clayton, Georgia measured more than 8" of snow. Damage to public and private property estimated at \$50,000 and to forest at \$10,000.	Northern and Eastern Iowa									
Glynn County	28	2:30 Pm			0	0	0	0	Hail	27- Evening					0	0	4	0	Blizzard
									One and 3/4 inch hail reported near Brunswick. No damage reports received.	Strong northwest winds gusting to 55 mph combined with sub-zero temperatures and one to two inches of snow to bring blizzard conditions. Visibilities were reduced to near zero in blowing snow. Travel halted as most roads and highways blocked with drifts to 6 feet or more. Wind chill factors of 60 to 90 below were common with many cases of frost bite reported. Numerous reports of frozen and broken water lines.									
Statewide					0	0	7	0	Other	KANSAS									
									The extremely cold weather during January, with alternate freezing and thawing of the road surface, has caused road damage in Georgia estimated in the tens of millions of dollars.	NONE REPORTED									
HAWAII										KENTUCKY STATE									
State-wide								?	Dry spell	1-1 to 1-31							8		Extreme cold Heavy Snow
									Dry spell continued through month.	The Kentucky Department of Agriculture estimated that between Dec. 26, 1976 and Feb. 7, 1977 Kentucky farmers lost \$107.5 million because of the severe winter weather. Nearly 100,000 cattle and calves were lost.									
5 mi. NE of Lihue Airport, Kauai	11	5:30p.-5:37p.							Waterspout										
1 1/2 mi. NE of Lihue Airport, Kauai	11	5:36p.-6:02p.							Waterspout										
Off Hickam Harbor, Oahu	12	10:42a.-10:48a.							Waterspout										
5 mi. S of Molokai	26	10:20a.							Funnel cloud										

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					KILLED	INJURED	PROPERTY	CROPS	
LOUISIANA Most of state	2	All day			1	0	7	5	Ice Storm
	Freezing rain coated all of the state, except the extreme southeast, with ice. Many papers in the central parishes termed it the worst ice storm in 25 years.								
	Hardest hit by the ice storm was that portion extending from Beauregard and Vernon across Rapides to Concordia and Catahoula parishes. Many schools were closed for a week. About 90% percent of its customers were without power for periods up to four days, according to one of the electric companies. Pineville was one of several places that lost its water-supply.								
	One death was directly due to the storm. The frozen body of William H. Fisher, 49, was found by sheriff's deputies behind a store in Lake Charles. Fisher had apparently fallen and had frozen before anyone found him.								
	There was also at least one death and many injuries in auto accidents on the icy roads.								
Most of state	30				0	0	4	?	Heavy snow and cold
	The heaviest snowfall in many years blanketed the state as far south as a line from Deridder to Bogalusa. Amounts ranged up to six inches in Natchitoches and Winn parishes.								
	Record breaking low temperatures caused extensive damage to plumbing, cars and machinery.								
MAINE Statewide	10	Daylong			0	0	6	0	Winter Storm
	Snow began early in the morning, continued until evening with a period of heavy rain near the coast (2.75 inches at Portland). Snowfall ranged from 10" to 19". The storm was accompanied by strong gales along the coast. The combination of snow and rain caused severe ice buildup on roadways as a cold wave followed the storm. Numerous cars abandoned on streets. Portland declared a state of emergency and the governor supplied equipment and men for several local governments. Numerous accidents (storm related), 5 - 10 deaths reported from the heavy wet snow (shovelers and persons working out-of-doors). Heavy beach erosion reported along southern Maine coast. Several roofs collapsed from weight of the snow and ice. Storm came just 3 days after another heavy snowstorm.								
MARYLAND & D.C. Eastern Shore	1-2				0	0	0	0	Dustorm
	Combination of 35 mph winds and the lack of sufficient cover crops caused considerable blowing and drifting of sand and dust over Caroline and Dorchester Counties.								
Eastern Shore	4	Morning			0	0	0	0	Gale
	Freezing rain resulted in at least 100 accidents on roads in Talbot, Dorchester and Wilcomit Counties.								
North Central and District of Columbia	5	Morning			0	0	0	0	Snow
	First major snowstorm of season deposited from 2 to 4 inches of snow over the area. In Washington, D.C. snow began during rush hour, causing serious traffic tie-ups, and several multi-vehicle pile-ups.								
