STORM DATA





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Kennel D Waden

NATIONAL CLIMATIC DATA CENTER

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CONTENTS

Cover: Minneapolis? Buffalo? It is the Washington, D.C. area on the day following the second in a series of snowstorms that brought the nation's capital as well as much of the Eastern U.S. one of its snowiest winters in years. The January 25th storm came on the heals of a previous storm on January 22nd, together leaving more than two feet of the white stuff over much of the metro area. Pictured is a parking lot in McLean, Virginia, a western suburb of Washington, on the afternoon of January 26th. ——Photo by Brian E. Doty, University of Maryland.

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STORM DATA (ISSN 0039-1972)

The section on Outstanding Storms of the Month is prepared by Professor T. Theodore Fujita, editor, and Duane J. Stiegler, associate editor, the University of Chicago with funding by the U. S. Office of Naval Research. The Storm Data and Unusual Weather Phenomena narratives, and summaries of Hurricanes/Tropical Storms are prepared by the National Weather Service. The National Climatic Data Center compiles statistics on deaths, injuries, damage, and prepares the annual summaries of Tornadoes and Lightning. 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. Late reports and corrections will be carried quarterly. Maps of zones used in the Storm Data and Unusual Weather Phenomena will be published in these editions; Eastern States: JAN, APR, JUL, OCT.

Central States: FEB, MAY, AUG, NOV. Western States: MAR, JUN, SEP, DEC.

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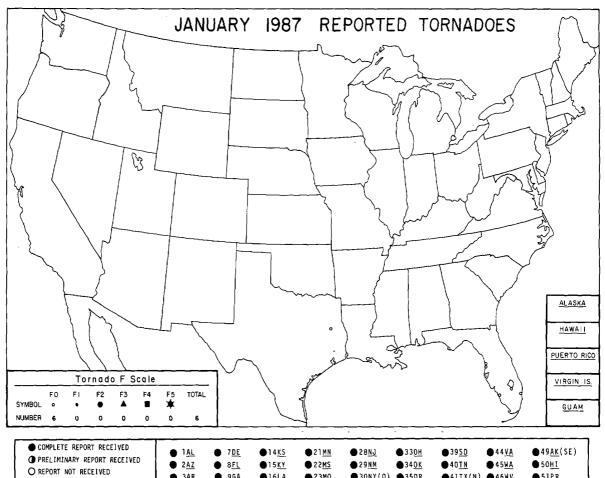
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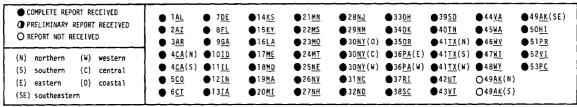
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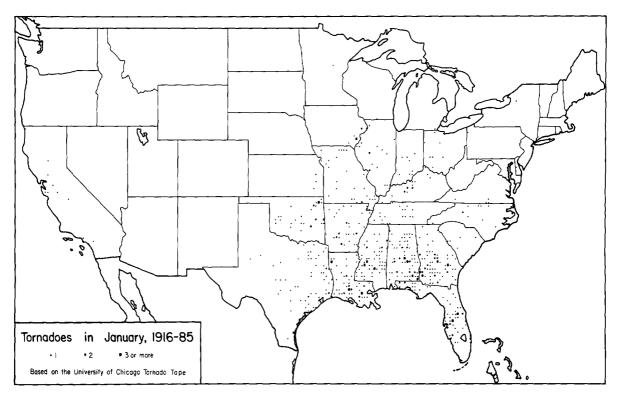
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OUTSTANDING STORMS OF THE MONTH







1300

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CYCLONE TRACKS

JANUARY 1987

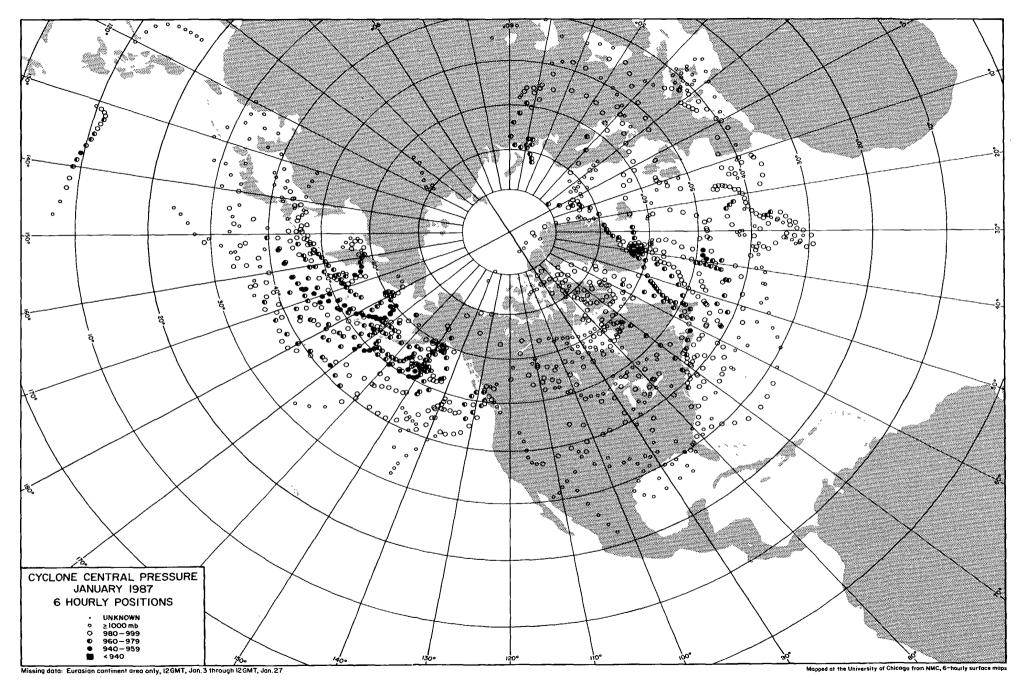
NUMBER OF CYCLONES

16 BEGAN IN PREVIOUS MONTH

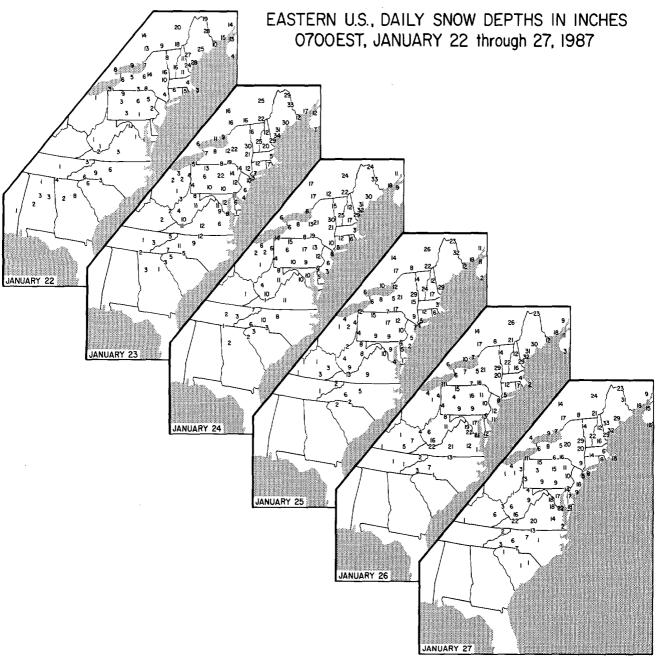
73 BEGAN AND ENDED IN THIS MONTH

13 CONTINUED INTO NEXT MONTH

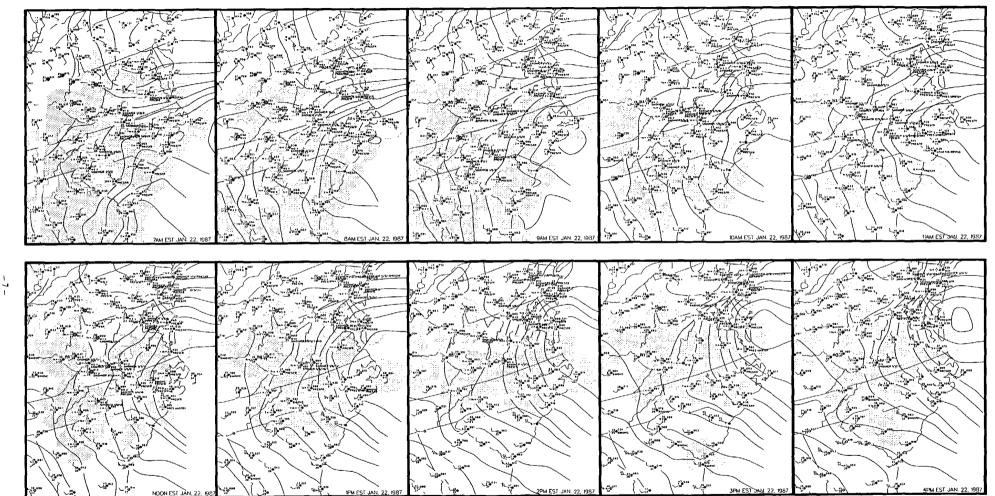
102 TOTAL CYCLONES IN MAP



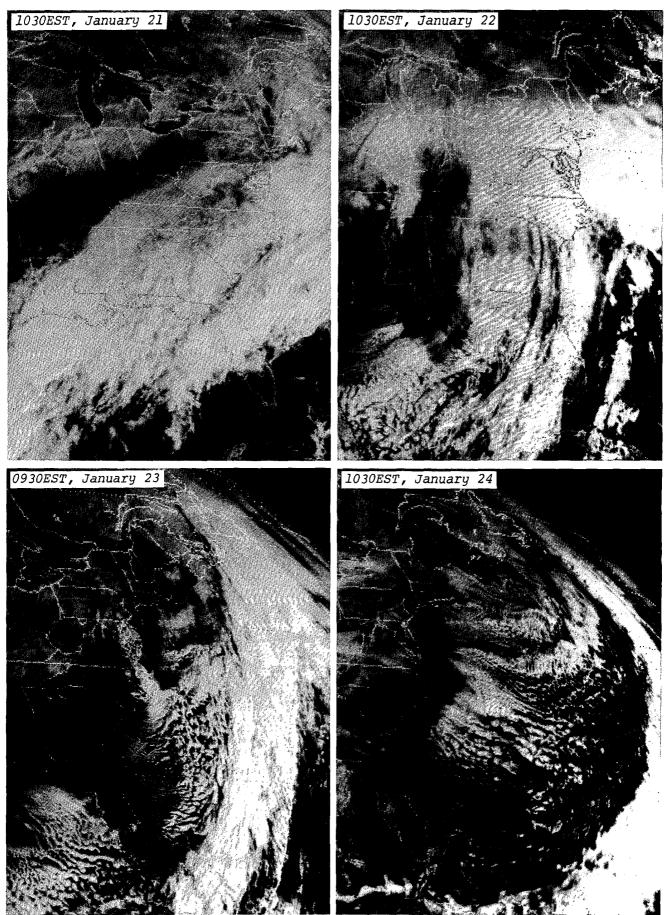
Two consecutive coastal storms within a 5-day period in late January dumped heavy snow over the East-Central U.S. The storms created massive transportation delays, especially in the Washington, D.C. area. The first storm, on January 22nd, left a trail of snow across the South from central Mississippi to northern Georgia, and northeastward from there along and just east of the Appalachian Ridge to New England. Although snowfall amounts peaked at only about 15 inches, the heaviest snow fell in heavily populated regions of Virginia, Maryland and Delaware. Washington was practically paralyzed by traffic tie-ups as hundreds of thousands of government employees struggled to get to work during the storm, only to be sent home through the same storm shortly after arriving, thereby compounding the already-difficult travel situation. Airports, schools and many businesses were also closed. A second storm doused the area with snowfall in the 1-foot range on January 25th and 26th, leaving its heaviest amounts in a band just to the south of that of the first storm. These storms along with two in February would make this one of the snowiest winters for the area in years.



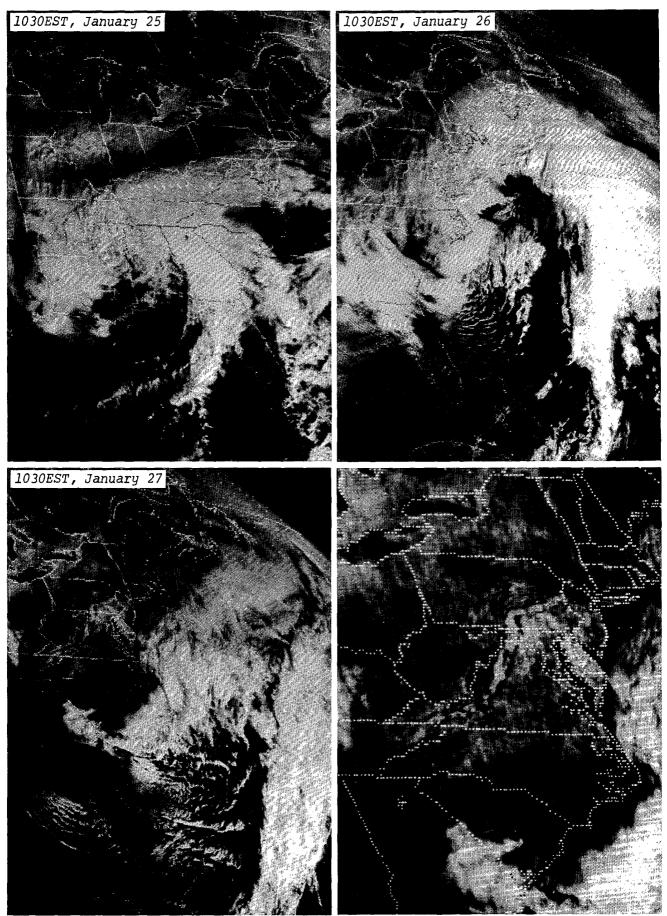
Daily snowdepths in inches for the Eastern U.S. during a 6-day period in late January when two consecutive coastal storms dumped heavy snows across the region. ---Data from NMC.



Hourly surface conditions from 0700EST to 1600EST on January 22, 1987 as the storm's low pressure center was organizing and deepening along and offshore of the coasts of the Carolinas and Virginia. Washington, D.C. was receiving moderate snowfall throughout the 9-hour period, starting just after the 0700EST observation. Light and dark gray shading depict areas of light and moderate precipitation, respectively. ---Computerized data plot and analysis by Brian E. Doty, University of Maryland.



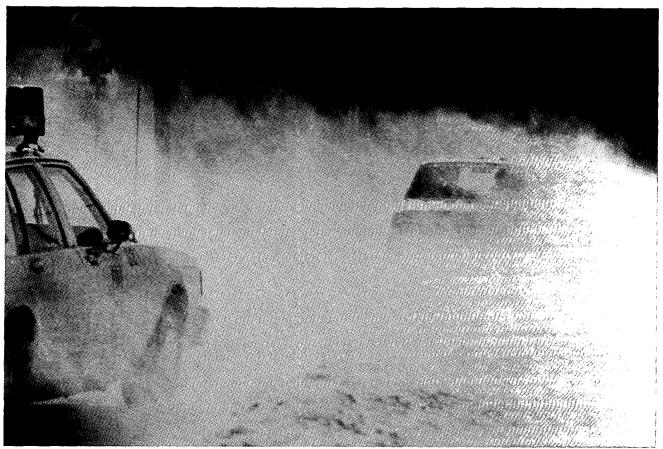
Daily, GOES 6 satellite, visible images of the first storm that dumped heavy snow over the Eastern U.S. on January 22nd. A snowband left behind by the storm is visible from central Mississippi through the western Carolinas. ---Photos from NESDIS.



A continuation of the photo sequence from the previous page shows the spiralling comma cloud of the second snowstorm. The lower right photo, enlarged from the lower left photo, shows the accumulated snowfall on the ground. ---Photos from NESDIS.

SNOWSTORMS in the EASTERN U.S. --- continued

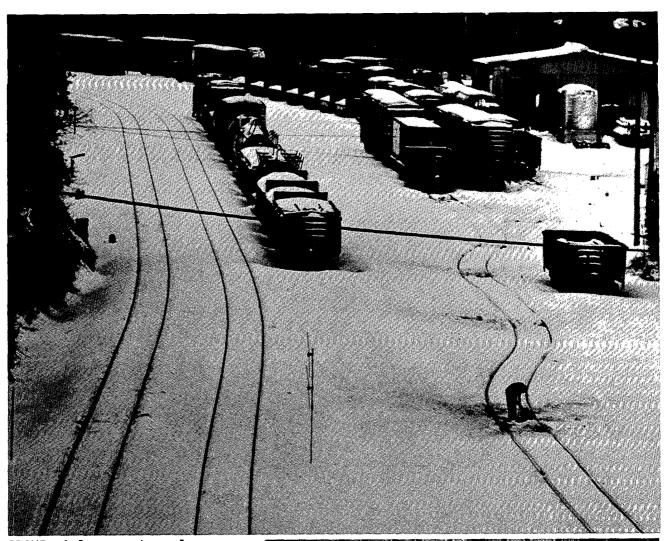
Photos on this and the next page were all taken in the Lynchburg, Virginia area after the second storm. Each storm left about a foot of snow accumulation across the central Virginia area, giving it a two-storm total near 2 feet in depth.



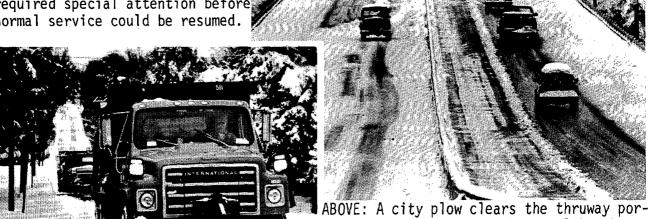
Strong winds following the second storm lift the snow to heights well over cartops along Lynchburg's Park Avenue, reducing visibility and making for treacherous driving.



A Lynchburg resident begins to extricate his vehicle from the storm's snowy aftermath, but only after the winds had lessened and the snow's motion had become saltatory.

