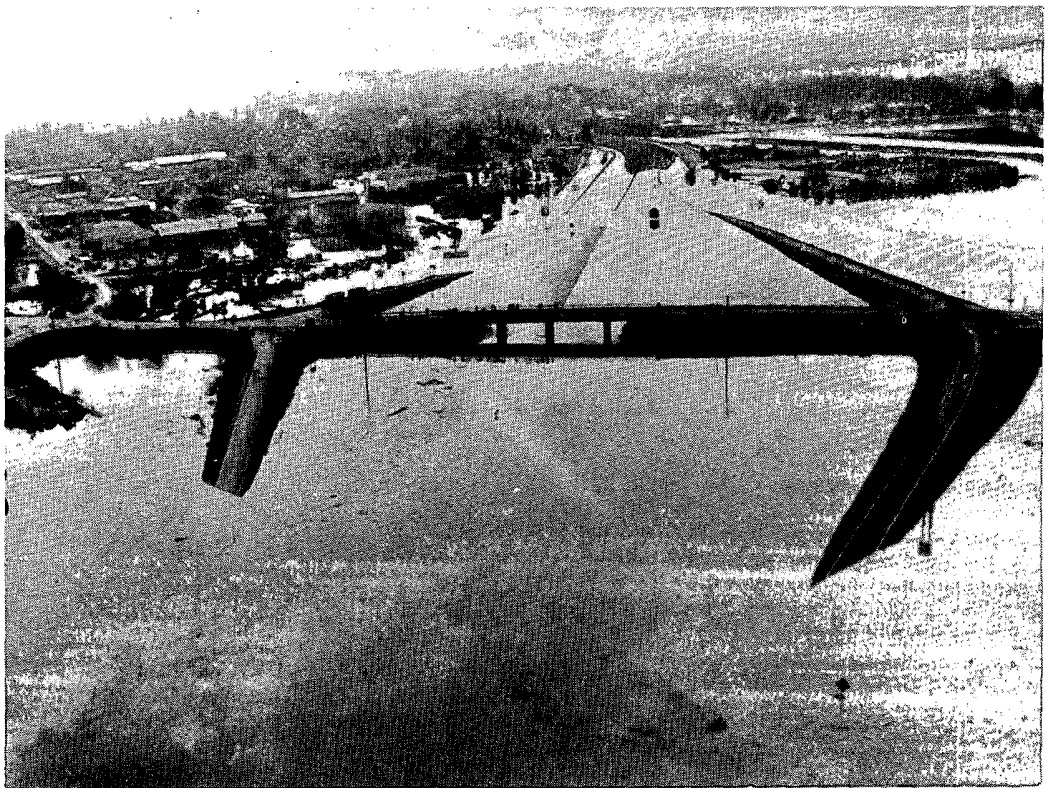


# STORM DATA

## AND UNUSUAL WEATHER PHENOMENA WITH LATE REPORTS/CORRECTIONS



"I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION AND IS COMPILED FROM INFORMATION RECEIVED AT THE NATIONAL CLIMATIC DATA CENTER, ASHEVILLE, NORTH CAROLINA 28801.

*Kenneth D. Haden*

DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

Extensive data collection efforts are provided by the National Weather Service.

**NOAA** NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE / NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NC

COVER: Floodwaters of the Chehalis River inundate Interstate 5 in Chehalis, Washington on January 10th. The highway remained closed for about four days. Photograph by Alan Berner/Seattle Times (copyrighted 1990) and supplied by Todd Dankers, WSFO Seattle.

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### **STORM DATA**

(ISSN 0039-1972)

National Climatic Data Center

Editor: Roger W. Tanner

Associate Editor: Vince Miller

Publication Staff: Lanny Dimmick, Jay Hollifield, and Sara Lackey

STORM DATA is prepared, funded, and distributed by the National Oceanic and Atmospheric Administration (NOAA). The Outstanding Storms of the Month section is prepared in cooperation with Mr. Vince Miller, Associate Editor. Mr. Miller resides in Marietta, GA. He is a broadcast meteorologist for THE WEATHER CHANNEL®

The Storm Data and Unusual Weather Phenomena Narratives and Hurricane/Tropical Storm summaries are prepared by the National Weather Service. Monthly and annual statistics and summaries of tornado and lightning events resulting in deaths, injuries, and damage are compiled by cooperative efforts between the National Climatic Data Center and the National Severe Storms Forecast Center.

STORM DATA contains all confirmed information on storms available to our staff at the time of publication. However, due to difficulties inherent in the collection of this type of data, it is not all-inclusive. Late reports and corrections are printed in the January, April, July, and October editions.

Maps of the National Weather Service Forecast Zones which are used in the Storm Data and Unusual Weather Phenomena section will be printed in all editions.

Except for the limited editing for grammatical errors, material submitted are generally published as received.