Entire State and District of Columbia	6-7				0	0	0	0	Snow, Wind
	Snow began the night of the 6th and continued into the morning of the 7th, leaving 4 to 6 inches of new snow over the central and west portion and 1 to 2 inches over southern Maryland and the Eastern Shore. Winds around 30 mph developed on the 7th and caused drifting problems over the western counties of Maryland, with a rash of accidents due to poor visibility.								
Western, North Central and District of Columbia	9-10				0	0	0	0	Snow
	Third major snowstorm in less than a week dumped another 8 to 12 inches of snow over western Maryland, with 3 to 5 inches in the Baltimore-Washington area.								
Statewide and District of Columbia	14				0	0	0	0	Gale
	Freezing rain beginning in the pre-dawn hours and continuing for a good part of the day, wreaked havoc as far as highway and pedestrian travel were concerned. Numerous traffic tie-ups due to "fender-bender" type accidents.								

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					KILLED	INJURED	PROPERTY	CROPS	
MARYLAND & D.C. (continued) Garrett County	16-17				0	0	0	0	Blizzard, Cold
	Additional 4 inches of snow falling on the 16th, was piled into road-blocking drifts as high winds pushed chill factor to 70 degrees below zero.								
Western	28	Afternoon & Evening			0	0	0	0	Blizzard
	Two to four inch snowfall combined with rapidly-falling temperatures and 50 to 60 mph winds. Motorists, unable to see as visibilities dropped to zero, pulled autos to the side or abandoned them in the middle of roads. Hundreds of travelers were reported stranded for many hours. Temperature dropped from 40 degrees to 12 degrees in Garrett County between noon and 1 pm.								
Entire State and District of Columbia	28	Evening			0	0	3	0	Wind, Cold
	Winds gusting to 40 to 50 mph blew large trees across two parked autos. Temperatures dropped 23 degrees in a two-hour period at Washington National Airport. Large chunks of ice in upper Chesapeake Bay were carried by the wind and blocked entrances to Baltimore Harbor.								
	Note: January 1977 proved to be one of the coldest Januaries on record over the Maryland and Washington, D.C. area. Hospitals in the Baltimore area reported several cases of frostbite. Injuries due to falls were also numerous and at least two deaths reported due to exposure. Frozen waterways immobilized Chesapeake Bay's seafood industry. In addition, local highway departments found themselves facing dwindling salt supplies. As ice continued to build up over the Chesapeake Bay and other waterways, marinas faced possibly "millions of dollars" damage to boats and docks.								
MASSACHUSETTS Statewide	7	All Day			0	0	4	0	Heavy snow
	Between one and two feet of heavy, wet snow fell across the area. This was the second major storm bringing in excess of one foot of snow in ten days.								
Statewide	10	All Day			0	0	5	0	Heavy snow, rain and wind
	A massive low pressure system extending from the Carolina's to Maine dumped 4 to 6 inches of snow in many sections and up to 2 feet across inland higher ground. In most sections the snow changed to rain which amounted to 1 to 2 inches. The heavy rain on the snow brought some of the most extensive highway and property flooding in many years.								
	Most roads were flooded to hubcap depths and many as high as windshields. The heavy weight of snow and rain caused at least 20 barns to collapse throughout the state. The roofs of the Auburn Sportsdrome, a two story building in Waltham, the the Warner Co. in Revere, a greenhouse in Sudbury Gardens, the Chelmsford Fuel Co. and a glass company in Milford also caved in.								
	The Chester A. Poling, A 800 ft. oil tanker was split in two off Gloucester, MA as wind gusts of 70 knots and 30 foot seas battered the vessel. One crewman was killed as he jumped for a helicopter rescue basket.								
Statewide	28	Evening			0	0	?	0	Wind
	A very strong cold front slammed across the state bringing strong, gusty winds, thunderstorms and a very rapid temperature fall.								

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					KILLED	INJURED	PROPERTY	CROPS	
MICHIGAN State wide	All month								Low temperatures.
									Frost penetrated the ground 3 to 5 feet causing thousands of homes and businesses to lose water service. Some homes suffered broken pipes and water damage. Owosso, Kalamazoo, Alpena, Flint hardest hit. Wells froze solid leaving homes without running water in the Ontonagon area. Train service disrupted when frozen steam lines made engines impossible to start and passenger cars heatless. Power plants were shut down at Lansing and Monroe when stored coal froze into massive chunks. One plant was down to only 5 percent of capacity causing electrical brown outs in the Detroit area.