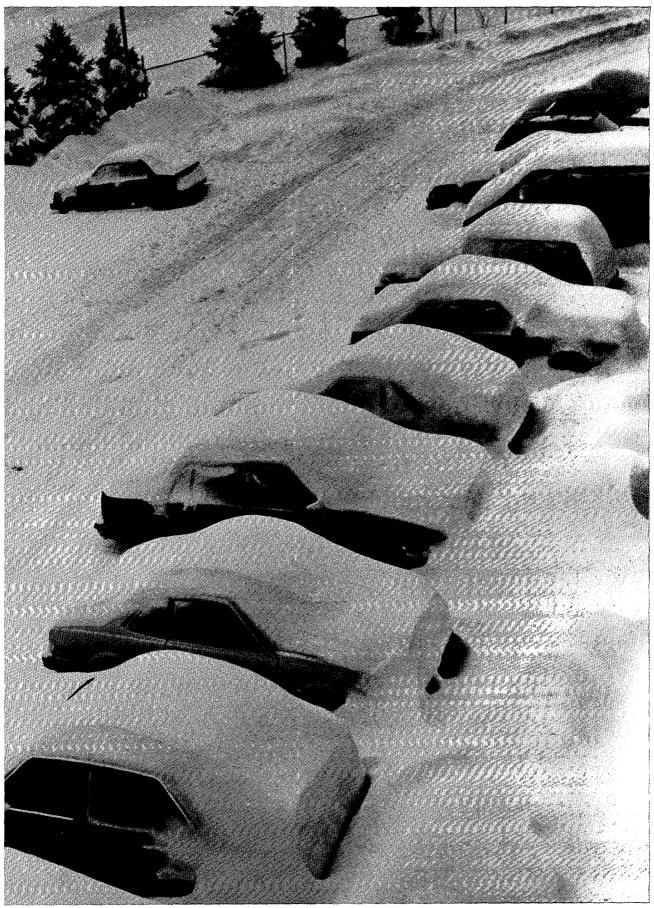


ABOVE: A lone worker clears a snow- and ice-clogged switch in a Norfolk Southern railyard in Lynchburg. The storms had minimal effect on mainline rail operations, but sidings and yards required special attention before normal service could be resumed.



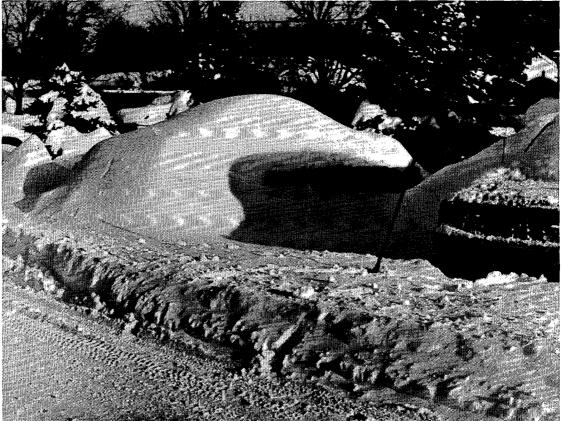
tion of U.S. 29 in Lynchburg, although drivers still had slick conditions to contend with. LEFT: City plows work in tandem to clear a side street.

---Photos on pages 10 and 11 by Aubrey Wiley, The Lynchburg News and Daily Advance.



A balcony view of an apartment building parking area in McLean, Virginia, a Washington D.C. suburb, on the morning of January 26th.





Additional views of the parking area shown on the preceding page.
---Photos on pages 12 and 13 by Brian E. Doty, University of Maryland.





Snow-blanketed autos in Bethesda, Maryland, also near Washington, on the morning of the 26th. ---Both photos by Robert F. Abbey, Jr., Office of Naval Research, Washington, D.C.



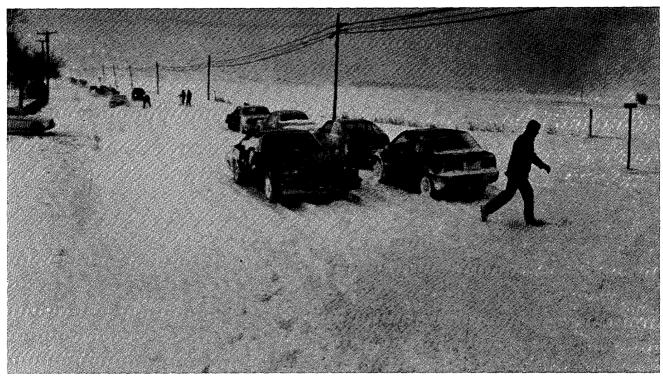




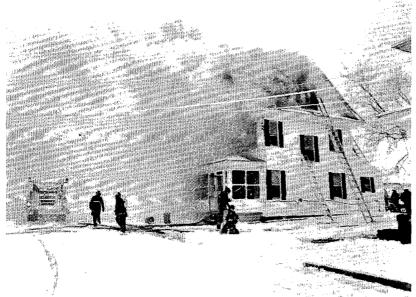
In three views above are shown abandoned vehicles that lined Washington's Beltway on the morning of January 23rd. The obstacles hampered cleanup efforts on the previous day, and their subsequent removal only served to further exacerbate the highway's usual traffic-flow problems. ---All three photos by Brian E. Doty, University of Maryland.

SNOWSTORMS in the EASTERN U.S. ---- continued

Photos on this and the following page were taken in the Salisbury, Maryland area on the Delmarva Peninsula. The area received a combination of rain, freezing rain and snow from the first storm, creating icing problems, and mostly snow in even heavier amounts from the second storm. The region, where snowfalls of this proportion are far less common than in areas to the west, received a two-storm snowcover of generally 18 inches.



A rural road west of Salisbury, with a layer of ice under the obvious snowcover left by the first storm, experiences a city-like traffic jam as many autos lost traction and/or became stuck in drifts.



In Delmar, Maryland, a house fire broke out during the first storm when the heater of the above home was overworked to the point that the chimney caught fire. The storm delayed the arrival of firefighters and hampered their efforts once there. At right a firefighter with tools in hand trods through the snow.





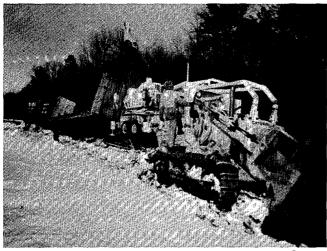


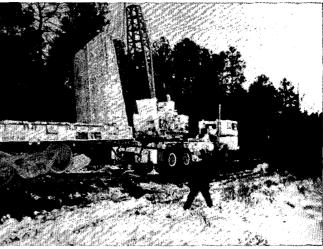
LEFT: A Wicomico County road worker spreads dirt on an ice-covered intersection west of Salisbury. RIGHT: A truck owner checks for vehicle damage after having veered into a ditch to avoid a possible collision with an out-of-control vehicle on an ice-slickened road near Parsonsburg, Maryland. Both photos were taken on January 23rd.





Salvage of a poultry truck that fell over in a ditch along U.S. 50 east of Salisbury during the second storm. Occasional zero visibility in blowing snow and an icy road surface under snow drifts caused the driver to drift off the roadway.

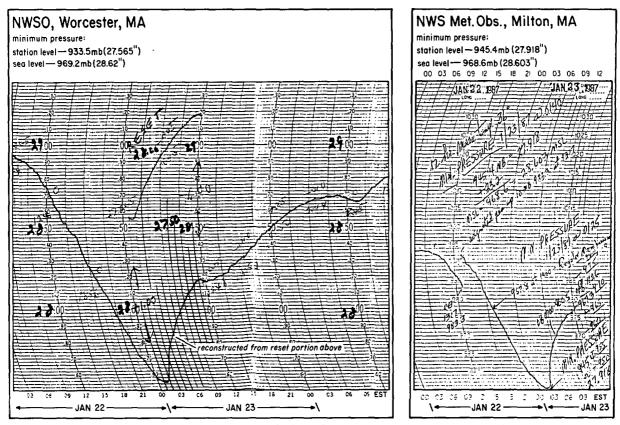




A train derailment near Hurlock, Maryland that occurred after the second storm is cleared. Poor roadbed conditions brought on by erosion from melting snow, and the train's having to plow through drifts were blamed for the accident.

---All photos on pages 15 and 16 by Milt Savage, The Salisbury Daily Times.

In New England, aside from the up-to-one-foot snowfall that caused traffic tie-ups similar to those experienced to the southwest, the January 22nd storm produced note-worthy, minimum surface pressure readings at many observing stations. Following the chaos caused by the snow that fell over the region during the 22nd, the storm's very deep, low pressure center moved northward through New England during the early morning hours of the 23rd. Although the pressures experienced were not record-setting, some were among the five lowest ever recorded for given stations.



Barograph traces for the January 22-23, 1987 storm from the NWSO at Worcester, Massachusetts and the NWS Blue Hill Meteorological Observatory at Milton, Massachusetts. The pressure at Blue Hill was the fifth lowest of record for the station; the station also encountered 73 mph winds during the storm. ---Both traces supplied by the Blue Hill Meteorological Observatory.

2. SNOWSTORM in the CENTRAL U.S. on January 16-19, 1987

Although there was a lack of snowfall throughout the Central U.S. during the winter of 1986-87, one storm did produce a band of snowfall with peak amounts of slightly over a foot from the Texas Panhandle through Indiana, as well as heavy snows in the Four-Corner States to the west. Snows began during January 15th, west, and 16th, initiated by two short-lived systems, one near the Four Corners and one in northeast Texas, each of which stalled (see satellite photos, page 19). Ample moisture left in the areas by the disturbances allowed snows to continue until a new low pressure center formed late on the 17th off the Texas coast. The new system slowly organized and broadened as it lumbered northeastward during the next two days, intensifying snowfall as it went.

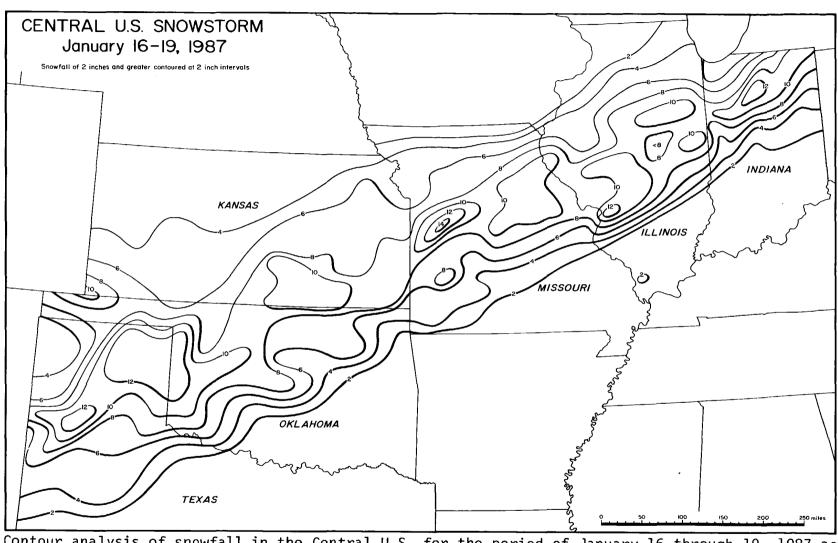
On pages 19 tions that the 19th.

19 through 21, daily GOES 6
at accompanied the snowstorm
. ---All photos from NESDIS

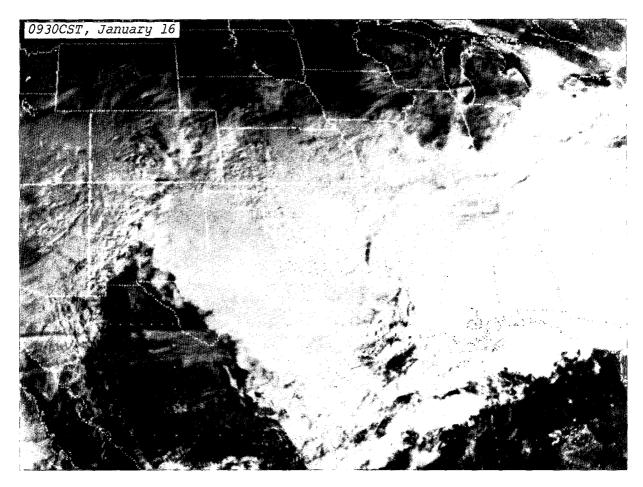
satellite, visible im over the Central U.S.

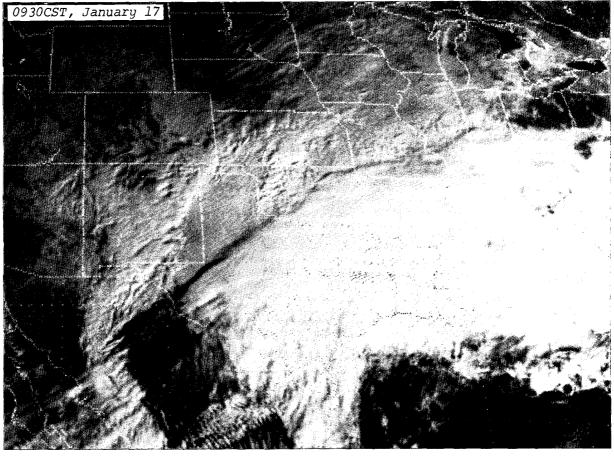
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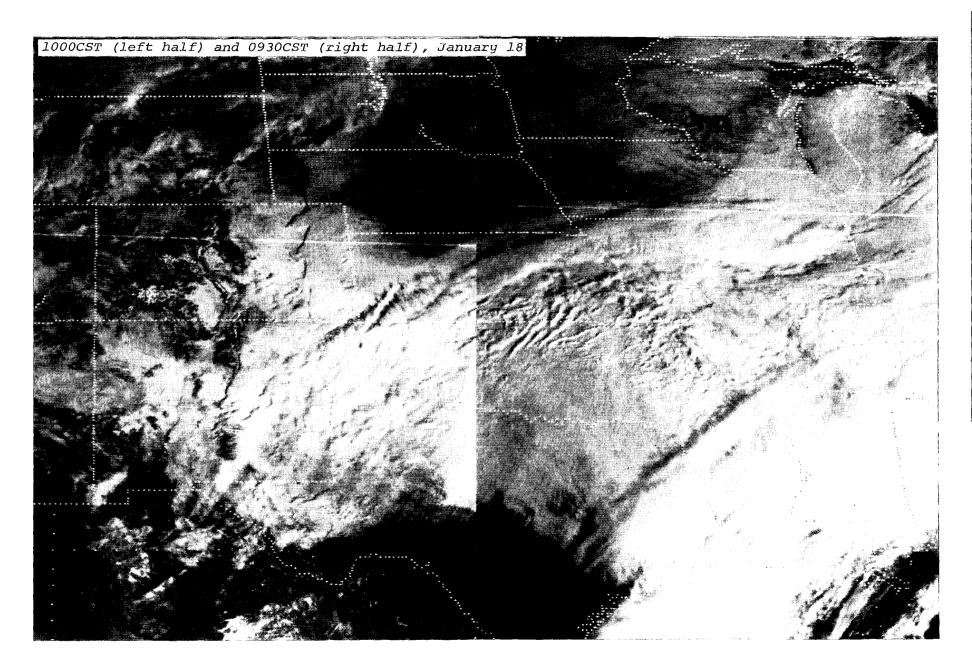
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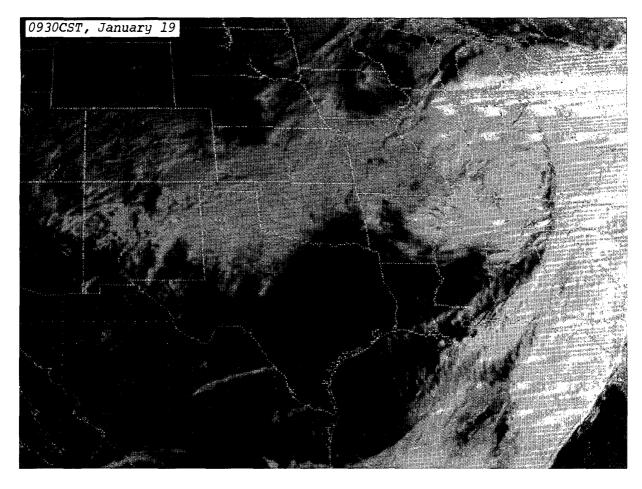


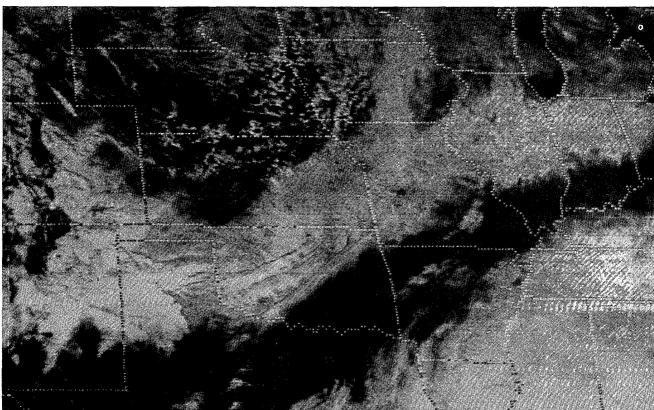
Contour analysis of snowfall in the Central U.S. for the period of January 16 through 19, 1987 as reported for the states of Texas (western), Oklahoma, Kansas, Missouri, Illinois, and Indiana. ---Data supplied by NWSFO's at Lubbock, TX; Norman, Oklahoma (Oklahoma City); Topeka, KS; St. Charles, MO (St. Louis); and Indianapolis, IN; and the Illinois State Water Survey, Champaign.











This additional GOES image taken at 1430CST on January 21st shows the band of snow left from the Texas Panhandle through Indiana in the wake of the storm. ---Photo supplied by NESDIS and the NWSFO at Topeka, Kansas.