Subscription, pricing, and ordering information is available from:

National Climatic Data Center  
Federal Building  
Asheville, NC 28801-2696  
(704) 259-0682 or (704) CLIMATE



## EDITORIAL STAFF

Above left photo: (from the top)

Roger Tanner, Editor - Served in U.S. Navy (1963-1973) as a weather observer and a forecaster. Employed as a meteorological technician and as a computer programmer/analyst at the National Climatic Data Center since 1973. Present position is Chief, Computer Support and Product Generation Section, Data Operations Branch.

Lanny Dimmick, Computer Support Specialist - After a tour as a weather observer in the U.S. Air Force from 1959 to 1964, Lanny gained employment as a meteorological technician with the Polar Meteorology Group in Silver Spring, MD until 1967. From 1967 through 1981, he worked as a physical science technician/programmer at the Geophysical Fluid Dynamics Laboratory in Princeton, NJ. Since 1982, he has been employed by the National Climatic Data Center as a computer programmer/analyst.

Sara Lackey, Editorial Assistant - Since 1965, Sara has worked in several positions at the National Climatic Data Center including clerk-typist, editorial clerk, and computer clerk. She has worked with *STORM DATA* longer than any other member of our editorial staff, assisting with proofreading and layout since 1981.

Jay Hollifield, Meteorological Verifier - Jay has worked as a meteorological technician at the National Climatic Data Center since 1959. He served from 1955 to 1959 in the U.S. Air Force as a weather observer.

Above right photo:

Vince Miller, Associate Editor - Vince is the only private-sector member of our staff. His energy, enthusiasm, and long-time interest in thunderstorms and severe and unusual weather have resulted in a cooperative agreement with NOAA for his assistance with *STORM DATA*.

Vince received his Master's Degree from the University of Oklahoma, and has worked as a television meteorologist in Oklahoma City, OK and in Ames/Des Moines, IA. He has been an on-camera meteorologist for THE WEATHER CHANNEL® in Atlanta, GA for the last eight years.

## EDITOR'S NOTES:

During November 1989 the National Climatic Data Center (NCDC) was informed that Dr. Fujita (University of Chicago) would discontinue his position as editor of *STORM DATA* effective with the December 1989 issue. We are, and I am certain the meteorological community as a whole, is saddened by this action. We extend our thanks and appreciation to Dr. Fujita, Duane Stiegler, and their staff for the outstanding efforts and significant improvements in *STORM DATA* during the last several years.

We at NCDC realize that we have some "big shoes to fill" by continuing to publish *STORM DATA*. We will make every effort to produce a high quality publication in the same basic format established by Dr. Fujita's staff.

Although *STORM DATA* will generally follow the 1989 format, some changes will be made as we introduce more automation in the assembling of data and final composition.

- (a) Cyclone Tracks - The plotting of cyclone tracks and central pressures will be automated. We are presently working with the staff of the *Mariners Weather Log* to produce a projection of these maps that will be beneficial for both publications. The map of cyclone tracks appearing in this issue depicts the results of our initial efforts. These maps will improve during the next few issues.
- (b) Confirmed Tornadoes of the Month - The plots of the confirmed tornadoes are now being produced by a computer and an electrostatic plotter using data provided by the National Severe Storms Forecast Center (NSSFC).
- (c) Additional Computer-Generated Graphics - During the next few months we will continue to improve our capability to generate computer graphics suitable for publication in *STORM DATA*. Since NCDC has assumed most of the publishing tasks formerly done by Dr. Fujita's staff without additional funding or staffing, we must automate in every area that is possible and practical.
- (d) Biography Page - Beginning with this edition, a page will be included to highlight persons involved with publishing, data gathering, data verification, and support functions of *STORM DATA*.