State Wide	26-31				3	41	5	C	Blizzards
									Winds of 30 to 60 MPH and wind chill of 30 to 50 below zero swept across the state. The worst conditions occurred on the 26th and 28th when visibilities were lowered to near zero over large areas for long periods of time causing many multi-car accidents and leaving thousands of abandoned vehicles littering the roads. One man was killed by a car in Caladenia on the 26th and another man was killed by a snowplow in Bloomfield Hills on the 28th. Both drivers were unable to see the men due to the low visibilities. A third man in Bloomfield Hills was crushed to death on the 28th when a sheep collapsed on him under the weight of heavy snow. 41 other people were treated for frostbite. Factories and schools were closed for days. Some rural areas reported people snowbound in their homes from the 26th to the end of the month. Snow removal crews subcontracted extra people and equipment to remove 10-foot drifts from north-south roads. Some naturally formed drifts were 20-foot high. Hardest hit were Muskegon, Kent, Cass, VanBuren, Kalamazoo, Allegan & Monroe Counties.
MINNESOTA STATEWIDE	26-29	---	---	---	4	3	5	0	WIND
									Four day windstorm began evening of JAN 25 with low pressure center over Western Ontario, and Canadian cold front approaching northern North Dakota border. By midnight front had already moved to South Dakota with strong pressure gradient and winds gusting to the 60s. Strong winds continued thru Wednesday, 27th followed again by very strong gradient and over State Thursday, 28th, winds gradually diminishing thru the 30th and 31st. Most roads in Minnesota closed Thursday due blowing and drifting snow--numerous traffic accidents--winds combined with subzero temps produced wind chills of 60-80 degrees below zero--Three killed in car-truck collision near Fergus Falls Otter Tail County--Austin man died in 2 car collision near Windom Cottonwood County--3 others hospitalized--Friday, JAN 28 more than 240 schools remained closed due high winds and low temps--5 St. Paul water utility crews worked 16 hour shifts to thaw frozen water pipes.
									This JANUARY with average temperature of 0.3 degrees second coldest of 20th century exceeded only by 2.7 degrees below zero average in 1912. This JANUARY fourth month of record cold now averaging 21.7 degrees or coldest four month period in 20th century. Previous record cold 22.5 in 1919-1920. Heating degree days for month 2005 compared with normal 1637 of 22 percent energy use above normal. Energy emergency declared in Minnesota JAN 18. New minimum temperatures 8th 23 below, 9th 32 below, 10th 27 below, 11th 31 below, 16th 28 below--wind chill reading 78 degrees below zero at Minneapolis 5AM Friday, JAN 28--120 consecutive hours with temps zero or below from 2AM Saturday, JAN 8 until 2AM Thursday, JAN 13.
MISSISSIPPI Entire State	2				0	0	?	?	Ice Storm
									Freezing rain and sleet began falling in SW MS early on the morning of the 2nd and spread east and North across the state during the day. Bridges and overpasses began icing over during the morning hours over southern and central sections and conditions continued to worsen with time. Fallen tree limbs and power lines caused extensive power outages over the southern two-thirds of the state as ice accumulations reached one inch. Freezing rain, sleet, and a little snow began spreading into northern sections by nightfall and continued until the early morning hours of the third. Many schools across the state were closed and traffic accidents were numerous. Two traffic fatalities were directly attributed to the icy roads as well as several injuries. The hardest hit areas of the state were the southern and central sections due to the lengthy duration of freezing or frozen precipitation but isolated reports of up to two inches of combined sleet, ice, and snow accumulations were received from northern sections.
MISSISSIPPI (continued)									
2 N Canton Madison County	9	8:20 AM	~300	?	0	0	3	0	Tornado
									A small tornado touched down briefly 2 Mi. N of Canton damaging a frame dwelling and continuing northeast for 300 yards crossing Highway 1b. Damage \$1,000.
1/4 NW Mize Smith County	9	11:00 AM	1	200	0	0	4	0	Tornado
									A small tornado touched down near the Shady Grove voting precinct 1/4 mi. NW of Mize near the Simpson county line destroying one house trailer and one barn, and damaging 2 chicken houses. Damage \$10,000.