JANUARY 1987

	CAL	PATH	Ę	NO. PER			ATED†				CAL	РАТН	F		. OF SONS	ESTIM. DAM		
PLACE	DATE TIME - LO STANDARD	LENGTH OF 1	WIDTH OF PA (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	DATE	TIME - LO STANDARD	LENGTH OF F	WIDTH OF PA	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM

1 ALABAMA

ALZ005-006-007-008-Central Alabama

| 18 0620CST 18 0620CST 10 0 0 ? ? Flood Heavy rains that began during the evening of Jan. 17 and continued at times into the evening of Jan. 18 caused some flooding. The heaviest rains appeared to be in a broad band from near Livingston to Centreville, Birmingham and Cullman. Centreville had more than 7 inches of rain in some 28 hours while 3 to 4 inch storm totals were common in a broad band from around Montgomery to Huntsville. Lowland and small stream flooding apparently began over parts of west-central Alabama around 0620CST, when flooding was rangered in Surear Countral to Huntsville. Lowland and small stream flooding apparently began over parts of west-central Alabams around 0620CST, when flooding was reported in Sumter County, and apread eastward during the day. By evening, some roads were under water in Bibb County, including a stretch of Alabams 25, the main route between Centreville and Greensboro. In East-central Alabams, the main route between Ashland and Lineville was cut by high water and several roads were closed in Calhoun County. Cullman County reported one wooden bridge washed out. Flooding along the Sucarnoochee River in the Livingston area forced the evacuation of several families as flood waters surrounded several homes. There were no reports of water entering any dwellings there, but water was reported to have entered the basements of some homes in Shelby County. One couple escaped injury when their small car was carried some 100 yards downstream from a flooded roadway near Montevallo. The car was reported to have stalled when the driver turned onto the flooded roadway, and the couple swam to safety. Washed out tracks were reported to have caused the derailment of 35 cars of a 138-car trein north of Prattville at about 0120CST on the 19th. Flooding along the Tombigbee, Alabama, Cahaba and Black Warrior Rivers was generally confined to adjacent lovlands as the runoff continued.

ALZ003-005-006-007-East-Central and NE Alabama

22 0000CST 0 0 4 1 Heavy Snow A major winter storm dumped heavy snow during the early morning hours from around Birmingham to Ft. Payne, Anniston and Lineville. The wet snow caused numerous power outages, especially over parts of Clay and Calhoun counties. Snowfall amounts by 0500CST totaled some 2 to 4 inches over most of the area and up 6 inches in parts of Clay County and 8 inches in the Jacksonville area of Calhoun County. Numerous roads were closed, including the entire interstate system in the Birmingham Metro Area. Sunshine and moderating temperatures helped conditions to improve after mid-morning over most of the area, although some refreezing of roadways occurred after sunset.

2 ARIZONA

AZZALI.

0 0 ? 115-18 ? Snow, cold

A very strong winter storm developed over the Great Basin and moved directly over Arizona. One to two feet of snow fell along the Mogollon Rim and White Mountains. Some light snow fell in Phoenix and a record 4.3 inches fell in Tucson. Travel was difficult and numerous traffic accidents were reported. offrictit and numerous traints accidents were reporter two fatalities were attributed to icy roads. A 120 mile stretch of 1-10 east of Tucson was closed on the 17th due to ice and snow. Record cold set in, with a low of 19 in Tucson on the 17th, and 29 in Yuma on the 18th. Citrus crops in the Salt River Valley were spared from extensive damage although temperatures dipped to 20 at several key agricultural stations.

3 ARKANSAS

Desha County

04 UNK 1 0 - - Low Temperature

A 49-year old man died of exposure to low temperatures in the county, according to the Arkansas Health Department.

4 CALIFORNIA, Northern

lount Shasta, Northern Mountains, and Sierra Nevada 03 1800PST

The heaviest snow of the season spread over the mountains in the northern portions of the state and the Sierra Nevada Range. Accumulations ranged from 8 to 20 inches, with 10 inches rep at Burney, 12 inches at Truckee, 16 inches at Badger Pass in Yosemite National Park, and 17 inches at Echo Summit.

CALIFORNIA, Northern

Healdsburg, Sonoma Co

14 2000PST

Wind

Winds snapped a 70-foot-long limb which fell on a mobile home, crushing a 17-year-old female to death.

Northern San Joaquin 15 Valley and Altamont Pass

Northerly winds of up to 55 mph were recorded in the northern San Joaquin Valley and the vicinity of Altamont Pass.

Sierra Nevada 24 0800PST

Heavy snow fell in amounts between 8 and 12 inches in the Lake Tahoe area. Sierra Ski Ranch received 10 inches of snow, and Blue Canyon had about 1.50 inches of precipitation.

Sierra Nevada

Moderate to heavy snow fell in the Sierras; 11 inches fell at Sierra Ski Rauch.

4 CALIFORNIA, Southern

104 all day

0 0 ? 0 Winter Storm

A winter storm brought heavy rains to the valley and snow to the higher elevations of southwest San Bernardino County on the 4th. In the Chino area, heavy rain (2.20 inches) and snow closed roads for a day, and minor street flooding left debts on roadways. Rainfall in excess of 1.86 inches in Fontana also left debtis in roadways and caused heavy erosion to several flood channels. The San Bernardino area had 1.25 inches of rain which caused minor stream flooding and again, debtis on roadways.

At higher elevations in the San Bernardino Mountains, snow in excess of 15 inches closed roads for a day in the area including Blue Jay, Lake Arrowhead, Running Springs, Arrowhear Lake, and Green Valley Lake. By the 5th, only 50% of the secondary roads were open. Peak areas received even heavier snow amounts.

North of the mountains, numerous shoulder washouts were reported in Phelan, Hesperia and El Mirage of the Baldy Mesa area at 1200PST on the 5th, even though barricades were in place.

San Gabriel Valley

09 1300PST

0 ? ? 0 High Winds

A tractor-trailer and mobile business building were blown over and onto State Route 60 (Pomona Freeway), blocking traffic for several hours. The event resulted from strong "Santa Ana" winds that were prevalent throughout all of Southern California.

Entire Region California)

4 0 ?

Three nights with sub-freezing temperatures for extended periods of time resulted in heavy loss of frost-sensitive crops in the agricultural areas of Southern California. Four deaths were attributed to hypothermia. M550, M570, M500, F540

5 COLORADO

COZ001-002-004-008-010 Mountains, Northwest

2-3

0 0 0 0 Heavy snow
Most spots in the mountains received 6 to 12 inches of
snow, but there were greater amounts at some spots in
Northern and Central Colorado. 19 inches fell at Vail,
with 15 inches at Steamboat Springs. At lower
elevations in Northwest Colorado, 10 inches fell at
Meeker.

COZ002-004-008-Mountains

5-6 0 0 0 0 Snow
19 inches of snow fell at St. Paul in the San Juan
mountains of Southwest Colorado. Purgatory ski area
had 11 inches. Farther north, 13 inches of new powder
piled up at Steamboat Springs. Most other spots in the
high country had only 3 to 6 inches.

	STORM DATA AND UNUSU	AL WEATH	ER PHENOMENA
			JANUARY 1987
PLACE	TITME - LOCAL STANDARD - LOCAL CENGTH OF PATH (MILES) WIDTH OF PATH (CARDY) WOOP ESTIMATED, OLD STANDARD CHARACTER OF STATY OF ST	PLACE	CROPS ESTIWATED CROPS STAMPARD A COLOR CROPS STAMPARD A COLOR CROPS STAMPARD CROP
COLORAL	00	CONNEC	TICUT
Statewide except		CTZALL, Statewide	22 Afternoon
Northwest (CO2001-002)	Substantial snow fell over almost all of Colorado except in the morthwest part of the state. 24 inches of light, fluffy powder piled up at Colorado Springs; 22 inches of that total fell on the 15th, an all-time 24-hour snowfall record for January. Schools were closed, and the Colorado Springs airport was shut down much of the day on the 15th. Interstate 25 through the city was closed for seven hours due to traffic accidents. Schools also closed in Pueblo, where 10 inches of snow fell, and in Durango, which was buried by 13 inches. Some schools also closed in the Denver area, where snowfall varied widely. 10 inches fell at Stapleton Airport, but amounts elsewhere in the metro area ranged from 3 inches in southeast Aurora up to 18 inches in the western and southwestern suburbs. Castle Rock, a normally snowy spot in Douglas County between Colorado Springs and Denver, had only an inch. 6 to 12 inches fell in the foothills west of Denver and Boulder. Heavy snow fell in the southern valleys; Alamosa had 8 inches, and Salida, in the Upper Arkansas Valley, was buried by 15 inches. Away from the foothills, the eastern plains of Colorado had 2 to 6 inches, with similar amounts near Grand Junction.		Evening A very intense coastal storm brought heavy snow to all of the state. Amounts ranged from 6 to 12 inches. The greatest snowfall occurred in the western portion with amounts of 8 to 12 inches. The snow began during the early afternoon on Thursday and many employers released their employees at mid-afternoon. The sudden heavy volume of traffic and poor road conditions resulted in a severe tie-up on the roads in most urban areas. In the greater Hartford area, commuters were hours late, arriving home. During the evening, the heavy snow mixed with and changed to rain over the eastern portion of the state. The center of the intense low pressure system moved north-northeastward across the state from a point near New Haven, around midnight Thursday night. At New Haven, the barometric pressure dropped to 28.67 inches, and to 28.65 inches at Hartford where it was an all-time low record for the month of January.
	Snowfall also varied widely in the mountains. One to	7 DELAWARE	
	two feet fell in the Southern Mountains, with 4 to 8 inches in the Central Rockies. However, the high country in Northern Colorado had almost no snow. The heaviest snow of all fell in the foothills west of Pueblo. The town of Rye, at an elevation of 6900 feet, received an amazing 58 inches during the storm!	DEZ002-003	22
COZ011-014-015 Eastern Foothills	19 0 0 0 0 Snow Rye received another 18 inches of snow. 5 to 10 inches fell in other spots in and adjacent to the eastern Foothills. Denver and Pueblo had 2 to 4 inches.	DEZ001-002-003	25
COZ002-004 Northern, Central Mountains	24-26 0 0 0 0 Heavy snow A slow-moving storm deposited 8 to 16 inches of powder on the slopes of the Northern and Central Rockies in Colorado. Some areas had much more; 28 inches fell at Copper Mountain in Summit County. The snow contributed to numerous traffic accidents on the 25th. Farther south, 26 inches fell at Monarch Pass.		DEZ003 8 inches
CO2011		8 FLORIDA	
Front Range COZ002-004-011-	26 1900MST 0 0 0 High winds A gust of 71 mph was recorded 3 miles SSE of Fort Collins. 28-29 0 2 7 0 High winds	Lee Co., Bonita Springs	04 1110EST 2.5 30 0 0 5 0 Tornado (F0) A tornado damaged 48 homes and mobile homes causing mainly roof damage or damage due to falling trees.
012-014-015-016 Eastern Foothills, Northeast, Northern and Central Mountains	Strong winds buffeted much of Eastern Colorado and also blew.in the mountains. The peak gust recorded was 99 mph at 0008 MST on the 29th at the National Center for Atmospheric Research in Boulder. The nearby Rocky Flats plant also clocked 99 mph during the night. Other gusts in excess of 80 mph occurred along the	Palm Beach Co., Lake Harbor	One mobile home was overturned. 04 1249EST 1.0 30 0 1 3 0 Tornado (FO) A tornado destroyed a mobile home and injured a 62- year-old woman who was inside the mobile home.
	foothills from Fort Collins south through the western sections of Colorado Springs. 60 to 80 mph gusts were noted as far east as Fort Morgan in Morgan County, and westward into the northern and central mountains.	Dade Co., Coral Gables	04 1340EST 0 0 0 0 TSTM wind (52) A wind gust to 52 knots was recorded at WSFO MIA.
	Total damage from the storm was estimated at 5.6 million dollars. Planes were damaged at the Boulder and Jefferson County airports; hangars were damaged at the latter site. Windows were broken all along the	Broward Co., Pompano Beach	04 1445EST 1.0 30 0 0 5 0 Tornado (FO) A tornado damaged 32 mobile homes. Roofs were destroyed, screen enclosures were destroyed, power
I	eastern foothills; signs were blown over, trees were downed. A brick wall was blown onto parked cars in the Denver suburb of Lakewood. A couple of homes were unroofed, while falling trees damaged others. Two people were injured by flying debris in Jefferson County at Lakewood and Golden. The strongest winds blew from early afternoon on the 28th until early morning on the 29th.	Dade Co., North Miami Beach	lines were downed and trees were downed. 04 1500EST 0 0 4 0 TSTM wind (55)
	In the mountains, up to a foot of snow accompanied the strong winds, causing blizzard conditions in some spots, along with numerous traffic accidents.	Hernando Co., Weeki Wachee	22 0630EST 0 0 4 0 TSTM wind (55) A carport was blown into a neighbor's yard.
		Pasco Co., New Port Richey	22 0635EST 1.0 30 0 0 4 0 Tornado (FO) A porch was destroyed and blown across a street, a small airplane was overturned, billboards were blown down and garden sheds were destroyed.
6 CONNECTIC	UT .	Pinellas Co.,	22 0650EST
CTZ001-003, Northern Portions	Heavy snow fell over the northern portion of the state, with amounts reported up to 12 inches in the northwest corner and 7 inches in	Clearwater Beach	A wind gust of 60 knots was recorded. Thirty cars were damaged when pebbles were blown off a hotel roof onto the cars.
	the northeast corner of the state. An intense coastal storm which moved northeastward to the east of Cape Cod brought the heavy snow which mixed with or changed to rain toward the coast. Poor road conditions hampered travel throughout the area.	Citrus Co., Crystal River	22 0700EST 0 0 0 0 Funnel cloud A funnel cloud was sighted by employees of the crystal river power plant.
		Hillsharough Co	

Hillsborough Co., 22 0700EST 0 0 0 0 Funnel cloud Tampa A sheriff's deputy reported a funnel cloud.

			
PLACE	TIME - LOCAL STANDARD LENGTH OF PATH (MILES) WIDTH OF PATH (TARDS) CHOUSE CHOPS WOOD CHOPS CROPS	PLACE	TIME - LOCAL STANDARD LENGTH OF PATH MIDTH O
FLORIDA	1	11 ILLINOIS	
Pasco Co., Hudson	22 0710EST 1.0 30 0 0 4 0 Tornado (FO) A tornado blew off the roof of a mobile home and	ILZ001-003-004-005- 006	29 0200- 0 0 5 0 Ice storm 0900CST
Dade Co., Homestead	the roof of a carport. 22 1030EST 0 0 0 0 TSTM wind (70) A wind gust of 70 knots was recorded by the Turkey Point power plant.		Several hours of freezing rain produced a substantial ice accumulation which, in combination with gusty winds, caused many power lines to snap. Electric power outages were widespread. The most disruptive outages occurred in Henry, Stark, and Bureau counties, where 5200 customers were without power up to four hours.
Dade Co., Homestead	22 1325EST 0 0 0 0 Funnel cloud A sheriff's deputy reported a funnel cloud.		
		12 INDIANA	
9 GEORGIA		INZOO1 through INZO11 Northern and Central Indiana	09 1000 - · 0 0 ? 0 Heavy Snow 2200 EST
Fulton County DeKalb County Douglas County Cobb County Gwinnett County	18		Four to ten inches of snow fell across northern and central Indiana on January 9. Snow began to fall over west-central Indiana late in the morning, along with some freezing rain. Snow spread across the northern two-chirds of the étate by mid afternoon. The greatest accumulations of snow, generally eight to ten inches, occurred in west-central Indiana. Numerous traffic accidents occurred throughout the area.
	Rainfall of 2 to 4 inches during the late morning and early aftermoon produced flash flooding of many small and medium streams from the Douglasville area across the northern part of the Atlanta metropolitan area. Several houses and cars were flooded near Peachtree Creek, Nancy Creek, Sope Creek, Proctor Creek, Sweetwater Creek the Yellow River.	INZOO2 through INZOO7 Northern Indiana	18 2300 EST 19 1500 EST 0 0 ? 0 Heavy Snow
Catoosa County	19 0215EST 0 0 ? 0 Flash Flood Flash flooding closed several roads and forced the evacuation of two homes near Fort Oglethorpe.		Snow across parts of northern and central Indiana on January 19 ranged from four to fourteen inches. The snow began in west-central Indiana just before midnight on the 18th. Some freezing drizzle was mixed with the snow initially, By late morning, several roads and highways were closed in north-central Indiana where 20 to 25 mph winds were causing much blowing and drifting of snow. Numerous north-central
Worth County East Dougherty County Northeast Mitchell County	19 0300EST 0 0 5 0 Flash Flood 19 0300EST 0 0 4 0 Flash Flood 19 0300EST 0 0 4 0 Flash Flood		Indians counties were forced to declare snow emergencies. The heaviest snow, thirteen to fourteen inches, fell in Fulton County.
	Rainfall of 4 to 6 inches was measured across this area during the night. Ponding of water flooded a total of 37 homes and 13 mobile homes. 13 roads were either washed out or put under water and closed. Evacuations were necessary south of Acree, in the west part of Sylvester and in Baconton.	INZO01-002 North-Central Indiana	22 1130 - 0 0 ? 0 Heavy Snow and 23 1415 EST Extreme Cold Two to nine inches of snow fell over north-central Indiana near Lake Michigen. Bitterly cold northwest winds gusting to 35 mph caused considerable blowing and drifting along
GAZ001-002-003-004 North Georgia	21- 2100EST 0 0 ? 0 Heavy Snow 22 1000EST		with wind chill readings of 35 to 40 below zero.
10 IDA HO	Rain turned to a heavy wet snow across north Georgia during the late evening on the 21st and continued through much of the morning on the 22nd. Snowfall of 5 to 9 inches occurred over a large part of the area north of a line from Atlanta to Athens. Up to a foot of snow was reported in the mountains of northeast Georgia. The heavy wet snow broke trees and power lines that left 75,000 homes without power. Some homes were without power for two days. The wet snow packed into ice on the roads and many accidents were attributed to the slick roads.		09 Morning- 0 0 4 0 Snow and Heavy Snow Snow Tracked across Southeast lows leaving 3 to 6 inch amounts in its wake. The heaviest snow fell over the far southeast and east-central counties, with 5 to 6 inches common. In many areas, it was the first significant nowfall in nearly a year. This resulted in numerous auto accidents and injuries. The Quad Cities alone reported 100 fender benders. There were 20 injuries due to auto accidents.
IDZ004-010	1-2 overnight 0 0 0 0 Heavy snow		
	Heavy snow fell New Year's afternoon and night on the mountains south of the Nagic Valley. The Pomerelle Ski Area southeast of Burley picked up 12 inches of new snow. Soldier Mountain north of Fairfield got 8 inches of new snow.	14 KANSAS	
IDZ003	3 overnight 0 0 0 Heavy snow Heavy snow fell in the mountains of northern Idaho. Schweizer Ski Area received 9 inches of new snow overnight.	KSZ009-011-012- 013-014-015-016- 017 East and Central Kansas	08- 1800 to 0 0 0 Snow 09 1800CST Snow fell from the evening of the 8th through the evening of the 9th. Snow depths of 4 to 6 inches were measured at 0600CST hoth east of a line from Achievant to Great Bond, Palett and Maryevilla
ID2002-004	14-15 overnight 0 0 0 0 Heavy snow Heavy snow fell on a small area of the Magic Valley and the adjacent mountains south of the Snake River overnight. Twin Falls measured 5 inches; Pomerelle Skt Resort southeast of Burley picked up 12 to 13 inches.	KSZ003-006-009- 011-012-014-015- 016-017 South, Central and Northeast Kansas	from Ashland to Great Bend, Beloit and Marysville. 16- 0000 to 0 0 0 Snow 18 2400CST Snow fell Intermittently upon most of Kansas from early morning the 16th until late evening the 18th. Snow depths at 0600 the 19th showed more than 4 inches southeast of a line from Hiawatha to Salina, Great
IDZ010	28 afternoon 0 0 4 0 Heavy snow Heavy snow fell during the afternoon, leaving 15 inches at Last Chance Inn in the Island Park area near the Montana border and Yellowstone Park. Eight inches fell at Ponds Lodge in the same vicinity. Grand Targhee Ski Resort got 8 to 10 inches.		Bend and Tribune. Depths were greater than 8 inches southeast of a line from La Cygne to Carnett, Eureka, Hutchinson and Klowa. Depths reached about a foot within 20 miles of the Oklahoma border east of Klowa all the way to Missouri, and in an area 60 miles wide from Michita to Arkansas City. Heavy snow fell for a time (listed separately) on the 17th in South-Central and Southeast Kansas.