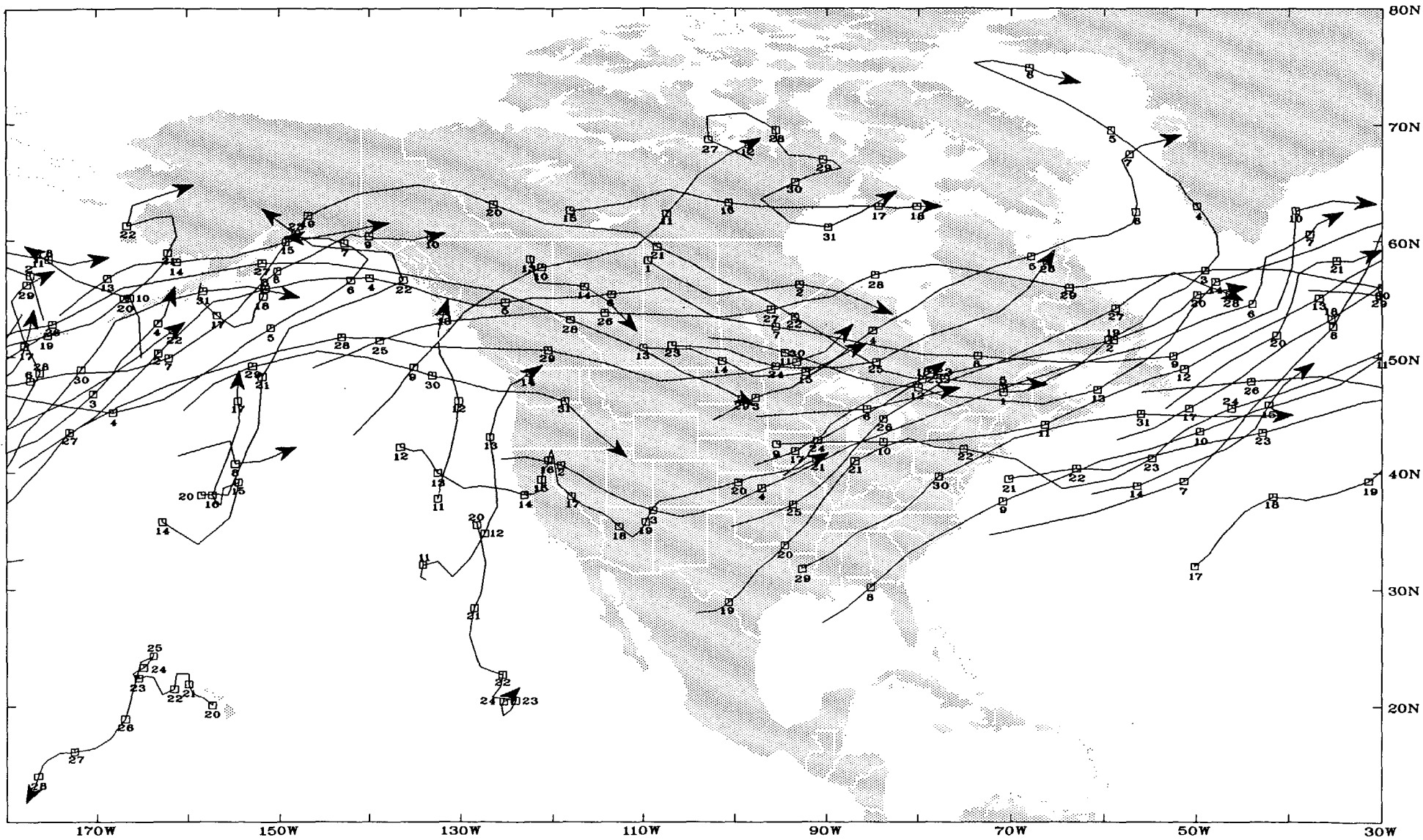
- (e) Storm Shorts - The occasional section "Storm Shorts" will be renamed "Et cetera." In addition to publishing photographs received, but not included in the Outstanding Storms of the Month section, we will use this section to publish other interesting material submitted by our readers.
- (f) Storm Data and Unusual Weather Phenomena - The readability of this section has been significantly improved by utilizing desktop publishing methods and retyping the National Weather Service reports with a small standard font. The use of a laser printer also improves clarity. It is expected that the need for retyping these reports will be eliminated within a few months as the technology is acquired for receiving this information electronically.

A major problem we are encountering is that of acquiring photographs and captions of significant weather events. We request that any subscribers or other interested persons who would share such photographs (black & white or color) for publication, please mail these to:

Mr. Vincent Miller  
1464 Wood Thrush Way  
Marietta, GA 30062

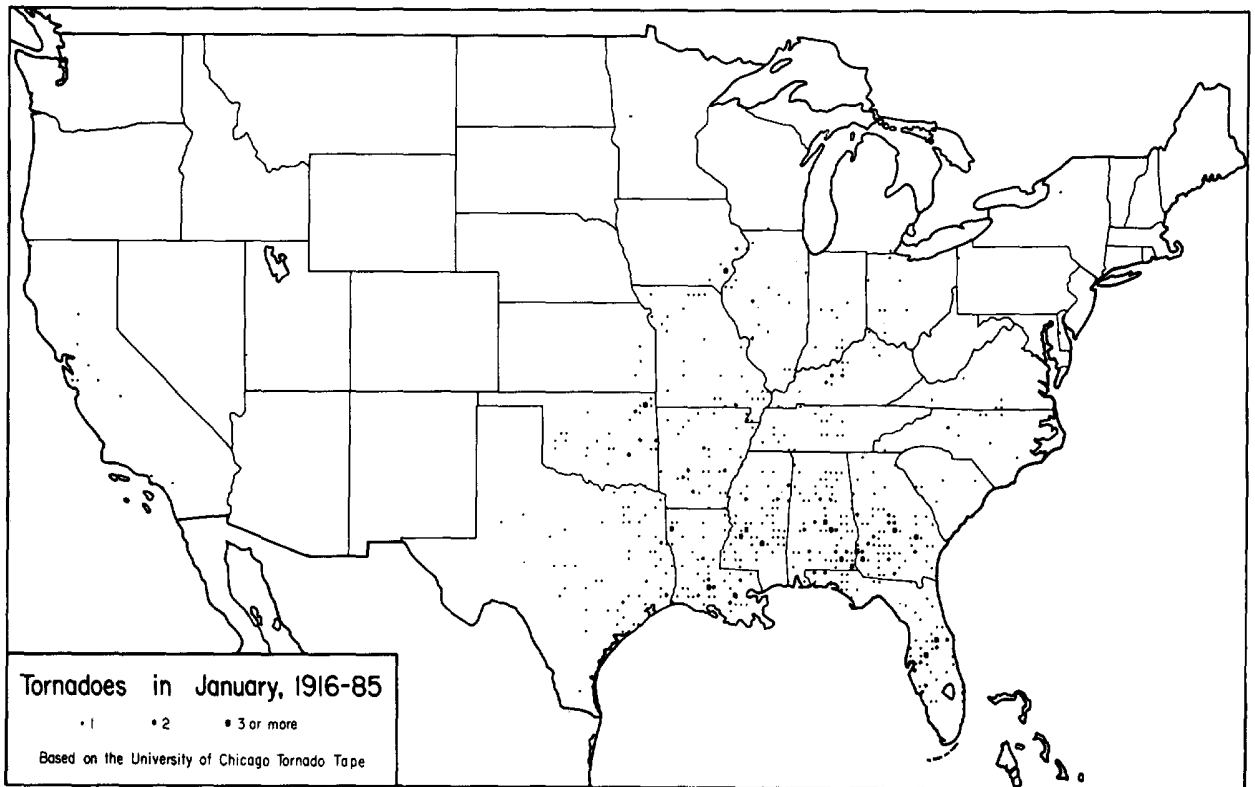
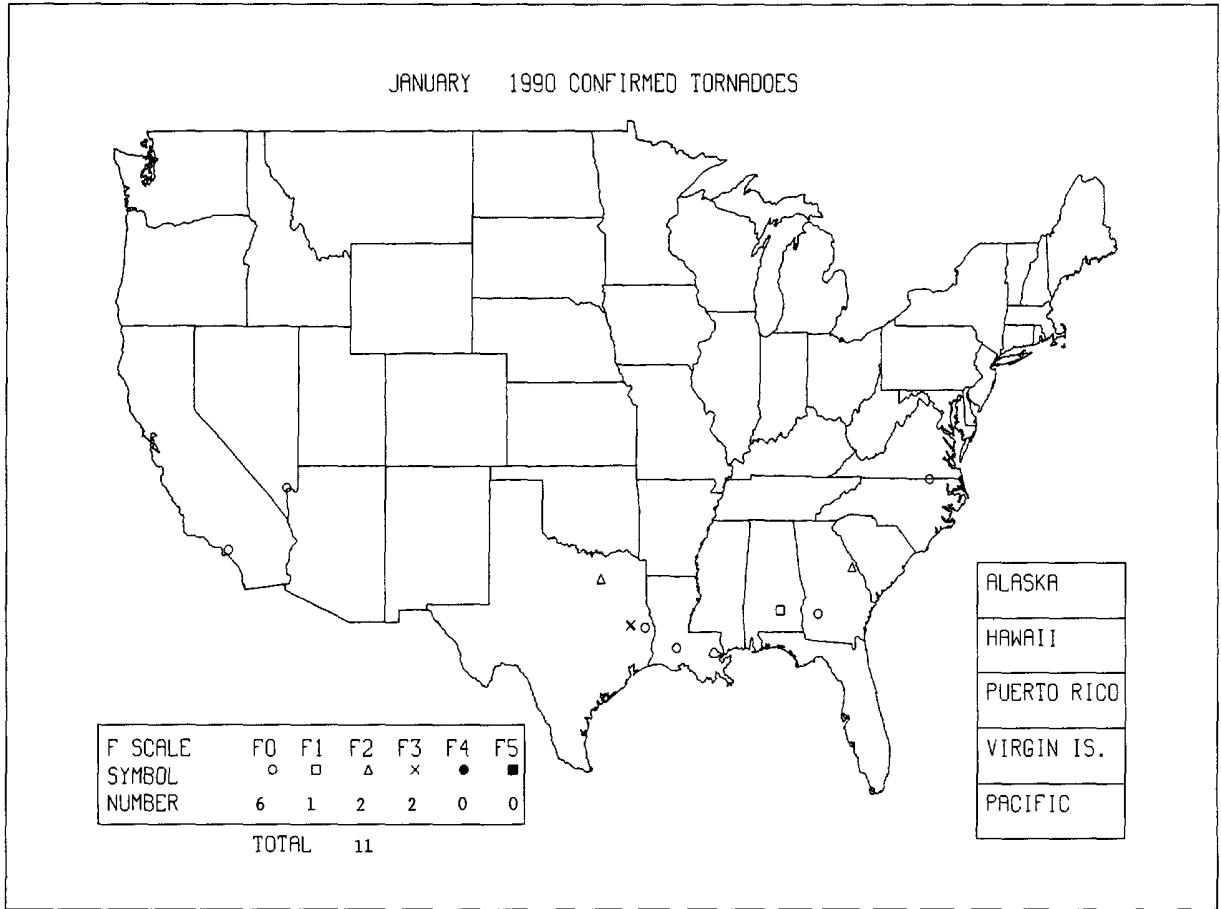
Any material received will be used for publishing **STORM DATA** only. Material will be returned if requested with the original submission.