Northern Sections Cochran, Union, and Monroe Counties	11 14 17				3	?	?	?	Severe Cold
									Three persons died from exposure to severe cold weather which saw temperatures drop to record lows throughout the state. Below zero readings were common across the northern third of the state ranging from 2 below zero at Greenwood to 8 below at Oxford. Two of the victims were found out of doors while the other, an elderly man, was found dead in his home. One woman was found on the 14th, another man was found on the 14th, and the other man on the 17th.
Southern and Central	30				0	0	?	?	Snowstorm
									A winter storm system along the Texas coast moved eastward along the Gulf Coast on the 30th bringing unusually heavy snowfall to southern and central Mississippi. Snow began falling in Western sections on the afternoon of the 30th and gradually spread eastward and southward over the state during the night. By early morning of the 31st snow cover of 3 to 4 inches were common over the southern and central sections with a few locations reporting between 4 and 5 inches. The northern quarter of the state did not receive measurable snow and snow cover was reported all the way to the Gulf Coast.
MISSOURI Northern Missouri	4	all day	?	?	0	0	?	0	Snowstorm
									Heavy snow up to 9 inches fell across the northern half of Missouri north of a line and including Kansas City and St. Louis
Southeast half of Missouri	9-10	all day 9th, a.m. 10th	?	?	0	0	?	0	Snowstorm
									A well-developed winter storm dumped heavy snow up to 12 inches across the southeast half of Missouri south of a line from the southeast corner of the state to and including St. Louis. Bitter cold temperatures and near blizzard conditions accompanied the storm.
MONTANA									NONE REPORTED
NEBRASKA									NONE REPORTED
NEVADA									NONE REPORTED
NEW HAMPSHIRE Statewide	10	Daylong			0	0	5	0	Snowstorm
									The second major snowstorm in three days dumped another foot or more on a major portion of New Hampshire. The storm caused many traffic-related injuries and several people died on the highway or shoveling snow. Structural damage to buildings with collapsing roofs and snow, ice and wind caused power outages. Gale winds reported generally around the state. Winds of 70 - 135 mph reported in the mountains. Highways impassable in the notches with vehicles buried in snow and people marooned.
NEW JERSEY NORTHERN NEW JERSEY	7				0	0	?	0	SNOW
									3 to 4 inches of snow fell over the area causing several traffic accidents.
STATE	9-10				0	?	?	?	SNOW
									Another 3 to 4 inches of snow fell over the state. This was the second large snow storm in two days to hit Northern New Jersey. This added snow caused hazardous driving conditions.
NORTHERN NEW JERSEY	14-16				0	?	?	?	SNOW
									The heaviest snow fall of the the month dropped 6 to 8 inches of new snow over the area. This along with previous snowfalls of the month caused slippery hazardous driving conditions.

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					KILLED	INJURED	PROPERTY	CROPS		
NEW MEXICO Statewide	8,9	Continuous			0	0	6	1		Snow and Cold
			New snow began western border Saturday, January 8, as very cold temperatures plunged southward over eastern plains. Cold penetrated throughout State Sunday, January 9, while snow ended west early Sunday and east Sunday evening. Four to as much as twenty inches of new snow from the storm on top of already existing snow cover many areas. Many school closures due to cold and treacherous roads. Very cold temperatures continued for days with persistent snow cover. Most of damage loss due to deterioration of streets, some indirect casualties from traffic accidents.							
NEW YORK COASTAL AREA	7				0	0	?	?		SNOW
			2.8 inches of snow fell in Central Park, but to the East and North of the City 3 to 5 inches of snow fell. This caused hazardous driving conditions.							
AREA	14-16				0	?	?	?		SNOW
			5 to 8 inches of snow fell over the area. The heavy snowfall coupled with freezing temperature caused server traffic accidents. Also, on the morning of the 15 there was 6 inches of snow on the ground in Central Park.							
NEW YORK CENTRAL ORANGE, SULLIVAN, ULSTER, PUTNAM, DUTCHESS, GREENE, COLUMBIA, ALBANY, RENSSELAER, SARATOGA, SCHENECTADY, WASHINGTON, WARREN, DELAWARE, OTSEGO, SCHOHARIE, CORTLAND, CHEMUNGO, MADISON, ONEONAGE, FULTON, AND MONTGOMERY COUNTIES	6-7	11P-5P								SNOW
			Two to six inches of snow coupled with wind gusts to 40 MPH closed many schools, downed powerlines, and caused numerous traffic accidents. In Sullivan county four persons were injured in an auto crash on Rte #42. Another man was found lying beside his car and died in a hospital several hours later of heart failure. Four persons were reported injured in auto accidents in Glens Falls, Warren County.							