JANUARY 1987

		CAL	РАТН	Ę	NO. PERS		ESTIMA DAM					CAL	РАТН	TH		. OF	ESTIM DAM	ATED [†] IAGE	
PLACE	DATE	TIME - LC STANDARD	LENGTH OF (MILES)	WIDTH OF PA (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	DATE	TIME - LC STANDARD	LENGTH OF (MILES)	WIDTH OF PA (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM

KANSAS

KSZ012-017 Southeast and South-Central Kansas

0 Heavy Snow

KSZ001

Ω Ω 0 0 High Wind

29 0300 to 0 0 0 0 High agreement and the northwest vinds blasted the northwest corner of Kansas. Speeds averaged 30 to 40 miles an hour with frequent gusts greater than 50. Goodland measured a peak wind gust of 64 mph at 1157CST.

15 KENTUCKY

Southeast Kentucky

Heavy Snow

Snow began to fall over southeast Kentucky in the early morning on January 22 and continued to sporadically fall into the 24th. By late night on January 24th, an intense winter storm held the region under its grasp. The storm produced a combination of snow, sleet, and freezing rain across southeast Kentucky. The sleet and freezing rain ere confined primarily to the extreme southern counties of eastern Kentucky where light coatings of ice were reported at a few locations. Elsewhere around southeast Kentucky, the precipitation was mainly in the form of snow with accumulations aeveraging between 4 and 12 inches. Especially hard hit areas were the counties of Jackson, Lee, Owsley, Breathitt, Magoffin, Floyd, Pike, and Letcher, which all averaged seven inches of snow or more. Whitesburg in letcher County to totaled twelve inches of snow. Transportation was greatly affected in this rural and mountainous area. Most all businesses and schools were closed. chools were closed.

16 LOUISIANA

Natchitoches Parish	24	20/2007	^		2		arm mam
		2042CST	0	0		- ?	SVR TSTM-Wind
Caddo and Bossier	24	2050CST	0	0	?	?	SVR TSTM-Hail(0.8-
Parishes							1.0)
Webster Parish	24	2052CST	0	0	?	?	SVR TSTM-Hail(1.0)
Natchitoches and Winn	24	2105CST	0	0	?	?	SVR TSTM-Hail(1.0)
Parishes							
Desoto Parish	24	2122CST	0	0	?	?	SVR TSTM-Hail(1.0)
Claiborne Parish	24	2131CST	0	Ö	?	?	SVR TSTM-Hail(1.0)
Bienville Parish	24	2147CST	0	0	?	?	SVR TSTM-Hail(0.8)
Red River Parish	24	2150CST	0	0	?	?	SVR TSTM-Hail(1.0)
Sabine Parish	24	2152CST	0	0	?	?	SVR TSTM-Hail(1.0)
Desoto Parish	24	2155CST	0	0	?	?	SVR TSTM-Hail(1.0)
Natchitoches Parish	24	2238CST	0	0	?	?	SVR TSTM-Hail(0.8)
Winn Parish	24	2258CST	0	0	?	?	SVR TSTM-Hail(1.0)

An area of numerous severe thunderstorms moved rapidly northeast across northwest Louisiana producing widespread reports of large hail from 20/2/ST to 2258/ST. At 20/4/CST, straight-line winds blew down several trees near Robeline in Natchitoches Parish. O.8-1.0 inch hail fell in northern Shreveport (Caddo Parish) and southern Bossier City (Bossier Parish) about 2050/CST. One inch hail was reported at Cotton Valley in Webster Parish at 2052/CST. Quarter size hail fell east of Campti (Natchitoches Parish) and west of Dodson (Winn Parish) at 2105/CST. One inch hail fell between Logansport and Mansfield in Desoto Parish about 2122/CST. Quarter size hail was reported between Homer and Haymesville in Claiborne Parish around 213/CST. Nickle size hail fell at Castor in Bienville Parish about 214/CST. One inch hail was reported between Hanna and Halls Summit in Red River Parish around 2150/CST. Quarter size hail fell 5 miles west of Many in Sabine Parish around 215/CST. At 215/CST, one inch hail was reported between Mansfield and Coushatta in Desoto Parish. About 2238/CST, nickle size hail fell 5 miles southeast of Natchitoches in Natchitoches Parish. Finally, around 2258/CST, one inch hail fell near Atlanta in Winn Parish.

St. Charles Parish

4 4 0 Fog

Three chain-reaction accidents occurred when dense fog shrowled the I-10 bridge over the Bornet Carre Spillway in St. Charles Parish. Four German nationals were burned to death after their small car was hit by a tractor-trailer truck. In addition, four people were injured in the other accidents; two were hospitalized. MS5V,MS6V,FS3V,FS4V

17 MAINE

MEZ 001-002-003-004-005-006-007-008-009-010-011-012-013-014 Statewide

A low pressure area formed off the South Carolina coast early Thursday afternoon and intensified as it moved northeast paralleling the Atlantic seaboard. By 0700EST Friday, it had developed into a full-blown "Norteaster" located about 150 miles south of Providence, RI. The storm slowed down but continued to intensify, and by 0700EST Saturday, it was some 90 miles due east of Portland, RC. The storm passed west of Mount Despet Rock around noon, then accelerated and arrived over Newfoundland Island, Sunday morning. Tides were unusually high due to celestial alignment, but were also enhanced by the strong winds in this storm. On Friday the 2nd at 12285T, the official high tide in Portland Harbor stood at 12.84 feet above mean low water, which becomes the sixth highest tide ever recorded there since records began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the began in 1912. This tide was higher than the occember of the provided was not to t

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MEZ 001 Capital District MEZ 001-002-003-004-005-006-007-008-009-010-011-012-013-014 Entire State	producing s1 woman driver skidded into in Gardiner. 10- 0600EST 13 A low pressus had an occluc Carolinas. Occluc Carolinas. Occupant of the second of the second occlus the second occupant occ	4 7 7 7 5 7 7 5 7 7 5 6 8 8 5 7 4 4 4 6 8 5 7 6 6 8 5 7 7 5 7 7 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	itions that ed when so it of an on ve speed of car's of an on ve speed of car's of a car	111 E 0081 I E 0081 I h E 009 LE DOP LE TWP I am	-12 M P P P P P P P P P P P P P P P P P P	Newcas and the service of the servic	and 15 ston 18 lockport 14 looke 012 14 lanon 11 14 lanon 11 14 lanon 11 14 lanon 11 14 looke 013 14-16 lanon 18-16 la	t t	MEZ 008 Mount Desert Island MEZ 013 Southwest Interior MEZ 013-014 Southwest MEZ 013-014 Capital District	Carrier Forth Ports Forth Port	Kent age Kent age	8.5 16 13 14-15 26 619 10 14 14 16 13 12 24 27 16 13 12 24 27 17 11 18 18 18 in the the coasyrick (10 10 10 10 10 11 11 11 11 11 11 11 11	ist Satt (cumber) into Mind of Mer (cumber) into Mind of Mind of Mer (cumber) into Mind of Mer (cumber) into Mind of Mer (cumber) into Mind of Mind of Mer (cumber) into Mind of Mind of Mer (cumber) into Mind of Mer (cumber) into Mind of Mind of Mer (cumber) into Mind of M	Jac Lala Jac Lala La Lala Lala Lala Lala Lala Lala	ke wp. ke wp. ake wp. 16 ake 15 11 17 12 .	12 10 10 11 11 11 11 11 11 11 11 11 11 11	East Hidden to the control of the co	18.5 on 8 erwick 4 field 12 8 ro 8 13 SKI AREAS t. Mt. 10-12 NE 014 ck 13 nkprot 4 hard Bch. 8 d 11.8 Slippery Road Conditions d mixed precipine cause of one own fiyer Road ing car. Two 11.8 Heavy Snow Load collapsed 60 feet ries signer and one-half control on the ne roadways due set during the com- tries. Black Ice he roadways due studied to the com- tries. Black Ice he roadways due so during the com- tries. Black Ice he roadways due so during the com- tries. Black Ice he roadways due so during the com- tries. Black Ice he roadways due so during the com- tries. Black Ice he roadways due so during the com- tries. This produced ght. Snow tatewide. The ions had an inch (Washington Rain The worst were cars in a quarter urring just the Wells exit ries, but seven . Slippery Road Conditions

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MEZ 007-008-009-010-011-012-013-014 Entire State MEZ 003-004-005-006 007-008-009-010-011-012-013-014 All but northern ME	22-23 A limit of the control of the	1100EST ow pressuriesday nights of the provided in a steed off title cod, their, reaching, harriving morning. The code of the	e area fornt and movining. The virginin north be greentral growth the Portland anuary, each arise sea was a since the sea control of sea co	med ow wide at wait of the control o	on this moved and the second of the second o	o north storm, and move cords of the cords o	heaster terms the Eight th	rn Gidaday Gid	stle 7.3 ZONE 012 1 8 1 14 haron 8 ord 7 Paris 9 ZONE 013 Hiram 15 mord 12 ZONE 014 wick 8	18 MARYLAND Worcester County MDZ007-008-009 Western Maryland District of Columbia MDZALL Statewide and DC	slippskiddinjums	pery as iddings, rol ries repo port-Brund dup in a d lanes fee Turnpik agy aftern in County the speed finto Sates and by .ZONE OOD to Lake ton .ZONE OOD to Lake genus Dams to Lake .ZONE OOD to Lake genus Dams to Lake .ZONE OOD to Lake genus Dams to Lake .ZONE OOS to Six in	ce rin Tovers	ks over , and fire The Wo town li The Wo for chain eeport rthtoun m Gray r an ac re Follo : Ellsw Milfo Sprin Mest Ellsw Mest Ellsw Mest Kest Lusti Eusti Eusti Wyman Karon Karon Kater roof da of snow ontribut that of	southeemder-bc ender-bc ender-	n Maine menders, dent occordent occo	, production of county) isions, or more county, or more county	and 9 ZONE 012 1 10 1 1 9 Naron 8 rd 11 Paris 9 ZONE 013 Eagle 11 Hiram 13.6 m 8.9 ZONE 014 wick 11 and 8.2 Heavy Snow Meavy Snow Meavy Snow Heavy Snow Heavy Snow

		JANUARY 1987
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19 MASSACHUS		MASSACHUSETTS
MAZO02-003-007-008, East Coastal Area, Newburyport to Chatham	O2 1000EST- O O 6 O Coastal Flooding 1500EST An intense low pressure system moved northeastward passing just to the east of Cape Cod. Strong to gale force northeast winds and	MAZ002-009, Southeast Portion of the State Heavy snow amounted to 6 to 12 inches over the southern portion of Plymouth and Bristol counties. Gusty northeast to north winds
Cita Citadii	unusually high astronomical tides during a "syzygy" produced the worst coastal Tlooding in Massachusetts since the Blizzard of 1978. At Boston, the tide level reached 14 feet or two and a half feet above normal. The threshold for major flooding at several key areas prone to coastal flooding is 13,5 feet. About 350 people	mAZOO1-004-005-006, Northern Middlesex Country, and resulted in considerable blowing and drifting snow, and poor road conditions. MAZOO1-004-005-006, Northern Middlesex Country, and
	were evacuated from several coastal towns from Plymouth northward. In Marshifold, where 75 fest of seawall collapsed, seawater 9 feet deep flooded an area of homes, resulting in many-thousands-of-dollars damage. Major flooding of coastal roadways resulted in the isolation of several islands and peninsulas including Plum Island, near Newburyport, and, Hull near Boston. Damage to immediate coastal homes was heaviest in Hull, Scituate, Marshifeld and Duxbury. A few cottages along the northern shore of Cape Cod were also damaged. Dollar damage estimates to residential and business property was at least one million dollars in both Scituate and in Marshifeld. Damage to seawalls was most costly in Manchester, Swampscott, Scituate, and Marshifeld. At Chatham, the high tide	Worcester, Franklin, Hampshire, Hampden, and Berkshire Counties C
MAZ002-003-007-008-	and waves made a "cut" at North Beach. A windshift from northeast to more northerly with diminishing velocity near the time of high tide prevented more serious flooding. Total damage estimates for this storm were in the range of several million dollars.	20 MICHIGAN — NONE REPORTED
009, Eastern Portion	Strong to gale force northeast winds gusted to 68 MPH at Chatham, 60 MPH at Falmowth, 63 MPH at Scituate, and 60 MPH at Thatcher Island, Cape Ann. Wind gusts of 40 to 55 MPH were common inland from the coast and resulted in scattered power outages. In New Bedford, power was knocked out to 4,000 electric customers and a tree resortedly fell on a house.	21 MINNESOTA — NONE REPORTED
MAZO01-004-005-006- 007, Central and Western Portion, & Middlesex County	O2 All day 0 0 0 0 Heavy Snow Heavy snow amounted to 12 to 20 inches in Franklin and northern Worcester County, and 6 to 12 inches elsewhere including Middlesex County, resulting in very poor road conditions.	22 MISSISSIPP! Smith County,
MAZ001-002-004-005- 006-007-008-009, Satewide, except	22 Afternoon & 0 0 0 Heavy Snow . Svening	Taylorsville Strong winds from a thunderstorm blew down several trees and downed some power lines. Minor damage occurred at an elementary school. Also, a few outhouses were damaged.
Cape Cod & Islands	Heavy snow began falling during the early afternoon and many employers released workers at mid-afternoon. The combination of heavy snow, poor road conditions and the sudden heavy volume of traffic resulted in massive traffic tie-ups. This gridlock of cars occurred in many urban streets and along the major commutar routes. I normal twenty-minute trip took hours. In Springfield, students who were disaised from school at mid-afternoon did not arrive home until mid-evering after being stalled on buses which were caught in the traffic jam. In the Worcester and the Boston area, many notorists abandoned their cars after being stalled for hours. The National Weather Service issued a blizzard warning at 4 PM for much of the state. Show accumulated at a rate of 1 to 2 inches per hour before mixing with and then changing to rain in the eastern half of the state during the evening. Significant urban street flooding resulted in many areas after the changeover to rain. Snowfall amounts for this storm ranged from a foot and more in central and western Massachusetts to 6 to 8 inches in the western suburbs of Boston. Amounts of 6 inhees fell in northern	Lauderdale County. Meridian 18 0600- 1800CST Steady heavy rains fell across all of Mississippi on the 17th and 18th. Rain was heaviest in the east-central portion of the state near Meridian where unofficially 8 to 10 inches of rain fell. The Sowashee Creek, which is known to be flash flood prome, rose 18.2 feet in less than 24 hours. The creek crested at 21.5 feet at around mid day on the 18th. Residences are affected by the creek at a stage of 17 feet. Several residences had to be evacuated, and water got into some homes. A 20-year resident of Meridian reported that the water was higher than he had ever seen and was in places he had never seen it before.
MAZ003-009, South Coastal Areas	Plymouth and Bristol counties and 9 inches in the Lowell area. 23 Early morning 0 0 5 0 Coastal Flooding Gale force, south and southwest winds to the east and southeast of	23 MISSOURI NONE REPORTED
	an unusually intense storm center which passed north-northeastward through central Massachusetts caused a moderate amount of tidal flooding along the south-facing coasts. A number of residents in flood-prone areas left their homes at scattered locations from Hyarmis to Falmouth, around Buzzards Bay, in Mattapoisett, and along the Taunton River in Dighton and Somerset. The most serious flooding occurred at Onset on Buzzards Bay where some autos were submerged and piers were danaged. The hurricane barrier at the	24 MONTANA
	entrance to New Bedford Harbor was closed several hours before the 2 AM high tide and prevented thousands-of-dollars damage from flooding at New Bedford.	25 NEBRASKA NEZ001-005-011- 21 1020CST- 0 0 3 2 High Wind (54)
MAZ001-002-003-007- 008-009, Eastern Portions of State	23 Early morning O O L O High Winds Gale force, south and southwest which gusted to 76 MFH at Chatham and 73 MFH at Blue Hill, Milton. Record low barometric pressure readings for January were set: 28.62 in. at Worcester, 28.61 in. at Boston and 28.60 in. at Blue Hill. A scaffolding blew down on a hotel under construction at New Bedford.	OG6-007 Panhandle and Central Nebraska Strong northwest winds gusted to as high as 62 m.p.h., reducing visibility at times to less than a half mile in blowing dust and causing minor property damage and a few power outages. Some damage to signs and small tree branches was reported. Peak wind gusts to 62 m.p.h. were reported northwest of Harrison at 1020CST, 61 m.p.h. at Broken Bow at 1450 CST, 60 m.p.h. at
MAZOO3, Cape Cod & the Islands	26 All day 0 0 0 0 Heavy Snow/Blizzard The Cape Cod blizzard produced 14 to 18 inches of anow and 4 to 8 foot drifts due to gale force winds which gusted up to 65 MPH at Chathan. Yisibility during the storm was near zero, creating a	Scottsbluff at 1036CST and at Mullen at 1550CST, and 59 m.p.h. at Alliance at 1343CST.
	blizzard and causing a number of motoriats to become stranded on the highways. The powdery texture of the snow prevented any significant damage to power lines and there were few power problems other than a few scattered outages. Many businesses and schools were closed for two days including the day of the storm. The low pressure system which brought this blizzard passed 150 miles to the southeast of the Cape.	Northwest wind gusted to 58 m.p.h. at Sidney and to 55 m.p.h. at Scottsbluff. A home under construction was blown down at Gering and sporadic power outages were reported. NEZO12 Central Nebraska Northwest wind gusted briefly to 61 m.p.h. at North Platte. Minor damage was reported.