*Roger W. Tanner*  
Roger W. Tanner  
Editor



CYCLONE TRACKS AND DATES - January 1990

# OUTSTANDING STORMS OF THE MONTH



# 1. TEMPERATURE ANOMALIES - JANUARY 1990

What a difference a month makes! A comparison of temperature rankings for December 1989 and January 1990 are shown in Table 1. The nine climatically homogenous regions are shown in Fig. 1.

After the fourth coldest December of record (records date back to 1895) for the contiguous United States, January 1990 became the warmest of record (Fig. 4). In fact, almost all of the contiguous U.S. reported temperatures above normal (Fig. 2 and 3).

TABLE 1.  
Temperature rankings comparing December 1989 and January 1990, based on the period 1895-1990.  
1 = coldest; 96 = warmest.

Region	Dec '89	Jan '90
National	4	96
Northeast	1	91
East North Central	2	95
Central	1	93
Southeast	1	85
West North Central	22	96
South	2	88
Southwest	49	71
Northwest	55	92
West	58	58

From National Climatic Data Center, NOAA

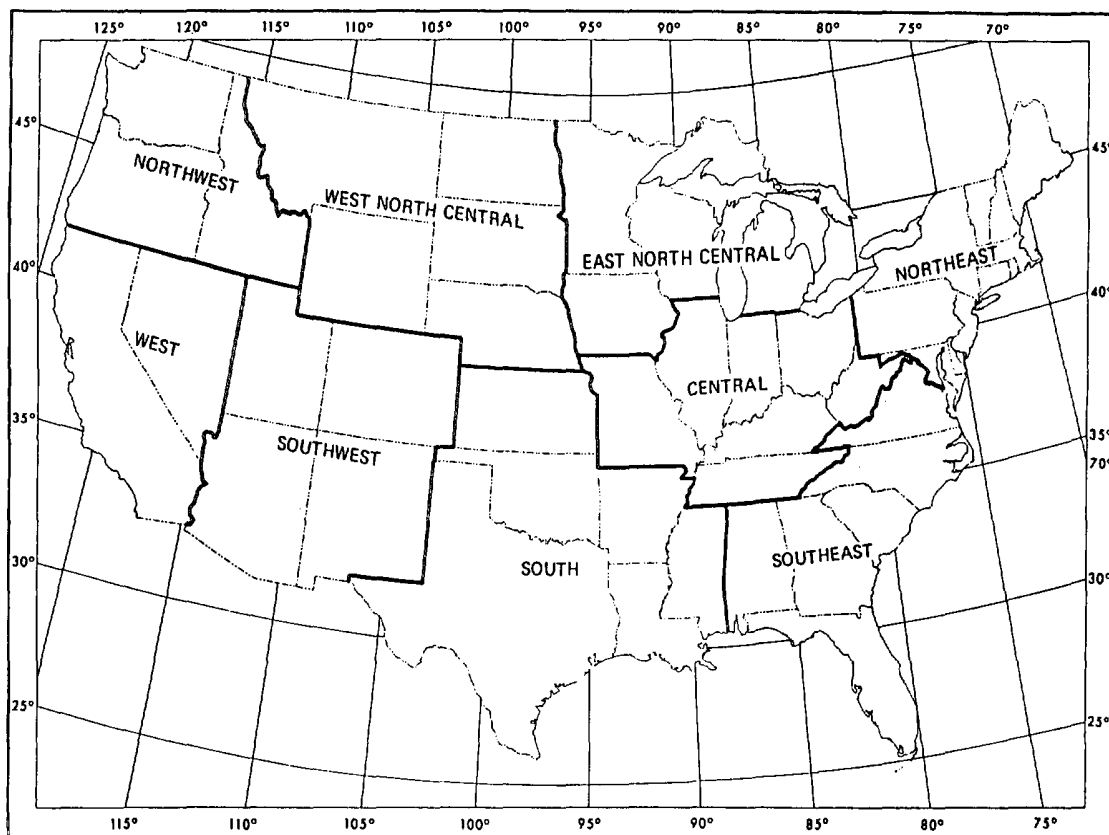


Fig. 1



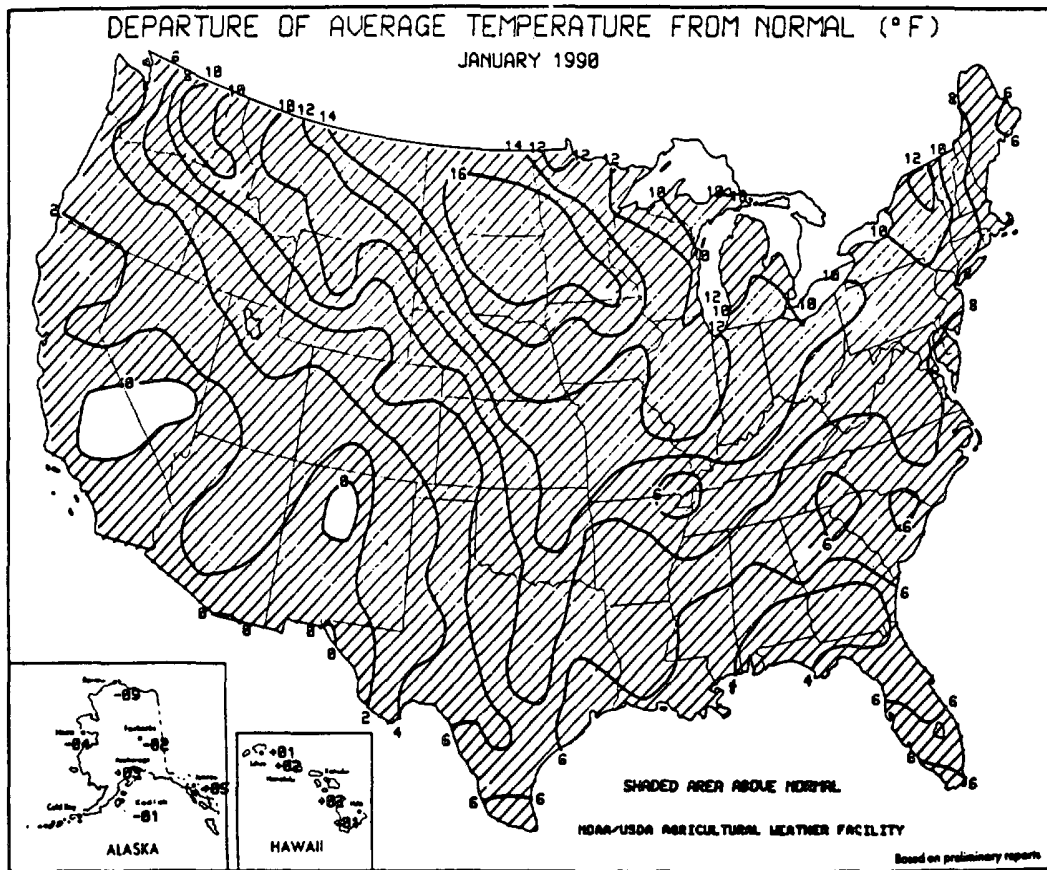


Fig. 2

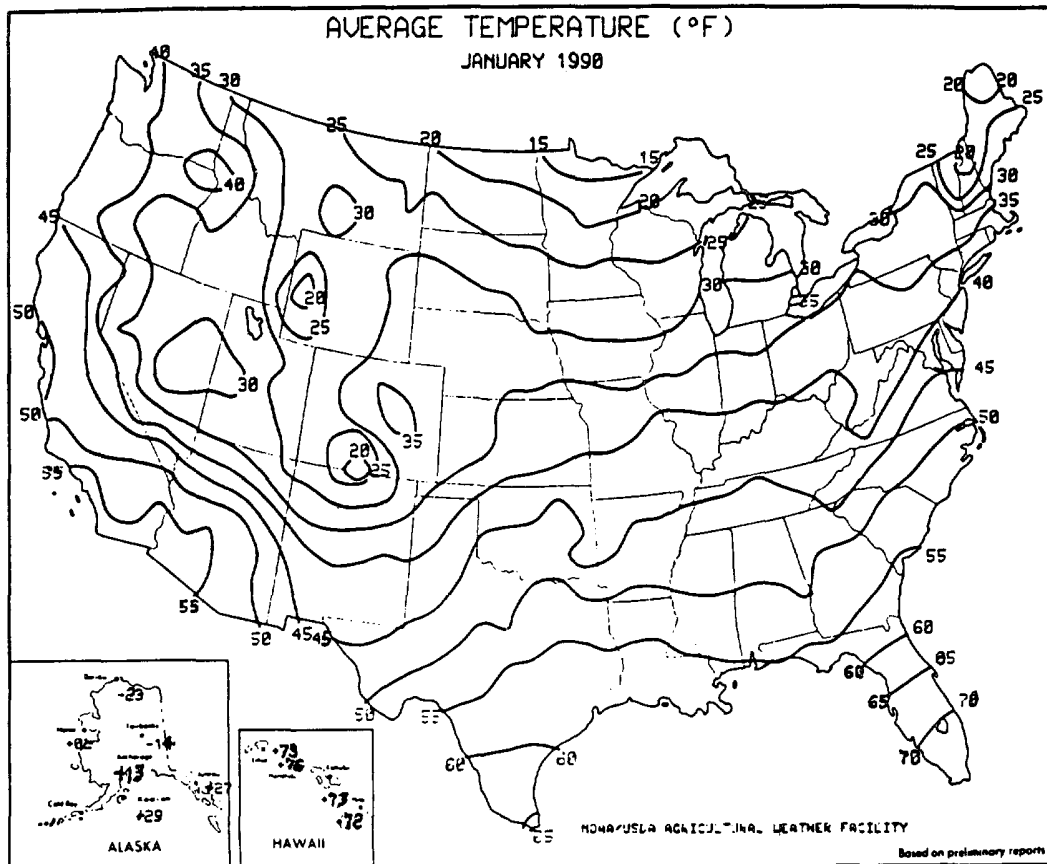


Fig. 3

Above figures reprinted from Weekly Weather and Crop Bulletin - February 6, 1990.