AREA WIDE	10	12P-9P			1		5			WIND AND SNOW
			3 to 14 inches of snow accompanied by 25 to 40MPH winds, gusting to 65 MPH in Oneida County caused downed trees and powerlines and numerous traffic accidents. In Oneida County a man was killed when strong winds blew a wooden barn door on top of him. Another man in Newport, Herkimer Co., died of a heart attack when his car became stuck in a snowbank. At Kirkwood Airport, on Rte #11, in Broome County, winds gusting to 47MPH blew the metal roof off of a hangar causing damage to two small planes parked inside. Snowdrifts were reported in Oneida and Herkimer Counties up to 15 feet high.							
NEW YORK WESTERN All Counties	28-FEB.						6			BLIZZARD
			A winter storm began about 3:30 PM Friday, January 28th as a strong cold front moved through the Counties of Lewis, Jefferson, Oswego, and St. Lawrence and became a five-day blizzard which literally buried these counties. Winds were gusting from 50 to 65 MPH and over five feet of snow was reported to have fallen during the five day period in the vicinity of Watertown. Roads were blocked by drifts ranging from 15 to 30 feet and more than 1000 motorists were stranded. Schools and businesses closed and the National Guard, as well as any available volunteers were delivering food, fuel, and supplies to residents as well as the stranded. Three men died of heart attacks while shoveling snow and another suffered a heart attack in his automobile and died. Snow removal costs were estimated to exceed two million. Four dairy barns had collapsed with at least \$350,000 worth of damage and in addition, many dairy farmers had to dump approximately \$350,000 worth of milk which could not be delivered.							
	10	All day			4	?	?	?		Heavy snow and strong winds.
			13.2 inches of snowfall at Buffalo Airport. Closed roads and highways. Many schools and businesses were closed. 50 People were trapped in a Buffalo factory along the waterfront due to snowdrifted closed roads. 4 Deaths were attributed to the weather. 8 to 12 inches of snow fell in the Rochester area.							
	16 &				0	?	?	?		Heavy snow and strong winds.
	17									Winds gusting to near 50mph, accompanied by 7.3 inches of snow at Buffalo Airport, buffeted the area, blocking roads and highways with snow and very poor visibilities. Schools and factories closed. Many motorists stranded. N.Y. State Thruway closed from Amsterdam westward to the Pennsylvania State line.
	26 &				0	?	?	?		Strong winds and snow.
	27									Strong winds gusting to 50mph early on the 27th produced extremely poor visibilities and drifting, blowing snow. Roads and highways were closed. Schools, factories and the Airport closed due to the poor visibility and hazardous travel conditions. 4 Inches of snow fell overnight at the Buffalo Airport.
NEW YORK (continued) WESTERN	28 to				29	?	8	?		Blizzard
			All Counties 2/1 A rapidly developing low pressure system, moving eastward just north of the Lower Lakes Region, moved into Quebec, decelerated and turned northward, keeping Western New York in a very strong flow of cold Arctic air. As the associated cold front moved across the area, blizzard conditions arrived suddenly and completely paralyzed the area. Visibility dropped from three-quarters of a mile at 11:20 a.m. to zero at 11:38 a.m. Officially the visibility stayed at zero until 12:50 a.m. on the 29th, when it increased to three-eighths of a mile. The rapid drop in visibility trapped Airport snow removal crews in their plows, while they were working on runway snow removal at Buffalo. 5 Plows were abandoned as the crews got into one plow and slowly worked their way back to the garage. An airline mechanic, emerged from a plane parked on the ramp and got lost on his way to the terminal; he wandered onto the runway and into one of the abandoned plows. Thousands of motorists experienced the same fate and abandoned their vehicles and took any nearby shelter. Churches, fire halls, police stations, restaurants, and private homes became emergency shelters. The wind gusted to 69mph on the 28th and gusts over 50mph were recorded each day of the storm. Snowdrifts over 25 feet high were reported with buildings and thousands of cars being buried. Many roads and highways remained closed over a week later, as drifts were too high and the snow packed too tightly for plow removal, so front loaders and other earth moving equipment was utilized. Four wheel drive vehicles and snowmobiles were the only reliable vehicles operating. The Mayor of the City of Buffalo and a few other communities issued bans on vehicle operation, with only emergency and essential personnel able to travel. Wind chill temperature remained at minus 50 degrees or lower much of the time. Losses in excess of 250 million dollars were estimated to have occurred, in storm damage, snow removal costs, lost