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26 NEVADA		NEVADA
NVZ003	1 0600- 0 0 0 0 High winds 2100 PST	NVZ007 28 0800 PST 0 0 0 High winds
	High winds buffeled extreme Western Nevada during the day with winds of up to 75 mph at the Virginia Foothills. Minor power outages were reported.	High winds struck southern Nevada during the day. Winds of over 60 mph occurred in many areas of southern Nevada. Gusts at Las Vegreached 54 mph. The winds caused extensive areas of blowing sand and dust, creating areas of near zero visibilities at times.
NVZ003	1 0600- 0 0 0 Heavy Snow 2100 PST	
	Locally heavy snow fell in the Lake Tahoc area during the day. Around 6 inches of snow fell at Incline with up to a foot in the passes. Roads throughout the Lake Tahoe area were under chain or snowtire requirements.	27 NEW HAMPSHIRE
NVZ003~004	3 0600 0 0 3 0 High winds	NHZ 001-002-003-004 02 0000EST
	1800 PST High winds buffeted extreme Western Nevada, gusting to 55 mph at the Reno Airport and 75 mph at the Virginia Foothills. Winds were over 50 mph at Hawthorne. There were numerous power outages	leling the Atlantic seaboard. By O700EST Friday, it had developed into a full-blown "Movieaster" located about 150 miles south of Providence, RI. The storm slowed down but continued to intensify, and by O700EST Saturday, it was some 90 miles due east of Portland, ME. The storm then accelerated and arrived over Newfoundland Is-
NVZ002-003	and some damage was done to the 84 lumber store south of Reno.	land Sunday morning. Tides were unusually high due to celestial alignment, but were also enhanced by the strong winds in this storm. Every coastal community (Rockingham County) closed their shore roads around the time of high tide, when ice-choked water not only flooded streets, but basements of homes in low-lying
	Beavy snow moved into Northern Nevada during the 3rd and the 4th. In the Lake Tahoe area some strom accumulations were 16 inches at Slenbrook and Zepher Cove, 2 feet at Spooners Summit, 25 inches at Incline. 30 inches at Dagget Pass, and over 3 feet at some ski resorts. In Northeast Nevada, 3 inches fell at Battle Mountain and 6 to 8 inches at Owyhee.	areas. The towns of Hampton and New Castle appeared to have the most trouble with flooded streets. At Hampton, the tide peaked at 1234EST Friday some 2 to 3 feet above normal, and police closed several miles of Route 1A from Hampton to Little Boars Head. The Hampton Police Station was surrounded by knee deep water at high tide. A small section of a seawall collapsed in Rye, with little flooding occurring there. Generally, town officials agreed that
NVZ006	4-5 1800- 0 0 0 Heavy Snow	the coastal flooding caused only minor property damage and beach erosion. However, the rough surf, waves in the 10 to 20 foot range, generated too many tourists, which in turn hindered the removal of ice chunks, large rocks and ocean debris from the shore
	Heavy snow fell overnight giving 4 inches to Pioche and 6 inches to Tonopah. This created slick and snow-packed roads with chain or snowlire requirements on area roads.	roads. The automated Coast Guard Station on the Isles of Shoals reported peak gusts of 54 mph (47 knots), and Pease Air Force Base in Portsmouth had a peak gust of 37 mph (32 knots). Atop Mt. Washington (elevation 6.288 ft.), the peak wind was 113 mph (98
NVZ003	G 0600 PST 0 0 0 0 Heavy Snow	knots) and the average wind speed for the 2nd was 53 mph (46 knots) Very light snow began to fall over southern sections between 2300 and 2400EST on the 1st and spread into the far north by sunrise.
	Locally heavy snow fellinextreme western Nevada overnight and totaled 3 to 6 inches generally. 3 inches fell at Carson City, 4 inches at Mount Rose and 5 inches at Verdi. The snow caused chain or snowtire requirements on many roads.	rain, which caused a dense layer of packed snow to form on road- ways, making for very poor travel conditions, and later on, diffi- cult snow removal. Peak snow intensities reported were 6 inches in 4 hours (1200 to 1600EST) at Portsmouth; 5 inches in 34 hours
NVZ006	6·7 1800- 0 0 0 Heavy Snow 1200PST	(1130 to 1500EST) at Concord; and 5 inches in 5 hours (1900 to 2400 EST) at Lebanon. There were many auto accidents, abandoned vehicles, and skidding mishaps which left hundreds of vehicles stuck well off roadways statewide. Because of advanced warning of
	Heavy snow fell throughout most of south-central Nevada overnight. 3 to 6 inches fell in the valleys, and a foot over higher elevations. Chains Orsnowlires were required on many area roads.	this storm, traffic was considered light, and it moved very slowly, which accounts for no deaths or serious injuries. Shopping malls, smaller businesses, schools, and many state and local government agencies closed early, or never opened Friday. Snow removal was a
NVZ007	7 0600 PST 0 0 2 0 Flooding	sore spot for many communities, as it took several days for travel to approach normalcy. Snow removal costs ranged from about \$8,000 in the small towns to around \$40,000 in the cities. The ski areas
	of minor street flooding. Most areas of southern Nevada had over a half an inch of rain with las Vegas receiving two-thirds of an inch.	set record attendances for the Christmas week, which accounts for 20 to 30 percent of an area's annual business. In fact, all of the state's ski areas were filled to capacity on Saturday the 3rd. Only the extreme northern tip of the state had less than 6 inches
NVZ002	14 0600 PST 0 0 0 0 Heavy Snow Locally heavy snow moved into northeast Nevada with 4 inches falling	of snow. Elsewhere, snow depths from this storm ranged from 7 inches in the west and north, up to 24 inches in the southeast. Following is a list of heavy snowfall amounts in inches and by
	at Jackpot and 6 inches at Freeport Mine. The snow created slick road with chain or snowlires required over many area roads.	zones:
NVZ001-003	23-24 1800- 0 0 0 · 0 Reavy Snow	Dixville 13 Enfield 10 Dover 22 First CT Lake 5 Lebanon 7 Durham 19-20 Lancaster 12 Plymouth 9 Exeter 18
	Heavy snow [el] overnight and during the morning in northwest. Nevada. 4 to 8 inches fell in the Lake Tahoe area,with 3 inches at McDermitt and Winnemucca. The snow created slick roads with many area roads under chain or snowtire requirements.	No. Stratford
NVZ003	27 0800 PST U 0 0 0 High winds	Bethlehem 11 Ashland 7 Mont Vernon 13 Comerford Dam 7 Barnstead 14 Nashua 15-16 Franconia 10 Blackwater Dam 7.5 Salem 21-24 Borham 18 Franklin Falls 10 ZONE 006 SKI AREAS
	High winds buffeted extreme western Nevada and gusted to 63 mph at the Reno Airport and 75 mph in the Virginia Foothills. The winds caused areas of minor power outages.	Mt. Washington 13 North Conway 9 Crotched Mtn. 18 North Haverhill 9 Tamworth 8.3 ZONE 002 SKI AREASZONE 007
NVZ003	27:28 1800- 0 0 0 Heavy Snow	Attitash Mtn. 14ZONE 005 Hampton 21 Loom Mtn. 14 MacDowell Dam 10 Portsmouth 17-18 Marlow 11 Rindge 21
	Heavy snow fell overnight in the Lake Tahoe area. 6 inches fell at Glenbrook with 9 at Incline,12 inches at Slide Mountain, and 13 inches at Bargett Pass. The snow caused chain or snowtire requirements across most area roads.	Surry Mtn.Dam 7 Walpole 8 Westmoreland 7
	1.	

			JANGARI 1987
PLACE	TIME - LOCAL STANDARD LENGTH OF PATH (VARDS) WIDTH OF PATH (VARDS) CROPS	PLACE	TTME - LOCAL STANDARD LENGTH OF PATH (MILES) WIDTH OF PATH (TAROS) WIDTH OF PATH CROPS CRO
NEW HA	AMPSHIRE	NEW HA	AMPSHIRE
NHZ 001-002-003-004 005-006-007 Entire State NHZ 006 Southern Interior	10. 0600EST 1 3 6 Heavy Snow 11 A low pressure area over southern Michigan, early Saturday morning, had an occluded front that extended into the extreme western Carolinas. The low moved slowly east, while the front raced mortheast. A new low formed off the New Jersey coast late Saturday morning, high the front raced mortheast. A new low formed off the New Jersey coast late Saturday from the New Jersey coast late Saturday morning, picked up in intensity late Saturday, and finally ended in morthern sections ate Sunday night. Most of the state reported at least 30 hours of continuous snow or precipitation. Snowfall amounts varied from 5 to 16 inches across the state. Only the extreme southwest and southeast corners of the state reported less than 6 inches. Coastal sections had a mix of snow, sleet, rain and freezing rain, which produced minor-but-vide-spread power outages in the Rockinghan County communities of Greenland, Rye, Newington, and Portsmouth from shalf hour to 2 hours. Stratham had 300 to 400 customers without power from 1 to 10 hours. However, Exteer appeared hardest hit with ice buildup teering down tree limbs through power lines, and shorting out teering down tree limbs through power lines, and shorting out the strain of the state reported to the limb took down a powerline to 60 oustomers at 1715EST Sunday on Mt. Uncanonouc, which took radio station W210 and television station WWIR off the air until 2011EST. Also, Manchester and surrounding communities had about 800 residents without power, broady attention. Police, statewide, reported cars slid off roads in steady numbers throughout the weekend, and there were numerous fender-benders and auto accidents. There was one death that occurred in Farmington (Strafford County) around 1955EST on the 11th. A 44-yea-rold mn lost control of his car on 1018 Bay Road and struck a tree. Slippery road conditions ontil the script of the party to retrieve and auto accidents. There was one death that occurred in Farmington (Strafford County) and survey of the party to	NHZ 002-003-004-005- 006 Central and Southern NHZ 001-002-003-004- 005-006-007 Entire State	A weak low pressure area between Lake Huron and Lake Erie at 0.000EST Sunday, noved east-southeast. This produced light show over the sate, and the produced light show over the sate and show the sate and show over the sate and sh

																					JAN	UARY 19
PLACE	DATE TIME - LOCAL STANDARD	LENGTH OF PATH	WIDTH OF PATH (YARDS)	KILLED 334			CROPS above	CHARACTE OF STORM	,	PLACE		DATE	TIME - LOCAL STANDARD		(MILES)	WIDTH OF PATH (YARDS)	KILLED SABA		PROPERTY			RACTER OF FORM
			*	_ ₹	Z .	.	8	L							5	*	2	ž	#	8		
NEW HA	MPSHIRE		-							28 NEW J	ERSEY	', S	outhe	rn								
NHZ 001-002-003-004- 005-006-007 Entire State	30- 1200EST 31 1200EST 31 1200EST A low pressumorning with just off the New Jersey cand was loca aday. It connear Sable I corner of Revenue Southwest New 12 to a southwest New	re area a weak a keep as to linued a bow hamps liley r ved a linued a bow w Hamps liley r ved w Hamps lile	static Island ate Frint Island ate Frint Island ate Frint Island ate Frint Island Isla	onary f coast. iday ni inside y ni inside	ront: ght. Thi ght. Sund Thi syn as sit Sund Sincle Sund Sund Sund Sund Sund Sund Sund Sund	ern Lake ditm rectain and and all and	There were no. A 23-year A 23-year A 23-year eriously hurt while attent at 1530EST at 1530EST, due to the str a snow-ladent 100 residence state, this ge gave loud me of the tow we will be tow we will be tow of the ro chards collaps or of collapsed, owblower duri or of collapsed, or of collapsed, zone cos	o he	NJZ003 Coastal Areas NJZ002-003-00 Southern New 29 NEW A Statewide	4-006 Jersey	O2 A stibus scoss from the control of the control o	ofoODEST orm movify yygy, a sale and a ways and in the react t and at a ways and infigh wat the react of the	ing unit of the state of the st	all metro over the me	ignment of ding. d 7 fee feet & ding. d 7 fee feet & ding. d 7 fee feet & ding. d 7 fee feet & ding. d 7 fee feet & ding. d 7 fee feet & ding. d 8 feet & ding. d 9 feet & ding. d 10 feet & ding.	of the state of th	e sui viste de la constante de	n, moo. n, moo. n, moo. n, moo. n low wa low	ith hi: n and i water ter in High cause 0	on the atthe bay, waves a'd consider to 9 AM a'd to all Snow as trait zone 8 inches wer the stal zone 8 inches wer the stal zone 10 to 10	caused caused caused caused caused caused cause e, water can so many long with crable caused	
28 NEW JERSEY	01- 1500EST	10 4.8 8 10	B Otto	nzey er Brod pole	0 O	8 6 7		.ZONE 007smouth 8				Coun left crus wind 57-y on I	ty. A : his sta hed to a s pushed	52-ye rande death d ove man te 40	ar-o ed tr in er a was jus	ld man 'uck in Albuqu brick ' killed	was for Torran erque wall on in a n	ound nce C (Bern n whi nine-	along ounty. alillo ch he vehicl	a road A ma Count was wo e, cha	after h n, 22, w y) when i rking. in-react	e had as high A
Northwest New Jersey								northwestern N minor accident		30 NEW Y	, 		500ES				0	0	0	0	Heavy Sr	พอเ
NJZ001 Northwest New Jersey	19 Afternoo -Evening	n		0	0	0	0	Heavy Snow			_	Sno	w accumu	late							lons of F	
noteninge new delay	Snow accumul	ated to eling w	6-8 ir as quit	nches o te haza	over s ardous	ectio with	ms of t	northwestern N minor accident	w :	Nassau and Su Counties	ffolk	02 A si	Morning trong st	orm	movi	ng nort	0 heastw	0 ard a	?	0 the coa		Flood
NJZ001-005-007 and NYZ015 Northern New Jersey	New Jersey. was quite ha	er stor Airport Zardous ter bec	a, bust	inesses o some	and cases	schoo impo	snow a ls were ssible.	Heavy Snow across norther colosed. Trav Many cars we amerous accide	ling e			coml coas des main Beac Ham	stal flo stal flo troyed a aly conf ch, Free ptons. S south s	th roding and the ined port ever hore	are a g. In hree to t , Bal e bea	astrono n Westh others the sou bylon, ach ero	micall ampton severe th sho Fire I sion a	y hig Beac ly da re to sland nd pa	tide the on lamaged owns of Toba	es and Long Is . Coast f Baldy ay Beac	land, one al flood in Harbo th and th	extensive house w ling was or, Long
NJZ005-007 Northern Coastal New Jetsey	26 Morning The second m of snow acro was hazardou	s coas	tal sec	tions	of no	rther	a week n New J	Heavy Snow dumped 6-8 in ersey. Travel:	ches	NYZ014 Rockland Coun	:y	Snor		g late						ns of I	Heavy Sn lockland being r	