wages, recovery assistance such as food stamps and lost production. The Counties of Erie, Niagara, Orleans, Genesee, Wyoming, Chautauque and Cattaraugus were declared Major Disaster areas by President Carter. The Federal Disaster Assistance Agency, along with the U S Army Corps of Engineers, National Guard, Army Engineers from Fort Bragg, N.C., and heavy equipment operators assisted local crews in snow removal. The City of New York sent snow blowers and the City of Toronto, Canada sent two large snow melters to help out. Weather records showed this to be the most severe blizzard on record. At the Buffalo Airport 12.2 inches of snow fell during the period. The excessively high drifts resulted from the snow pack of 33 inches that had been accumulating since late November, with little thawing and freezing to provide an ice crust. Communities adjacent to Lake Erie were buried as the snow blew onshore off the ice covered Lake. Twenty-nine persons lost their lives in storm related incidents. At least 9 of these were found in snow buried automobiles. The cold temperatures coupled with a heating gas shortage resulted in numerous factories, all schools, many public buildings, and commercial establishments closing or curtailing hours of operation.							
NORTH CAROLINA										
Swain County	10	Overnight					1			Freeze
			A man of Leads Creek died from exposure							
Wilson County	11	Overnight					1			Freeze
			A man in Wilson died in the hospital after being out all night.							
Cumberland County	17	Overnight					1			Freeze
			A man in Spring Lake died from exposure after falling outside.							
Jones County	17	Overnight					1			Freeze
			A woman died in Pollockville from exposure when she fell into a ditch.							
Durham County	20	Overnight					2			Freeze
			Two people in Durham were found dead in a small house having no heat. They died from cold and exposure.							
Forsyth County	20	Overnight					1			Freeze
			A woman was found dead from cold and exposure in Clemmons when her furnace malfunctioned.							
			Statewide - The coldest January on record and several heavy snowfalls in the mountains caused problems across the State to everyone. In the western part of the State, water lines and in some communities, entire water systems were frozen and useless. Schools were closed for extended periods. Farmers had problems with working the fields along with feeding and watering animals. The increase in snow incidents produced an abnormal amount of automotive accidents injuring many and causing thousands of dollars in damages. Commercial fishermen were unable to work because of ice on the sounds and estuaries.							
NORTH DAKOTA										NONE REPORTED

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1977

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		
OHIO Entire State	9-11	Afternoon the 9th			0	?	4	0	Heavy Snow and Unusual Cold	
		A strong winter storm moved into Ohio Sunday afternoon and continued through Monday night. Snowfall amounts ranged from 5 inches in the southern counties to over a foot in the northern sections. Winds to 35 mph created blizzard-like conditions limiting visibilities and drifting snow. Travel was slowed and there were many cancellations in schools, factories, and social functions. Temperatures dropped from the 30s Monday morning to zero or below by Monday night. Numerous people were treated for frostbite.								
Entire State	13	All Day			1	?	4	0	Unusual Cold	
		Early morning temperatures dropped to 10 to 15 below zero across the state. A man was found frozen to death in his home in Mansfield. Four to six inches of snow fell on the state later in the day. Considerable freeze damage occurred around the state and many people were treated for frostbite.								
Entire State	16-17	Night			1	?	5	0	Unusual Cold	
		Record cold moved into the state on the night of the 16th and 17th. Temperatures fell to 15 to 25 below zero. Monday morning a man was found frozen to death in a front yard in Akron. Many cases of frostbite were treated and there was considerable freeze damage around the state.								
Entire State	28-29	Early Morning the 28th			7	?	5	0	Blizzard and Unusual Cold	
		A blizzard with winds to 60 mph moved into Ohio in the early morning of the 28th and continued until early a.m. the 29th. Snowfall amounts ranged from 4 inches to over a foot. The temperature fell to 10 to 20 below zero in the night of Friday the 28th. Five men froze to death in a stranded car near Fostoria in Seneca County. A woman froze to death in Milan while trying to walk 3 miles to her home. Another woman was found frozen to death on the morning of the 29th outside her home in Pataskala in Licking County. She had apparently been sleep walking. Many people were treated for frostbite and there was considerable freeze damage around the state.								
Entire State	31	All Day			1	?	4	0	Unusual Cold	
		A cold airmass moved into the state dropping temperatures below zero. A man was found frozen to death in his unheated home in Stuebenville. There were many cases of frostbite treated and there was considerable freeze damage done around the state.								
OKLAHOMA			NONE REPORTED							
OREGON East Portland and Columbia River Gorge	10-12	Mainly night time	-	-	0	Unk	Unk	0	Ice storm caused numerous auto accidents.	
PACIFIC			NONE REPORTED							
PENNSYLVANIA EASTERN Eastern Penna.	6-7	11 PM to 10 AM			0	0	2	0	Heavy Snow	
		Snow fell over all of Eastern Pennsylvania with accumulations of 4 to 6 inches over much of the area. While 8 to 10 inches accumulated in some northeast counties only 2 to 3 inches fell in portions of the Middle Susquehanna Valley. The snow caused many traffic accidents with 3 deaths in an accident in Snyder County.								
Eastern Penna.	9-10	5 PM to 9 AM			0	0	3	0	Heavy Snow, Wind	
		Snow deposited from 2 to 5 inches of new snow over Eastern Pennsylvania before changing to freezing rain and sleet. Accumulations were 4 inches or more in the northern counties and less than 4 inches in the south. Many traffic accidents resulted in 1 death and at least 2 injuries. Wind gusts to 58 mph were recorded at the Wilkes-Barre Scranton Airport.								
Lancaster, Berks, Lehigh, Northampton, Lebanon Counties	14-15	11 AM to 2 AM			0	0	2	0	Heavy Snow	
		Snow over Eastern Pennsylvania deposited 1 to 4-1/2 inches of new snow. The area from Lancaster to Northampton County received 4 inches or slightly more. Freezing rain and sleet fell on top of the snow in some areas.								
Lancaster	16	10 PM			0	0	1	0	Wind	
		Wind gusts to 52 mph were recorded at Lancaster Airport. This combined with below zero temperatures to give chill factors as low as 67 degrees below zero.								
PENNSYLVANIA WESTERN			NONE REPORTED							
PUERTO RICO North and West Coast	20-21				0	0	5	0	Heavy Surf and Wave Action	
		A severe winter storm moving off the northeast Atlantic coast of the United States generated heavy seas swells with damaging wave action along the western and northwestern coast of Puerto Rico. About 20 families were evacuated from their homes near the coast in the Aguadilla area and several homes were damaged with one completely demolished. A government fishing vessel was sunk and several smaller crafts damaged. Considerable erosion damage occurred to coastal roads near to shore.								
RHODE ISLAND Statewide	7				0	0	3	0	Heavy snow	
		Nearly one foot of wet, heavy snow fell across the state.								
Statewide	10				0	0	4	0	Heavy rain and wind	
		Snow was followed by 1 to 2 inches of rain which caused a great amount of flooding of highways and basements.								
Statewide	14				0	0	3	0	Heavy snow	
		6 to 10 inches of snow once again hit the state.								
Statewide	28	Late Night			0	0	4	0	Wind	
		An intense cold front packing thunderstorms, wind and snow squalls lashed the area bringing a temperature fall of 12 degrees per hour.								
SOUTH CAROLINA Statewide, South Carolina	-				-	-	-	4	4	Unusual cold weather
		Coldest winter to date most areas of the state has caused serious disruption to the economy. Many factories, businesses and some schools have had to close for lack of fuel.								
SOUTH DAKOTA			NONE REPORTED							
TENNESSEE			NONE REPORTED							
PENNSYLVANIA (continued) EASTERN Eastern Penna.	28	4 PM to 8 PM			0	1	4	0	Wind, Near Blizzard Conditions	
		A strong cold front moved across the state accompanied by strong winds, snow squalls and plunging temperatures. Wind gusts reached 60 mph over much of the area and combined with snow squalls to bring near blizzard conditions. This resulted in many traffic accidents and many stalled automobiles as snow already on the ground drifted out on to roads. The high winds downed power and telephone lines, damaged a construction site and blew a portion of a roof off. Portions of the roof blown off in Pottstown damaged other buildings and a police car and injured one person who was struck by the flying debris. Some of the wind gusts reported were: Lancaster and Allentown 67 MPH, Philadelphia, Pottstown and Schuylkill County 60 MPH, Wilkes-Barre Scranton 59 MPH, Reading 58 MPH, Montgomery County 50 MPH. The winds flipped over and damaged 3 airplanes at Reading Airport. Temperatures in the upper 30s and low 40s ahead of the front dropped as much as 15 to 20 degrees in one hour, 25 to 30 degrees in two hours and up to 40 degrees in five hours.								