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		COCAL	PATH	¥	NO. PERS	OF SONS		ATED1	CHARACTER				COCAL	PATH	PATH		NO. O		ESTIMA DAM		CHARACTER
PLACE	DATE	TIME - LOCAI STANDARD	LENGTH OF (MILES)	WIDTH OF PATH (YARDS)	KILLED	INJURED	PROPERTY	CROPS	OF STORM		PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF	(MILES)	(YARD)	KILLED	INJURED	PROPERTY	CROPS	OF STORM
NEW YO	RK, Co	asta			1 1			1	<u></u>	_	NEW YO	RK,	Centr		1	1	L				
NYZ014-015-016-017 Extreme Southeastern New York and Long	22 Aft				0	0	0	0	Heavy Snow		Ulster County	1	2130E			. h	*	0	6	0	Snow town of
Island	southeas extensive cases in	stern N ve peri mpossib uted to	ew York ods. Tra le. A st traveli	and L velin rike	ong I g was by the	sland extre e Long	. Air emely g Isla	ports w hazard and Rai	cross extreme were closed for lous and in some lroad lesses and some			Cra stu poo	gsmoor ck in a	on Si snow ner fi	unday w drif or sev	eve t. era	ning, Sear l day s of	af che s. up	ter h rs ha High to 10	is tr ve be wind -15 f	uck became en battling s and blowing
NYZ015-016-017 Metropolitan New York and Long Island			or winte	r sto	0	0	0 than		Heavy Snow									th,	is un age 1		. Possibly one
and body rotalia	inches of The stor strikebo	of snow rm snar ound Lo ill as were re	along c led traf ng Islan some sch ported a	oasta fic, d Rai ools, t the	1 sectomp1: lroad court	tions icated , and ts and r air	of so d life broug d bus: ports.	outheas e for c ght oth inesses	tern New York. ommuters of the er activities to were closed. Sou ling was hazardou	ie	Areawide	Sno fal mat	ling a	once t the	rate rs. S	of now	two i	nch tot	es pe als f	r hou or ea	Snow k, this tìme r for approxi- stern New York
											Areawide	22	1100E	ST			5 3	17	7	0	Snow
30 NEW YORK,	Two per a heavy County driver tional Binghar totaled in Ulst	rsons y snow whic . Sev lives mton t d 10-1 ter an al men	fall. h claim eral ot . Heav o Glens 5 inche d Dutch tal hea	A sened to ther viest Falmes. tess	econd the 1 traf snow 1s; Wet Coun faci	a sno ife of fic a wfall snow snow ties, litie	ident of a accid l was fall pull , for es.	tract tract dents s in a in th led do ccing Over alley.	Snow ccident during rred in Delawa: or-trailer claimed addi- band from is band wn power lines the evacuation 9,000 homes we:	re		one Sar tio pan dri One you ele win ele was due loc uti	foot of atoga-line was: ying the fire, ng boys ctrical ds and ctrical also he to the al gove	of snow warre: in excise snow warre: in Rose The possible service heavy and of an analysis analysis and of an analysis and of an analysis and of an analysis and of an analysis and an analy	ow. Hen-Wash cess of the cess	eav ing f 2 ere e m y, ont now ntr an pos	iest ton construction of the ribut and ance. s resd bloed a	sno coun hes rob ted e f ion wat pon win sta	w was ty ar in t gusty lem t ire w s to er sh he lo se by g sno te-of	repo ea. his a wind he fo he de as li this ortin cal f poor w. I: -emer	ork with over red in the show accumula- rea. Accom- s. Blowing and llowing day. aths of two sted as an short were high gout the read conditions of fact, many spency. Local re also ad-
			•		M-0	4-V 8-V 6-V			e accident)				-				M-UN M-UN M-8- M-5- M-78	K-0 0 0	(Fir		**
Areawide	York. centra for a l Sarato ported blamed accide: sulted drifts Albany	orm sy Snowfal Saran Boston ga Cou throu for t nts. in wh of ne	all of toga Co and Mainty. Sighout ewo fata High wite-outer ten	almo ounty aine Scatt easte al he inds	pst 2 Rail tered tern N teart duri duri trep F-U M-U	heavy 0 inc he he road power ew You attac ng an owing orted NK-O NK-V 8-V	ches eavy dera er ou ork. cks a nd ai g/dri d in (Hea	was r wet sailmen stages The and th fter t	"	- 1	30 NEW YORK, NYZ001-002-003-004- 005-021-022 Many parts of Wester & Central New York NYZ001-002-003-004- 005-021-022 Many parts of Western & Central New York	02 Fro tre Tom Loc the Man 19 A S inc	Evening 15 to acherous poke, Cay central y roads Afterno lowdown hes of: port wei	14 incl Man punty : iga Con South were : non of tra	ny accive receive unty go nern Ti- closed	dent d th t 11 er r in Y atic	s were ne most inche receive fates (e rep t sno es. ed 7 Count 0 ulted and	oorted. ow (14 Many p to 12 ty. 4 i when from 1	. Ithac inches portion inches 0 3 to 7	o). us of Snow Tralo
Otsego County	youth	year-c	ed out	duri	ing a ition *Po st	several de	ere w etail ly on	winter	snow seconta. The storm to available.		NY2201-002-003-004- 005-021-022 Many portions of Western & Central N.Y	Cou Nor 7 i 22 A s	port wei nty Air; th Tonas nches wi Evening nowstorm eived 10 hes, Sho	ort a wanda : nile A nile a ni nile a ni nile a ni ni ni ni ni ni ni ni ni ni ni ni ni	t Roche in sout. mherst, ed up t es, Che	ster hern Eri o 10 mung	was to Niaga e Cour O inche	not mara (nty maty maty maty maty maty maty maty ma	nuch di County receive 4 f snow , Elmin	ifferer received 6 in 0 . Ithac	nt. red' nches. Snow & Wind
Areawide.	easter Capita condit was re Meanwh Sarato three down f	freezi n New l Dist ions r portec ile, c ga Cou persor or fou	York. crict and apidly lin On: on Inter inty, a	Heaverea (dete ieda cstat 34 v inju	viest of ea erior Coun te 87 vehic ured Other tiona F-9 F-5	w ferstern ated ty as le as and see an	umula n New . A nd cl ar Cl ccide Inter ther	ations W York seven laimed lifton ent oc rstate -relat	Snow most of were in the . Road ocar pile-up t one life. n Park, souther courred. Twent e87 was shut	y I	NYZOO4 Parts of Lewis, Jefferson, & Oswego Counties	Whi win Lew 25 Abo Lew Cou clo Poo	nes, Shit ds prodi ds prodi is Count Morning ut 34 in is Count nty) to sed for r driving idents.	e 5 invaced who is the second with the second	ches, a miteouts to be of snow ntersta town (Jours.	nd C . M clos fel te 8 effe	Colden Many rosed. 0 1 in 1 31 from	4 in coads 0 Barne m Me Count	partic 5 es Correxico (ty) hac	Stror cularly 0 ners, (Oswego d to be	g in Snow
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	OCAL	РАТН		IO. OF RSONS		MATED [†]	CHARACTER			OCAL	РАТН	H.	NO. PERS		ESTIMA DAMA		CHIDICAL
PLACE	DATE TIME - LOCAL STANDARD	LENGTH OF (MILES)	WIDTH OF PATH (YARDS)	INJURED	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF (MILES)	WIDTH OF PATH (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM
31 NORTH CAR	OLINA							ОНІО									
NCZ001-016-017 Coastal North Carolina	Oi All Day		0	0	7	0	Coastal Storm	OHZ001-002-010 Northwest and North-Central Ohio	A wi	1800EST inter stor n of the a nt 1000 ES	rea.	The per	riod of	o 8 i		of sno	
	in some locat high tides pr	of unusa the south ions, tre oduced da th Caroli	lly high east coa mendous mage to na was p	tides st. W beach homes laced	produ inds g erosic and bu at \$6.	nced con nusted to no occur sinesso 9 mili	siderable to over 50 mph tred, and the es. Dollar ion, and would	OHZO02-003-004 North-Central and Northeast Ohio	Abou snow	0600EST ut 4 to 6 v commence	inches ed at O	000 ES1	on th	on t ne 23r O	rd. ?	a. Th	Heavy Snow
NC2006-007-008-009- 011-012-013 Western NC	01 0200 EST		0	0	?	?	Heavy Snow	Lawrence County		isapeake r rted at 06			thes of	SHOW	. The	SHOW	!
	The same storm and a small p inches in man	art of th	e pledmo	nt. Si	ns wor	ounts (34 OKLAHOMA									;
Dare County	A downburst e Hatteras Villactually hear	age. Hea d. Some	vy rain wooden d	fell, i	out oc	idly no own of	thunder was , fence blown	OKZONE-ONC-ONW-OPH- OWC-OSW-OOC-OEC-OSC- OKZO19-O20		1500CST- 1800CST			4	?	7		Heavy Snow/ Ice Storm
NCZ004-010-012-017 Coastal Area and Mountains	broken by the 19 1000- 1930 EST		as blown	0	4 4	Some 0	glass was also High Winds		the one due	Northwest state. T inch on t to the ic	while he free rees ar e,causi	e freez ezing r nd powe ing a l	ing ra: ain ca: rlines oss of	in and used a Mai powe:	d slee a coat: ny pow r to o	t fell ing of er lin ver 10	f the Panhandle over much of ice of up to es were downed thousand h as four days.
	High winds in lines, and ca businesses. knots blew sh	used some In Hyde C	damage County, i	to hou: n the e	ses, ç east,	arages. Gusts a	and s high as 50		Tree tree year man and	s in orch s to die, . Three was elect nut trees	ards we but wi fatalit rocuted is est	ere str ill cer ties we d while timated	ipped of tainly re attr repair at ove	cause cause ribute ring per 6 p	mbs who e a loo ed to power million	ich ma ss of icy ro lines. n doll	y cause the crops for this adways and one Damage to fruit ars. Damage to
NC2005-006-007-008- 009-010-011-012-013 Central and Western North Carolina			0	0	5	0	Heavy Snow	OKZ004-005-006-007-	doll with		injuri	lents a	re est	imate	dat bo d.	etween	d 5 million 500 and 1000,
	for a great m and parts of the worst in	any years the piedm about 50 med to be ommon, an The area	s in part nont, som years, a ear that ad in the cof heav	s of the residual recount.	he sta dents ords : Snowfa st hit	ate. In describ in at le all amou	ints of 6 to 8	008-009-010-011-012- 014-015-016-017-021- 022	Six to l	1800CST to ten in: 4 inches : -west roas	ches of in some	areas	fell g: . Dri: ers Wo:	iving Ets o: cld A:	a tota f 4 to irport	al acc 5 fee was s	umulation of 13 t were common on hut down for 36
Southern Moore County	The same stor state. Cain concern to re threatened fo	m produce Creek ove sidents.	rflowed Some sm	in the	Sandh	ills, a	Flood a third of the and caused be were		in S a fi at a most	ed many ro hawnee co re which o complete	oofs to llapsed destroy stands until t	collaging collag	pse. 'ing 14 build: as road lowing	The re emplo ing. is wer Wedne	oof of cyees. Many t re impa esday.	a com The towns assabl Dama	d businesses mercial laundry collapse led to and cities were e. This closed ge due to collapsed dollars.
NCZ-003-005 NCZ-003-005-006- 007-009 Central and Western	25 1700 EST 25 1600 EST		0	0	4 ?	0	Ice Storm Heavy Snow										:
North Carolina	northern part the Northeast	s of the Piedmont fell as er lines, nostly 5	mountain and Nor sleet an and min	s, fooi thern (d free; or stru	thills Coasta Ling r Lctura	, and p I Plain ain. I I damag	h, most of the This caused some pe. Snowfall	35 OREGON OR2001-002-003 Oregon Coast	A str This been of th	resulted reported ne coastal	in str at Cap strea	ong wir e Bland ms. Th	nds wit :o. He ne high	hap avy r wind	eak gu ains c is hit	l along st of aused the co	High Wind and Doastal Flood g the coast. 96 mph having minor flooding past in conjunc- considerable
32 NORTH DAI	(OTA	NO	NE REPOR	TEO					Sever	ral expens	ive be lamage	ach hor in the	es wer	e dan	naged.a munity	nd hig	r mudslides. gh water and aldport. Several lled.
33 OHIO								Malheur County	At al	0400MST a 0600MST	MST, a	CB ante	0 enna in	0 Vale	3 was b	lown o	High Wind
OHZOO4-007 Northeast Hills of Ohio and Southeast Ohio	01 0700EST Scattered loo The snow stan	cations ro ted arou	eceived -	0 4 to 6 EST an	? inche Decem	s of sn	Heavy Snow ow. t.	ORZ001-002-003 Oregon Coast	near	sidence ar by location 0415PST	nd into on was	a powe blown o	er line over in	. At to a	about line.		ST, a tree at a
OHZOO1 Northeast Ohio	10 0700EST Scattered loc The snow bega		received				Heavy Snow now.	007000	Wind to 70	gusts in) mph also	excess	of 80	mph we in sou	re re	ported t inte	. Wir	t
OHZOO2 Erie and Ottawa Counties	19 Evening Strong northe inland. The where several	worst dan	s pushed mage occ	urred i	n and	Lake Er around	Huron	ORZOO6 Cascade Mountains	28 The a	2200PST cold front to 16 inc s and at	hes of	Snow w	0 ove mo vas rep	? ved a orted	? cross as ha	the Ca	leavy Snow scades overnight. allen in the