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1977

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		
TEXAS NORTHERN	Several months of unusually cold weather in North Texas were followed by the coldest January on record. The average temperature at the Dallas-Fort Worth Airport was 34.7, far below the normal monthly average of 44.8 degrees F. Damaging snow and ice storms occurred on the following dates:									
North Texas	1-2				?	20	6	5	Ice and snow storm	
North Texas	8-9				6	?	7	5	Ice and snow storm	
North Texas	30				0	?	?	?	Snow Storm	
TEXAS SOUTHERN	NONE REPORTED									
TEXAS WESTERN	NONE REPORTED									
UTAH	NONE REPORTED									
VERMONT BENNINGTON, WINDHAM, AND RUTLAND COUNTIES	10	12P-10P			SNOW AND WIND					
VIRGINIA Hampton Roads-Norfolk areas	4	Early			0	12		0	Glaze	
Most of State	5				0			0	Snow	
Statewide	6-7				0	0	3	0	Snow	
Statewide	9	Afternoon & Night			0	0	0	0	Snow	
Hampton vicinity	10	4:30 p			0	3	3	0	Wind	
VIRGINIA (continued)	Statewide									
	14							1	0	Glaze
Tidewater area	16	Afternoon-Evening							0	Snow, Glaze
VIRGIN ISLANDS	NONE REPORTED									
WASHINGTON	NONE REPORTED									
WEST VIRGINIA Statewide	month					4	0	5	0	Unusual cold

STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1977

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					KILLED	INJURED	PROPERTY	CROPS	
WISCONSIN Northwest Section	9	Morning			0	0	?	0	Extreme Cold Temperatures
	<p>On the morning of January 9th some of the coldest temperatures ever recorded for Wisconsin occurred. The coldest officially accepted readings prevailed over the northwest section of the state. Gordon, which is located 30 miles south-southeast of Superior, recorded 50 below zero for the coldest reading. Other extremely cold readings were 45 below at Minong; 43 below at Spooner and Hayward; and 42 below at Webster and Ladysmith. The all-time record for the state occurred at Danbury January 24, 1922 and was not broken.</p>								
Statewide	26	Day			2	?	?	0	Blizzard and Cold Wave
	<p>A strong Arctic cold front swept across Wisconsin January 26 and caused very strong winds, plunging temperatures and blinding visibilities in snow and blowing snow. Although snowfall amounts were generally light, winds gusting to around 50 mph whipped the fallen and previous snow on the ground and reduced visibilities to near zero in many areas. Considerable drifting of the snow occurred and many rural roads became impassable for a time. A motorist drove his truck into a side of a moving locomotive. Apparently blowing snow reduced the visibility so that the driver could not see the flashers at the crossing nor the train. A Brookfield woman in Waukesha county died of apparent exposure. She was found knelling along a roadside by a passing motorist. When the motorist went up to aid her she collapsed and died.</p>								
WYOMING	NONE REPORTED								

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	
	<p>° Includes crop damage. C Crop damage. * Miles instead of yards. ** Yards instead of miles. † Storm damages are placed in categories varying from 1 to 9 as follows: 1 Less than \$50 2 \$50 to \$500 3 \$500 to \$5,000 4 \$5,000 to \$50,000 5 \$50,000 to \$500,000 6 \$500,000 to \$5 Million 7 \$5 Million to \$50 Million 8 \$50 Million to \$500 Million 9 \$500 Million to \$5 Billion</p> <p>Note: This publication contains our best information on storms but, due to the difficulties inherent in collection of the type of data, it is not all-inclusive. Late Reports and corrections will be carried in the June and December issues of this publication.</p> <p>SUBSCRIPTION PRICE: \$3.60 a year; \$4.80 additional for foreign mailing; 30c single copy. Make checks payable to Department of Commerce, NOAA; send payments and orders to: National Climatic Center, Federal Building, Asheville, N. C. 28801. Attn: Publications.</p>								
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