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		CAL	РАТН	Ē		OF E	ESTIM/ DAM					XAL		PATH	Ę		. OF		ATED!	
PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF (MILES)	WIDTH OF PAT (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	DATE	TIME - LOCAL	STANDARD	LENGTH OF 1	WIDTH OF PATH (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM
OREGON										36 PENNSYLVA	NIA	, We	ste	rn			•	•		
ORZ001-002-003 Oregon Coast	A st the c cause some the	evening, ed much da minor flo	Wind g mage f oding and c	usts fr rom Coo on the oexisti	om 60 s Bay coast ng hi	to 85 northw al stre gh tide	mph v ward. ⊵ams. es cav	moved were r Heav The used s	High Wind up the coast in eported and had y rain caused combination of ome beach erosion	PAZ004-005-006-014- 015 North, Central, and Southwest Pennsylvania PAZ002-003-014 Northwest and North-	A low of sn	pres	sure most	syste: area	m movin s and I	0 ng up 10 to	0 the E 15 fr 0	0 East Conches	past le in the	Heavy Snow If 6 to 10 inches Laurel Mountains. Ice Storm/ Heavy Snow
36 PENNSYLVA	nia	, Easte	ern							Central Pennsylvania	rain, centr from of sn	slee al mo ice a nowfal	t and untai ccumu	snow ns of	across the st	the	north Powe	west	corner ages ar	pread freezing and the north- id downed trees sported 6 inches
PAZ007-008-009-010-01 North-Central to Northeast PA. and Lower Susquehanna	1	1700 EST to 1800 EST			0	0	2	0	Heavy Snow	PAZ004-006-014 Central Pennsylvania	A TOM	pres			m moved s centr				st and	Heavy Snow
Valley	durin	g the eve	ning ir	the no	rth.	The s	now e	nded b	ne south and ny early afternoon night into the 3rd	PAZ001-002 Northwest Pennsylvania		early o eig		-	of snow	0 fell	0 from			Heavy Snow squalls.
	over noon after sleet The f Lower Valle	the Lower over the land over and rain inal accum Susqueham y, 6 to la	Susque Middle the No or fre mulatio nna Val 4 inche	ehanna V and Upportheast ezing r ons of s lley, 9	alley er Su metrain manner snow r to 15 the U	y, in the second of the second	he mo nna V an an ith t 8 to s ove usque	rning alleys d Poco he sno ll in r the hanna	orning of the 2nd and early after- and in the mos areas. Some nw over most areas. ches over the Middle Susquehanna Valley and 6 to 12 . Some snow,	PAZ003 Western Pennsylvania	A low		sure	syste	m movin				west s	Heavy Snow pread up to 6 a.
	gener Centr	ally less al and So	than 4 utheast	inches	accu	mulatio	on, al	so fel	l over the East-	37 RHODE ISLA		A11	davr			0	n	0	0	Heavy Snow
	at le	ery roadwa ast one de shoveling	eath.	At leas	erous t 5 d	accide leaths t	ents, were	many due to	with injuries and heart attacks	RIZOO1, Northern Portion	An in	tense	coas	snow t	o the r	nich p	assec	l to t	he east	of Cape Cod e state. Amounts gwinds.
PAZ007-008-010-011-016 North-Central to Eastern Pennsylvania		0700 EST 2200 EST			0	0	3		Heavy Snow	RIZOO1, Northern Portion	22	After eveni	noon			0	0	0	0	Heavy Snow
·	Zones untill south Centr for a Metro areas late areas Upper 5-7 i the P Centr	and acrost late more, but changal Zone. Little sipolitan An by late in the even overnight Susquehamnches over occurs and	ss the ning. ged to Across leet an rea. T in the ening, t. Account Account r the N d 2 to ad 1/2	south. The pre freezing the noid freez. The prec afterno but some cumulatine, 5-8 horrheas 7 inche inch of	Over cipit g rai rth t ing r ipita on. He ver ons o inche it Met	the notation and the precedent over the sign of snow arropolisher the sign of	orthe start ate m cipit er th ad ch gnifi t sno were the I tan Z East-	ast it ed as orning ation e Poco anged cant s w cont 4 to 8 Middle one, 6 Centra	Upper Susquehanna did not begin rain across the over the Eastwas snow except nos and Northeast to snow in all nowfall ended by inued in some inches over the Susquehanna Zone. to 8 inches over 1 Zone. The Eastegan and many	RIZOC2, South Coast- al & Narragansett Bay	of the busing in macconditer at 23. The property brown hurring high side was a	me stanesses my tritions accumu Early passag ght ga icane tide of Na report	te. let affic Du latic more ge of force resularrage ed.	The s their tie- uring ons of ning an ir orce,s e. Th lted i ansett The h	now beginners become the ever for the ever f	gan di yees cause ening 3 inch 0 storm nd so rrene de 4 Floom	ring of the less. Syst there of the less	the ef work he headeavy 5 em to st wint the hit above and datarrier	arly aiderly aiderly or snow of the weeds gus gh win e norm mage to was of the same of the	ne northern part ternoon and many This resulted and poor road named to rain af- Coastal Flooding st of the state ting to near is coinciding with al on the eastern o piers and boats Losed to protect
PAZ007-008-009-010- 011-012-016 Eastern Pennsylvania	22	0900 EST to 2400 EST			1	0	4	0	Heavy Snow	RIZO01-002, Statewide		Early nusual			coast	O al sta	O orm w	0 hose c	0 enter	High Winds
	secti by inche Five heavy	ons about blowing s or more inches of	noon. and dri an hou snow a ng with	The srifting. or during accumula blowing	The The ig the ited i	snow a snow a after in one l drift:	ery h ccumu noon hour ing g	leavy a lated and ea at Wil reatly	and northern nd was accompanied at the rate of 2 rrly evening. liamsport. The restricted		were was t Block press	ght some report k Isla	scations of the scatter of the scatt	and so tered The p eporteng for	power o power o peak will ed 60 M	t wind outage nd gua PH for dence	is gu es, bu et at a g	sting t no c Provi ust.	to 50 ther s dence The lo	ortheast track to 65 MPH. There ignificant damage was 51 MPH while west barometric for January, reach-
	way w		ing in						s County lost her a wooded area and	38 SOUTH CAR	DLIN	Δ								
	Zone, inche North and S heavy	11 to 21 s over the east Metro	inches e Lower opolita Zones a sed a p	over to Susque an Zone, and 12 to portion	he Mi hanna 10 to 24 of th	Iddle So Zone, to 12 in inches he roof	usque 8 to nches over	hanna 14 in over the P	per Susquehanna Zone, 10 to 16 iches over the the East-Central oconos Zone. The recial building to	Statewide	An i the pass of u	intens South age o	Caro f the y hig	lina stor hast	storm m coast c m coinc ronomic 9 feet	n Jan ided al ti	uary with des.	lst. a per This	The iod resulte	Coastal Storm
PAZ012 Southeast	ŀ	1200 EST			0	0	2	•	Heavy Snow		hig feet Haze the	hest tide l in entir	since heig 1954 e Sou	the ht at Th th Ca	hurrica Myrtle ere was rolina	ne of Beac beac coast	1940 h, hi h ero , how),and ; ighest osion ; vever,	since slong the mos	ıt
	aroun inche or le in th fell	d noon on as over the ass over the southea over the	the 26 e South he nort st. Li East-Ce	oth. Achest Zo theast Zo theand of ight accentral a	cumulane. cumuland Land La	lations Accumu west po ations ower Su	were lation of ma squeh	gener ons rar is to a inly a nanna 2	stinued until sally 4 to 8 sged from 4 inches uround 8 inches un inch or less cones.		eigh 50 m prop leve alon seri	t foo ph w erty, eled. ig and lous t	t wav recke and Resi near idal	es p d sea flood denti coas flood	the noushed by walls, ed low al and tal inding. I million	y win batt areas busin lets Cotal	ds gu ered ess p ess p e	beach beach my du proper cience ge of	to ove front nes wer ty	
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PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF (MILES)	WIDTH OF PATH (YARDS)	KILLED	INJURED	PROPERTY	CROPS	OF STORM	PLACE	DATE	TIME - LOCAL STANDARD	LENGTH OF	WIDTH OF PATH (YARDS)	KILLED	NJURED	PROPERTY	CROPS	OF STORM
SOUTH C	CAR	LINA								39 SOUTH DAK	(OTA								
		ipitation ng the pa						2		SDZALL Statewide	21	Morning Evening			ø	Ø	ø	Ø	High Winds
	repo	rted in t	he moun	tains s	and fo	othil	15.					ng wind	s of S						r the state.
Mountains and	A bi	eakdown o 0100-100		-relate	ed eve	ents fi O	ollow:	0	Heavy Snow		zero	winds p visibi rted at	lities	in ma	any a	reas	s. Ag	ust c	sed near- of 64 mph was
Foothills SCZ001-002	the and	to eight higher el Cherokee ed power	inches e evation countie	s of Gr s inter	reenvi	11e, S	cross Sparts	the inburg			(~ .			,			,		,.
Horry County	1 1	0000-120 0000-120			0	0	4	0	High Winds Flooding	40 TENNESSEE	•								
	Seve	re beach o	erosion	occuri						Hamilton County	19 Ten	0110EST homes we		uated d) ue to	0 a fl	0 ash fl	0 ood al	Flash Flood ong Spring Creek,
Georgetown County	1	0000-1200 0000-1200			0	0	4 6	0	High Winds Flooding			it 15 roa							rn Hamilton Count r in low-lying
		re beach hes, and							outer	Hawkins County	19	Morning			0	0	4	0	Flash Flood
Charleston County		0000-1200 0000-1200				0		0	High Winds Flooding	Sullivan County			unts be		and 2	2 inc			Flash Flood earlier rains, o flood. Automo-
	Consi the c busin	derable b uter beac esses dam	each er hes. T aged.	osion (occurr	red, e	specia es an	ally a	long		bil tre Cou	e acciden e was top	ts were pled by ge esti	caused the wa mated a	by ti ter as t \$40	he hi nd bl ,000	igh wat locked occurr	er on the ro ed to	o flood. Automo- Highway 93, and a ad. In Hawkins roads, bridges,
Colleton County	1	0000-1200 0000-1200 y-two hom	EST		0 0 ed.	0	•	0	High Winds Flooding	TNZ001-002-003-005 Eastern Tennessee	1	0800EST- 1400EST	,	,	0	0	?	0	High Wind
Beaufort County	l There	0000-1200 0000-1200 was cons ially alo	EST iderabl		D h eros		3 4	0	High Winds Flooding		noo. Sev:	es and por ga northw ierville	wer lin ard thr to the	es thro ough Oa Tri-Cit	ughou k Rid; ies a:	t eas ge, K rea.	tern T Noxvil Numer	enness le, Ma ous si	an hour downed ee, from Chatta- ryville, and gns were downed lso reported in
Jasper County		0000-1200 was cons				0	3	0	Flooding		Hem)	len Coun Gatlinbu	tv. A rg-Pige	wind gu on Forg	st of e Avia	70 m ation	illes a: Cente	n hour r. He	was reported at avy rains before ted the wind dama
Beaufort County	The s moder	1220EST econd coar ate beach line as we	erosio	n along	the o	outer		0	Flooding	TNZALL Statewide	22& 24- 27				0	?	?	0	Snow and Ice Sto
Charleston County Northwestern	19 Winds Sprui in Ch	1000EST interrupt 11, McMill srleston, on of Righ	lian, ar as well way #7.	nd West Las in Also	hicori Ashli the l	o, Iri ey Str North	is, eets Bridg	0 e	Winds		epi: Ten: tio: por: Ten: dur:	sodes afformers on the second	the 24 from t well ov lundred period	astern the thro race am er 6 in sof miresulti	Tennes ugh th ounts ches i nor to ng in	ssee he 27 in s in th raffi scor	on the th. So outhweste mount of accidents of the transfer of	22nd now an stern tains dents mostly	freezing rain and most of d/or ice accumula and south-central of upper east occurred statewide minor injuries.
Spartanburg County	Winds	1500EST gusting (rupted pos		Oh brok			3	0	High Winds										
Northwest South Carolina		1 of 0010		inches) s deep	0 in t	4 he	3	Heavy Snow and Sleet	41 TEXAS, Nor	ther	n							
scz001-002-003-004	mount sleet	ains and elsewher	lesser : e over :	amount s nort hwe	s of s estern	now m: Sout	ixed v h Caro	lina		Western Half of North Texas		Evening- Evening			0	0	?	?	Ice Storm
	activ shrub accid power power power	rupted traities. The state of t	he heav ntribut injurie includ anburg kee Cou	y enow ed to to s. The ing 12, County nty. A	broke numero ere we ,000 h and l Areas	e limber ous tra ere nur nomes to 1200 ha sffect	s, dan affic merous withou omes ted we	naged s n t withou			fre eve Jan the	ezing dr ning of uary 17. evening	izzle Friday Up i of Sund	and fre , Janu o two i lay, Jar	ezing ary nches uary	rai: 16 : of : 18.	n coate and du snow fe	d the ring :11 on	North Texas as area with ice the the day Saturday, top of the ice by
	Count		e from								tra		idents	were r	eport	ed, v	with fi	ve fat	20. Hundreds of alities blamed on
Northwest South Carolina SCZ001-002	Snow, after	1400EST sleet and noon of 2	5th upsi	ing rai tate ar	in beg nd con	gan du: itinue:	d to	the the	Ice Storm	Trinity County, Trinity		2000CST			0	0	?	?	Hail (0.75)
	inter traff	morning or rupted por ic accider ce was two	wer and nts and	contri injuri	ibuted ies.	i to s	everal	L		Groveton	Hai	2005CST 1 to 3/ ds downed							TSTM Wind 2000CST. Strong T.
Central, Northern and Northeast South Carolina	Freez	2100EST ing rain, ulation 1	to 2 is	and sno nches d	ow wit deep i	interri	upted	4	Ice Storm	Nacogdoches Co., 12 W Nacogdoches 6 NW Nacogdoches		2019CST 2030CST	Short	Narrow	, O O	0	0	0	Tornado (FO) TSTM Wind
SCZ003-004-005	and r preci ended	l activit: esulted i pitation l early on and tree:	n injur began di the mo	ies and uring n	d powe	of the	ages. e 26th	Free , and	zing		201	9CST.	Strong	winds d	lowned	nume	erous t	rees a	W Nacogdoches) at long Highways 204 t 2030CST.
	* 1mD S	and tree:	••							Shelby Co., 5 NW Center	24	2112CST			0	0	?	?	Hail (1.00), TSTM Wind (52)
												l up to orted 5 m							up to 60 MPH were

1	Ę	PATH	NO. 0		STIMATE				П	12	Ŧ	Ţ.	NO.		ESTIMA		
PLACE	DATE TIME - LOCAL STANDARD	LENGTH OF PAT (MILES)	(KARDS)	_	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	<u>_</u>	TIME - LOCAL STANDARD	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	KILLED	NJURED	PROPERTY	CROPS	CHARACTER OF STORM
		ž Š	菜	Ž	ž į	ž			DATE	STI	<u> </u>	¥	豆	ž	æ	Š	
41 TEXAS, Sout	hern							UTAH									
Jefferson County	Arthur. At le A satellite d	ast one lam isk was den	ge tree wa nolished at	as dow	med and stel. Th	mino d on he w	Tsim. Winds (?) or damage in Port ue barn destroyed. rind was measured ounty Airport.	UTZ003-010 Wasatch Front and Northern Mountains	sect 9 in the	ions of the ches in Alta Ski	he sta the v Resort	te. 24 alleys in Lit	hour along tle (snow the l	fell to Wasatch nwood (ump sno stals : Front anyon.	Heavy Snow w on northern ranged from 6 to to 18 inches at The resulting east two injuries
Bandera, Gillespie, Kerr, Kimble, Mason Medina and Real Counties	A general 2-1 6 inch depth reported open 3 inches were County. 3 inc	nch snowfal on the Real as the ter reported b	l≁Kerr cou mperature m oy an obsem	mty 1f was at rver a	lne. All or abo it Medir	cou l ro ove na i	ads were freezing. n Bandera	UTZ006-008-011	gers Lake road he 1 M17V	were in County. Is were	jured : In till s	when th Souther lick e	heir d n Vtal nd the	ar s the	lid int e snow ver of	oaso was n asenni	o other passen- chool bus in Salt not as deep, but was killed when n Kane County.
Madison County Polk County	24 1915CST Hail the size reported. 24 2030CST	of quarter	s fell in	•		e. D	Hail (0.87) Amage was not Tstm. Winds (?)	Southwest Valleys, Southeast Valleys, Southern Mountains	A sl sev fall incl inch	ow-moving eral inch amounts luded 8 : nes in the	es of for th inches Veyo/ Of foot	snow in e 12 hou at Ced Enterpr level	syste the s ur per ar Cit ise an	mouth iod y, 8 rea.	ttled a west co ending to 10 24 to th end	outhweener of at 1:4 inches 30 in	Heavy Snow ird and left if Utah. Snow- 5 p.m. MST s at Kanab, and 5 inches accumulated on National Park.
	High winds do around Mosvo	wned trees and Corriga	in the nor	rthern	part o	of t	he county	UTZ003 UTZ003 UTZ001 UTZ003	The Ceds	storm's	impact and S	was fe t Geor	lt me ge i	est i th	along e Blaci	Intere	tate 15 between e area, where the High Wind High Wind Righ Wind High Wind
41 TEXAS, West Far West, Panhandle, South Plains & Permian Basin			4 ?	? 1	? . 0		Vinter · Storm	UTZ003 UTZ003 UTZ003 UTZ003 Wasatch Front and Cache Valley	15 15 16	1630MST 2100MST 0405MST	von win	ds caus	0 0 0	0 0	4 1 1	0 0 0	High Wind High Wind High Wind at of damage and
	air, producing accumulated to and 10 inches amounted to or glaze during taccidents on the directly attriction and the second and the second and the second accidents of the second accidents on the second accidents on the second accident accidents and the second accident acc	widespread at Lamesa, ally a trace the selick re- butable to alities were eight miles adon colli- iof Pecos in into a medi Slaton in s hitcle, and Paso when i	d heavy sms 16 inches s 16 inches was preces of measur- of the 16 oad surface this cond e Ray Trus s south of lision. Vi n Reeves C lan. Kath southeast Benton Je nis car sl ough the so	nowfalles at Teded by reable of the the ces. A dition. Sler, 3 Hale letter A County by Mart Lubbookerry Tabled of four roof	I. The Fulia, of freez, preciping to fome at least lea	snot 14 i ing itat nted t fo die in 38, is t 224, f ty f 47, f ra	unches at Canyon, drizzle, which cion and created a lauserous traffic our fatalities are ad on Hale County was killed ruck rolled over died about two following a roll-was fatally map of Interstate		Court Cent 15 * throcesti Patr afte Webe blow trai gust of a near gust mph. of II 16th Court Many	tricted to trites for the trible to the trible to the trible to the trible to the trible trible to the trible trible trible to the trible trib	reffic much reporte ed to r and e wind ated wie e dama vis Cou in th e also e Cente ound Un ton. A ph, and ghway F Capyon spread 36 po were w	along of this days and a gust high-pr Davis gusts nots in mige starunties. He stroet blown or wille sometifatrol e in Sal power owner posithout	Interest Thurst to Count at 80 cm. Logo ted one confirm area confirm area confirm area confirm area confirm area confirm at Lake at La	state rsday rsday rehi ies rsday rehi ies rsday rehi ies rsday rehi ies rsday	15 th At h. By cles as as the h. At anyon unt up home winds ad clockee n were ter in hat n inds te unty av e repu blown lights	arough 7:33: 11:00 at 6: along and set Seve At a: dat 8: blown Center ight, blown rted in for me	Meber and Davis a.m. a spotter in a.m. a spotter in a.m. Interstating the relative spots a.m. the Highway Patro a.m. the Highway 10 mph. By mid Interstate 15 in weral campers has real semi-tractor cound 4:30 p.m. 5 mph and 16 care of the track wille reported: a gust to 9th near the mouth at 4 a.m. on the Davis and Webeluring the storm pre than 8 hours
	storm that fol lower 20s, and brought commer ways for nearl and 17th that Permian Basin Additionally,	n 6 a.m. Cs. Lowed occur covered the ce to a starty a week, the Postal because of the weight	of the snow (Gray Control of the snow (Gray	.m. CS temper th a th The s conditi alted to the now cau	atures sick shi snowcove lons wer deliver letter	he l in roud er l re s ry i car e ro laps	.6th. The snow- the teens to l of snow that ingered on road- io bad on the 16th in much of the riers.	UTZ006-008-011 Southwest Valleys, Southeast Valleys, and Southern Mountains	define the the wind p.m. Kano	lated amer failed 1700MST low press state pross along to on the light to deep wer	ure cer duced I he Wass 6th, Me	ruined nter the heavy sr atch Fro onticell	0 at set now in ont. lo had	tled some In the	power l over te locat ne 12-h eived 1 ore 8 i	ons a our pe 5 inches.	al swimming poo out off and backup Heavy Snow Thern portion of s well as canyon riod ending at 5 es of new snow, Drifts up to 3 ar the Colorado
42 UTAH								UTZ003 UTZ003 UTZ003 UTZ010 UTZ010	28 28 28 28	1130MST 1450MST 1530MST 1540MST 1545MST			0 0 0 0	0 0 0	1 1 1 1	0 0 0	High Wind Righ Wind High Wind High Wind . High Wind
UTZ001 Cache Valley UTZ003 Wasatch Front UTZ010 Northern Mountains UTZ010 Northern Mountains	Valley by sho the northern morning. Som inches of an Mountains to	rtly after portion of e bench are ow by mid a the east l ert reporte	o deced severe midnight of the state of Se section of the section	0 0 rel ir on the ste du calt I d the a fo	1 (ches of a range Ci ski resort in a 12 he lated 12	0 f s and he ity sort ours 2 in	Heavy Snow Heavy Snow Ideavy Snow Inow in the Cache continued across remainder of the had received 4 s in the Wasatch set spots. The as of 8:00 a.m. ches. Heavy Snow	UTZ010 UTZ003 UTZ003 UTZ003 UTZ003 UTZ003 UTZ003 UTZ003 Salt Lake County Wasstch Front and Northern Mountains	Wedne dama mph befo 58 m Salt vill moun	1500MST 1609MST 1609MST 1609MST 1609MST 1609MST 1644MST 1840MST 1130MST gorous coesday, anging light at the B a	d was tning. righto In Provo around and 3:: s inclus	Prefronski rethe vall Airport 2:50 p. 30 p.m.	enied ontal esort leys, t at a .m., a . Tw inche	by e wind and s peak round a d a elve- s at	l l l l l l l d forthwe strong ds gust 99 mph wind di 11:30 gust -hour s	0 0 0 0 0 0 0 0 st Ute winds ed to at Hid gust to 67 nowfal ird, a	Heavy Snow Lightning h on thie heavy snow and as high as 100 den Peak shortly reports included 61 mph in South mph in Center- t totals for the nd 12 inches at
:	many Northern West had rece	Wasatch Nived 12.5 j	ountain sinches in	ki res 12 hou	orts on	n th of	welcome snow on his Sunday. Park 3:30 p.m., Park ted 14 inches in		in H	ral locat olladay,	ions. 5 and (30 a.m	Spotter Sincher	rs re s in S se in	porte andy Sandy	ed accu , and 6	mulati inche	o half a foot in ons of 4 inches s in Cottonwood. by lightning and

		JANUARY 1987
PLACE	TIME - LOCAL STANDARD (RILES) WIDTH OF PATH OF PATH WIDTH OF PATH OF P	PLACE CHARACTEE OF STORM CHARACTEE CHARACTEE CHARACTEE CHARACTEE CHARACTEE OF STORM CHARACTEE CHARAC
43 VERMONT		VIRGINIA
Statewide .	03 PM 2 12 5 0 Snow Snow fell over the entire state, Friday afternoon. Two (2) men died in a car accident; cause of accident was listed as poor weather. Heaviest snow totals were in Southern Vermont. Several stations reported over one foot of new snow. M-UNK-V M-UNK-V	VAZ-003-004-005 -006-007-008-009 -010-011-012-013 -014-015-016 Statewide except near the coast n
Statewide	Storm dropped over 26 inches of snow in parts of Vermont. The wet snow caused scattered power outages. One male was killed in a collision between a snowmobile and a car. Heavy snow and 25 MPH winds were listed as the cause.	45 WASHINGTON Walla Walla County 02 Evening 0 0 4 0 High Wind
	M-19~V (Snowmobile)	Chinock winds gusting to as much as 55 miles an hour knocked down an elm tree adjacent to a Walla Malla home, causing damage to the verandah.
Statewide	22 PM 1 5 6 0 Snow The third storm of the year covered Vermont with another 10-18 inches of snow. The storm was followed by sub-freezing temperatures. One male who lived alone was found dead from exposure one week after the storm. M-69-0 (Exposure)	Western Washington 03 0730PST 0 0 4 0 Flooding Abnormally high tides combined with low atmospheric pressure, moderate winds and rainfall to cause minor flooding of roads near sea level. Fardest hit with minor flooding was Camano Island in Puget Sound, which was isolated for about an hour while water covered the one access road to the island. Some dikes on the island were also washed out, allowing minor flooding of fields and some buildings.
	29 1200EST 0 5 6 0 Show Another major snowstorm hit Vermont, this time slowing rush hour traffic; only scattered power outages were reported.	Mestern Washington A slow-moving Pacific storm moved over Western Washington during the day. Along coastal areas, winds gusting to 70 miles per hour combined with the abnormally high morning tides to tear up 1600 feet of rockwall protecting the Ocean Beach Highway near the town of Chinook. In the Puget Sound area, almost 2 inches of rein fell in a 12 hour period late in the day, causing some mudslides across roadways and some Western Washington rivers to reach flood stage.
44 VIRGINIA	Noncing 0 0 4 0 Harry Span	·
VAZ005-008-009 -010-011-012 -013-014-015 Korthern and Western Virginia	into northern portions by noon. Four to six inches of snow fell over a 12 hour period, although the snow mixed with sleet or freezing rain over much of the area before ending. Slippery roads contributed to many accidents.	Wood County 19 1330EST 0 0 ? High Winds Wind gusts of 58 mph associated with a very active cold front passed through Wood County causing many trees and limbs to be blown down. Several roads were blocked until the large fallen trees were removed.
VAZOD1-002 Coastal Virginia	As strong low pressure moved northeast along the coast, winds gusted to 60 MPH at Wallops Island between 1800 and 2300 EST. Several roofs were damaged. The storm, combined with high astronomical tides, also resulted in beach erosion in the Sandbridge area south of Virginia Beach. Damage was estimated at \$2 million as 264,000 cubic yards of sand was washed away. Tides ran 2.5 to 3 feet above normal with heavy wave action.	Randolph County 19 1500EST 0 0 ? ? High Winds Winds associated with a very active cold front passed through Randolph County while gusting to 55 to 60 mph. Many trees were blown down and 2900 residents were left without power. The high winds were followed by very heavy rainfall. WW2005-007-008-009- 010-011 Southern and Eastern Countries The season's first major snowstorm, the worst since 1983, dumped
Scott County, Wise County, Prince William County, and Culpeper County	19 Afternoon 0 0 4 0 Flash Flood Between 2 and 2.5 inches of rain fell over western portions of the state, causing many small streams to overflow their banks. Roads in low-lying areas were flooded.	up to 16 inches of snow on the southern and castern counties of the state. All schools and most businesses remained closed for several days. Following the snow, windchills dropped to between -10°F and -30°F. Some snowfall measurements included: 16 inches at Franklin, 15 inches at Terta Alta, 14 inches at læger and Seneca State Forest, and 12 inches at Petersburg.
VAZ-003-004-005 -006-007-008-009 -010-011-012-013 -014-015-016 Statewide except near the coast	22 Morning 1 0 5 0 Heavy Snow Ten to fourteen inches of snow fell over western and central portions of the state in a 12 to 18 hour period. This was the greatest snowfall in four years for most of these locations. Over the interior Tidewater area, the snow changed to rain during the afternoon after 4 to 6 inches of snow fell. Winds increased to around 35 MPH late on the 22nd and early the 23rd, causing drifting. A man died of exposure in Nottoway County after attempting to take a shortcut home. His body was found about 500 yards from his house. M360	WV2007-008-010 Southern and Eastern Counties 25 overnight 0 0 ? ? Heavy Snow The second major snowstorm in three days dumped up to 11 inches of new snow on the same counties that were struck by the storm of January 22nd. Total snow depths after both storms reached 22 inches in Petersburg and Bluefield, and 16 inches in Beckley.

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PLACE	DATE TIME - LOCAL STANDARD	LENGTH OF PATI (MILES) WIDTH OF PATH (YARDS)	KILLED	INJURED	CROPS		CHARACTER OF STORM	PLACE		DATE	TIME - LOCAL STANDARD	LENGTH OF F	WIDTH OF PATH (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM
47 WISCONSIN								49 ALASK	A, No	rthe	rn —		- NO RE	PORT 1	RECE 1	rED		
WIZ002-004-007- 008-00S North-Central and Southern Wisconsin	29- 0700CST 30 0200CST A winter ston on much of Wi and businesse in 7 southeas law enforceme you have a sn widespread sn to officials; west part of rain and slee roads and als scattered pow	sconsin, snar s. Over 200 v t Wisconsin c nt officer de commobile". Th ow accumulati Smallest amo the state, wh t. Ice accumu o coated powe	ling trehicle counties escribed as storm ons of bunts of lere it lations	affic as accident alone. roads a dumped the wint snow was was mixe up to	nd closi ts were A Wauke as "beau "the he ter", ac ere in t ed with 1/2 inch	es of recommend in the coordinate of the free holds of the coordinate of the coordin	schools orded 1 County ful if lest ding south- sezing lazed	49 ALASKA All Southeast	A, Sou	the:	serie couthea coutre courre	s of st Al. to and and utage	intens aska or s high (etchi) the ev a and	e lown the as 9 kan, facuat	pres 8th 5 mp orcision e cas	ssure and h. T ng th of th	syst 9th b hese e clo e FAA by fa	High Winds ems crossed ringing winds peak gusts sure of the office there. Iling trees
WYZ001 Northwest Mountains	02 0630MST t	0	0 0	0	0	He	avy Snow											
NOTEMWEST MOUNTAINS	1	mountains, in ski resort, a	ncluding about 5	g Yellow miles s	stone N outheas	lati	ew locations in onal Park. f Alta,	50 HAWAII		09-10				0	0	3	0	High Surf
WYZ011-016 East and South-	03 1835MST t 2040MST	0	0 0	?	0	H1;	gh Wind	All Islands		Minor	surf da			along	the	north	shore	of Oahu and alon
central	Sustained wind elevations of t an hour logged at Natrona Int	he southeast at 1835MST.	near At	rlington gusted	with good	gust : 50	the higher s to 60 miles miles an hour before 1835MST.		,				٠					
WYZ008-014 Far West and South-	05 2355MST t 06 0900MST		0 (0			avy Snow	51 PUERTO	RIC	—			- NONE R	EPORTE	Đ			
Central	deposited 6 to Pinedale, loca	12 inches on ted 45 miles now closed so	f snow. north o	Casper of Big P ds at ti	r picked Piney, a	i up abou	entral regions 11 inches and t 12 to 14 cularly U.S.287	52 VIRGIN	ISLA	ND:	; 		NONE R	EPORTE	.D			
WYZONE-OSE Northeast and	20 1735MST t 21 1300MST	0	0 (3	0	H1	gh Wind											
Southeast Wyoming	Gusts between west of Cheyer 50 to 60 miles Sheridan. The visibilities t closed for tim	ne and Arling an hour were high winds, o near zero	gton wes e clocked combine over the	st of La d at Che ed with e northe	aramie. eyenne, light s east. M	Gu G11 Snow	sts between lette and , reduced	53 PACIFIC Yap		11 Typho 0000u	on ORCHI FC and c	D move	d westwa	ird ju nage d	st no	rth of rain	the 1	Typhoon ORCHID sland of Yap at nd.
WYZ016 Southeast	24 1400MST Gusts to 60 mi Laramie Range	les an hour v between Laran	0 (were log mie and	gged at	Vedauwo		gh Wind long the	American Samoa		was s	anua gro	Hurri	ane TUS	locat	inds v	out 60 which	miles were es	durricane TUSI east of Pago Pa stimated at ne islands of
WYZ014-015-016-017 South	25 0100MST t 2350MST	o	0 0	0 0	0	H1.	gh Wind		1	Tau, (and 60 no fai	losega, 00 tempo alities	and Oi rarily and 10	u. Mor moved t 00 perso	e than o the	islar ffered) peop nd of I most	le were Tutuila ly mino	e left homeless a. There were or injuries. : \$16 million.
			e clocke	ed over	the high		s to 60 to 65 elevations of	ļ	1	Damage FUSI v	to coc	onut pl ing i n	antatio a south	ns al	one wa	s est	imated	at \$8 million. on and its eye
WY2016-017 Southeast	28 1415MST t 29 1430MST	0	0 0	?	0	Hi	gh Wind		,									
	Several gusts along the Lara 60 to 70 miles 2200 MST on th 45 to 50 miles 0200 to 0300 M hour were commstrong winds, visibilities n Rawlins to Che contributed to along Intersta caused power b	mie Range nes an hour were e 28th to 020 an hour bles ST on the 29to on at other 1 coupled with ear zero mair yenne. These a fatal car te 80 during	ar 1330 a also 1 b MST o v at Che th. Win location blowing aly over a acciden the eve	MST on logged a on the 2 eyenne a od gusts as over and drift of blow at one mening of	the 28th the Cheyer and the sound th	th. nne ust and und the sno eva tt tt tt tt tt	Gusts from airport from airport from airport from ained winds of Vedauwoo from 60 miles an ast. The w, reduced tions from ifting snow f Arlington High winds											
WY2002 Northwest	29 0230MST Gusts to 56 mi 0300 MST.	les an hour w	0 0 vere clo	-		(C	gh Wind hinook) een 0230 and											
								1										

STORM SUMMARY

		, –	,	,		, —		,	,	,		,	, -							,	,		,	,	JAN	JARY	1987
TYPE	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	ІРАНО	ILLINOIS	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND & DC	MASSACHUSETTS	MICHIGAN	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE
TORNADOES				_															-	-							
Number Days Deaths Injuries Property Damage Crop Damage								5 2 1 5																			
HAIL															!												
Deaths Injuries Property Damage Crop Damage																?											
THUNDERSTORM WINDS																											
Deaths Injuries Property Damage Crop Damage								4								?						4					
HIGH WINDS																											
Deaths Injuries Property Damage Crop Damage				1	2 7													4	5						4 2	3	
LIGHTNING																									_		
Deaths Injuries Property Damage Crop Damage											٠																
FLASH FLOODS																											
Deaths Injuries Property Damage Crop Damage									5	ļ												5					
FLOODS																											
Deaths Injuries Property Damage Crop Damage	?																									2	
HEAVY SNOWSTORMS AND BLIZZARDS @																!											
Deaths Injuries Property Damage Crop Damage	4	?					6		?	4		?	4	5	1		6	6									2 6
ICE STORMS #																											
Deaths Injuries Property Damage Crop Damage											5						5	5									4
HURRICANES AND TROPICAL STORMS																											
Deaths Injuries Property Damage Crop Damage										1																	
ALL OTHERS																											
Deaths Injuries Property Damage Crop Damage		?	1	4 ? ? 5												?	6		6							, ,	6

STORM SUMMARY

	+	_		т	_		Г				_	ı			_	,		· -	,	1	_	r	г		JAN	JARY	
TYPE	NEW JERSEY	NEW MEXICO	NEW YORK	NORTH CAROLINA	NORTH DAKOTA	ОНЮ	OKLAHOMA	OREGON	PENNSYLVANIA	RHODE ISLAND	SOUTH CAROLINA	SOUTH DAKOTA	TENNESSEE	TEXAS	итан	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING	ALASKA	HAWAII	PACIFIC	PUERTO RICO	VIRGIN ISLANDS	NATIONAL DEATH & INJURY TOTALS
TORNADOES																					-	≠					
Number Days Deaths Injuries Property Damage Crop Damage														1													1
HAIL																											
Deaths Injuries Property Damage Crop Damage														?													
THUNDERSTORM WINDS														İ													
Deaths Injuries Property Damage Crop Damage				3										5 ?									ı				
HIGH WINDS	-																					(i				
Deaths Injuries Property Damage Crop Damage			4	4				? 5			5		?		5		6	4	?		3						1 2?
LIGHTNING																											
Deaths Injuries Property Damage Crop Damage															4												
FLASH FLOODS																											
Deaths Injuries Property Damage Crop Damage													4				4										
FLOODS																											
Deaths Injuries Property Damage Crop Damage				?				?			7				į			4									?
HEAVY SNOWSTORMS AND BLIZZARDS @																											
Deaths Injuries Property Damage Crop Damage	2	3 ? 6 4	? ? 8	5		?	? 14 7 ?	?	1	,	4 3		?	?	4	1 ? 8	1 5]	?	?							6? 16?
ICE STORMS #					ļ																Ì						
Deaths Injuries Property Damage Crop Damage				4		-	7 7		3		5		?	?													?
HURRICANES AND TROPICAL STORMS																						}					
Deaths Injuries Property Damage Crop Damage																								100 7 7			100
ALL OTHERS												-				ļ								ļ			
Deaths Injuries Property Damage Crop Damage	6		?	7		5		?		5													3				5

CORRECTIONS

		CAL	РАТН	Ŧ	NO. PERS		ESTIM. DAM					CAL	РАТН	Ĕ		. OF	ESTIM. DAM		
PLACE	DATE	TIME - LO STANDARD	LENGTH OF F	WIDTH OF PA (YARDS)	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM	PLACE	DATE	TIME - LO STANDARD	LENGTH OF F	WIDTH OF PA	KILLED	INJURED	PROPERTY	CROPS	CHARACTER OF STORM

33 OH10

APRIL 1965

DEATH COUNT CHANGE:

Following is a revised report that originally appeared on page 29 of the April, 1965 issue. This latest version includes a change in the death count.

Seneca County Rockaway Area

Il 2215EST 20 300 4 30 5 0 Tornado (F3) This tornado first appeared a little south of Alvada, where it damaged a factory building. It then followed a hit-skip path for ten miles to the east, and finally established firm contact with the ground about three miles southeast of Tiffin. It continued east for about another ten miles, maintaining firm contact with the ground. The storm finally litted about three miles southeast of Republic. It barely missed several small communities enroute, but struck solidly in Rockaway, which had four fatalities, as well as four homes destroyed and three more heavily damaged. M??P M??P F??P F??P.

STORM SUMMARY

CORRECTIONS

APRIL 1965

1. OHIO

- Page 29 - Tornado deaths = 60 (vice 57)

JULY 1986

1. WEST VIRGINIA - Page 76 - Hail Damage; Property = ?, Crops = ?

REFERENCE NOTES

†	Storm	damage	categories	are	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

- Miles instead of yards
- ** Yards instead of miles
- @ Includes heavy sleet storm
- # Freezing drizzle and freezing
 rain, commonly known as glaze
 - Not received or incomplete
- O/c Under Estimated Damage,

Property/Crops, indicates crop

damage amount is included

in the figure given

<u>Definition of Fujita Tornado Scale (F scale)</u>

- (FO) Gale tornado (40-72 mph): Light damage Some damage to chimneys; break branches off trees; push over shallow-rooted trees; damage sign boards.
- (F1) Moderate tornado (73-112 mph): Moderate damage The lower limit (73 mph) is the beginning of hurricane wind speed; peel surface off roofs; mobile homes pushed off foundations or overturned; moving autos pushed off the roads.
- (F2) Significant tornado (113-157 mph): Considerable damage Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
- (F3) Severe tornado (158-206 mph): Severe damage Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; heavy cars lifted off ground and thrown.
- (F4) Devastating tornado (207-260 mph): Devastating damage Well-constructed houses leveled; structure with weak foundation blown off some distance; cars thrown and large missiles generated.
- (F5) Incredible tornado (261-318 mph): Incredible damage
 Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 m; trees debarked; incredible phenomena will occur.
- (F6-F12) (319 mph to Mach 1, the speed of sound): The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.

(F0+F1) Weak Tornado

(F2+F3) Strong Tornado

(F4+F5) Violent Tornado

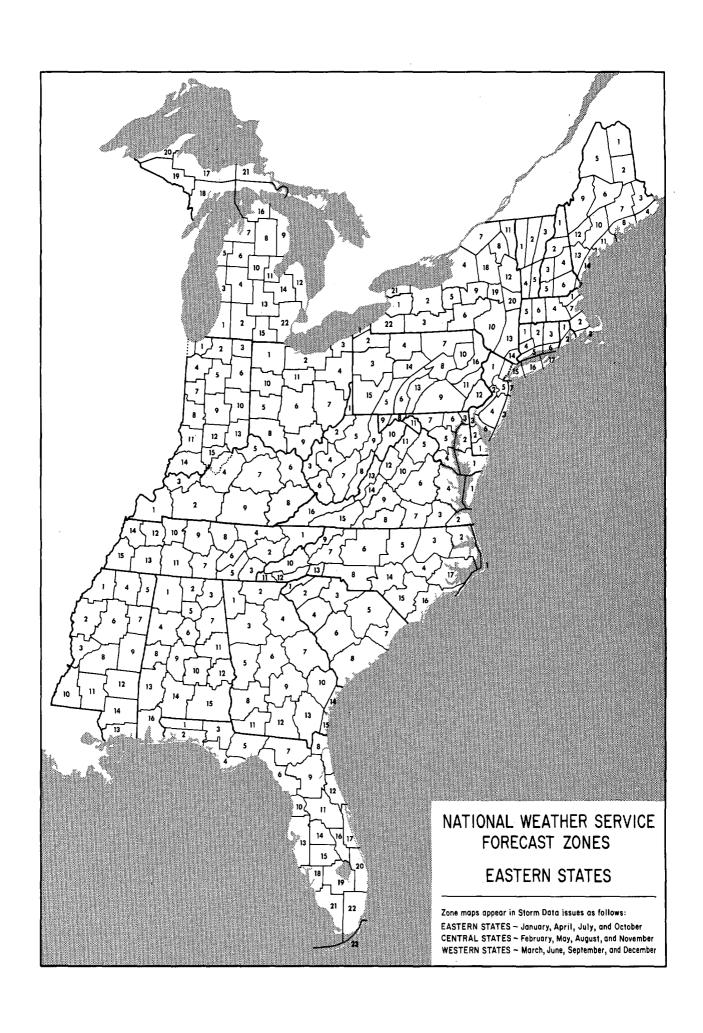
From J. Atmos. Sci., August 1981, p. 1517-1519











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