# U.S. NATIONAL TEMPERATURE

JANUARY, 1895-1990

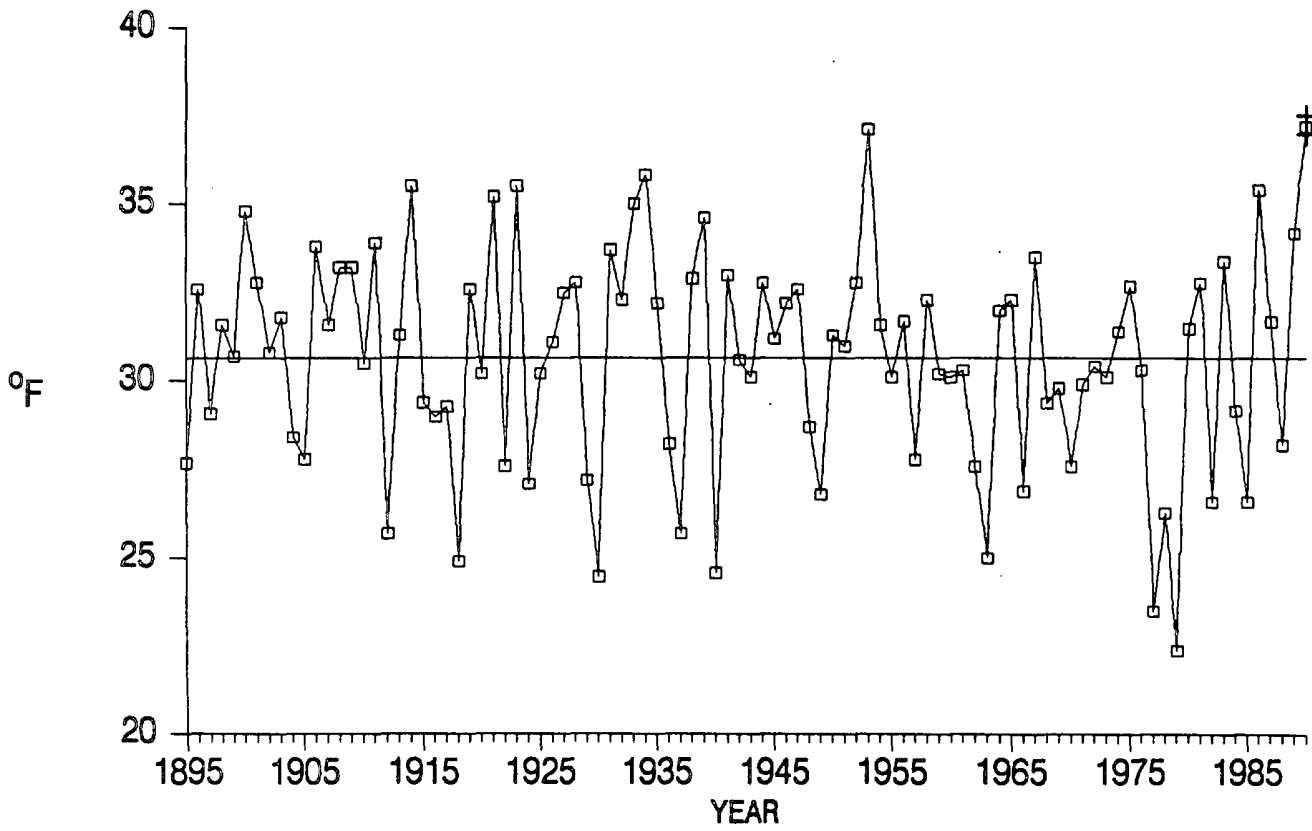


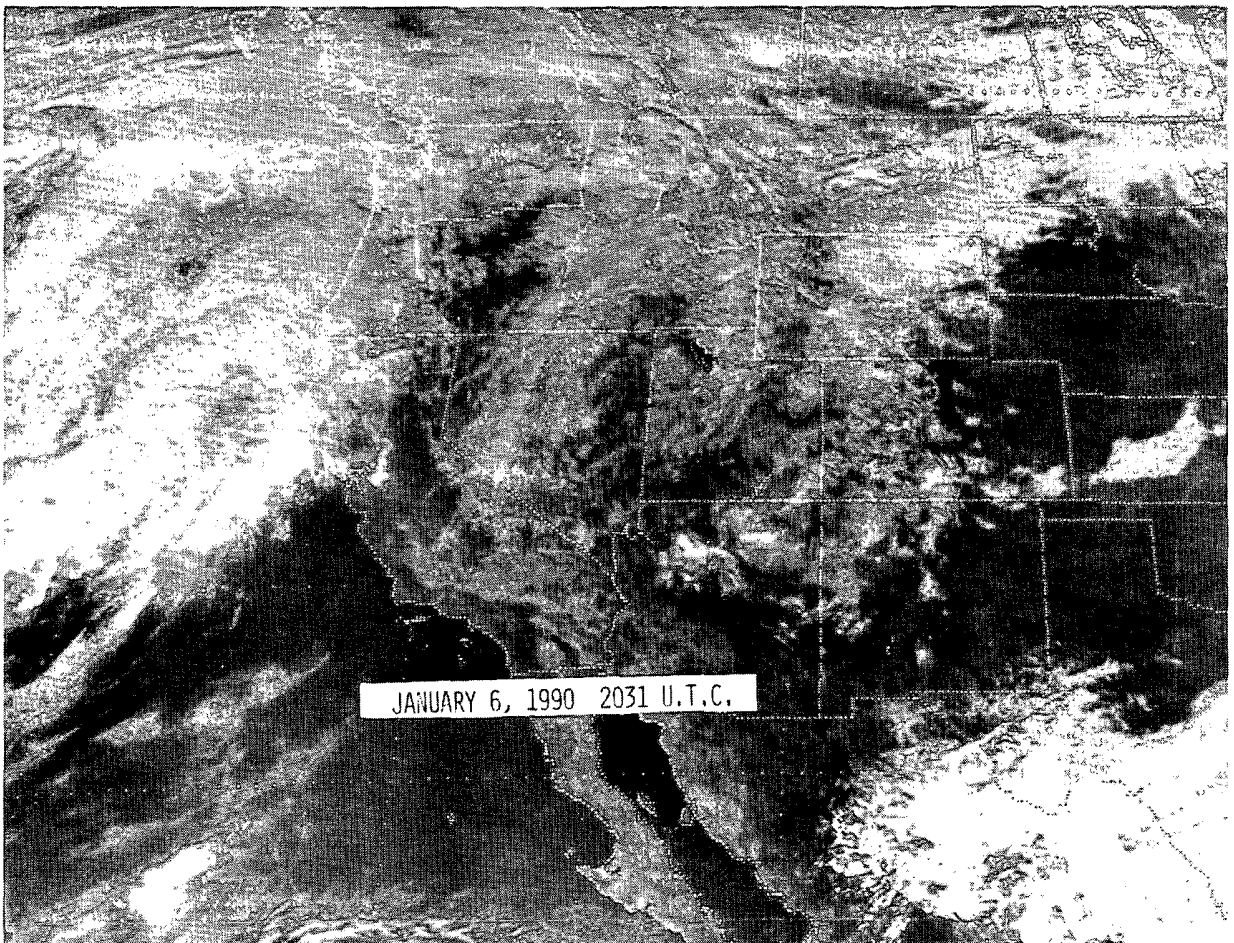
Fig. 4 National Climatic Data Center, NOAA

## 2. HEAVY RAINS and HIGH WINDS in NORTHWEST STATES January 6-11

A series of strong Pacific weather systems plowed across the Northwest U.S. between January 6th and 10th resulting in injuries, damages, and/or deaths in many areas of Washington, Oregon, Idaho, and Wyoming.

### January 6-7.

A vigorous frontal system extending from a low pressure center over Queen Charlotte Islands crossed the Washington coast on January 6th bringing rains in excess of an inch and high winds to western Washington and Oregon. Aberdeen, WA received a 24-hour total of 2.43 inches of rain by late afternoon on January 6th. Wind gusts to 58 mph were reported at Ocean Shores and Westport, WA. Although no injuries were reported as a result of this weather system, damage from falling trees and limbs to buildings and vehicles was estimated to be in the hundreds of thousands of dollars in both states. Rivers in the western portion of these states became swollen to near flood stage.

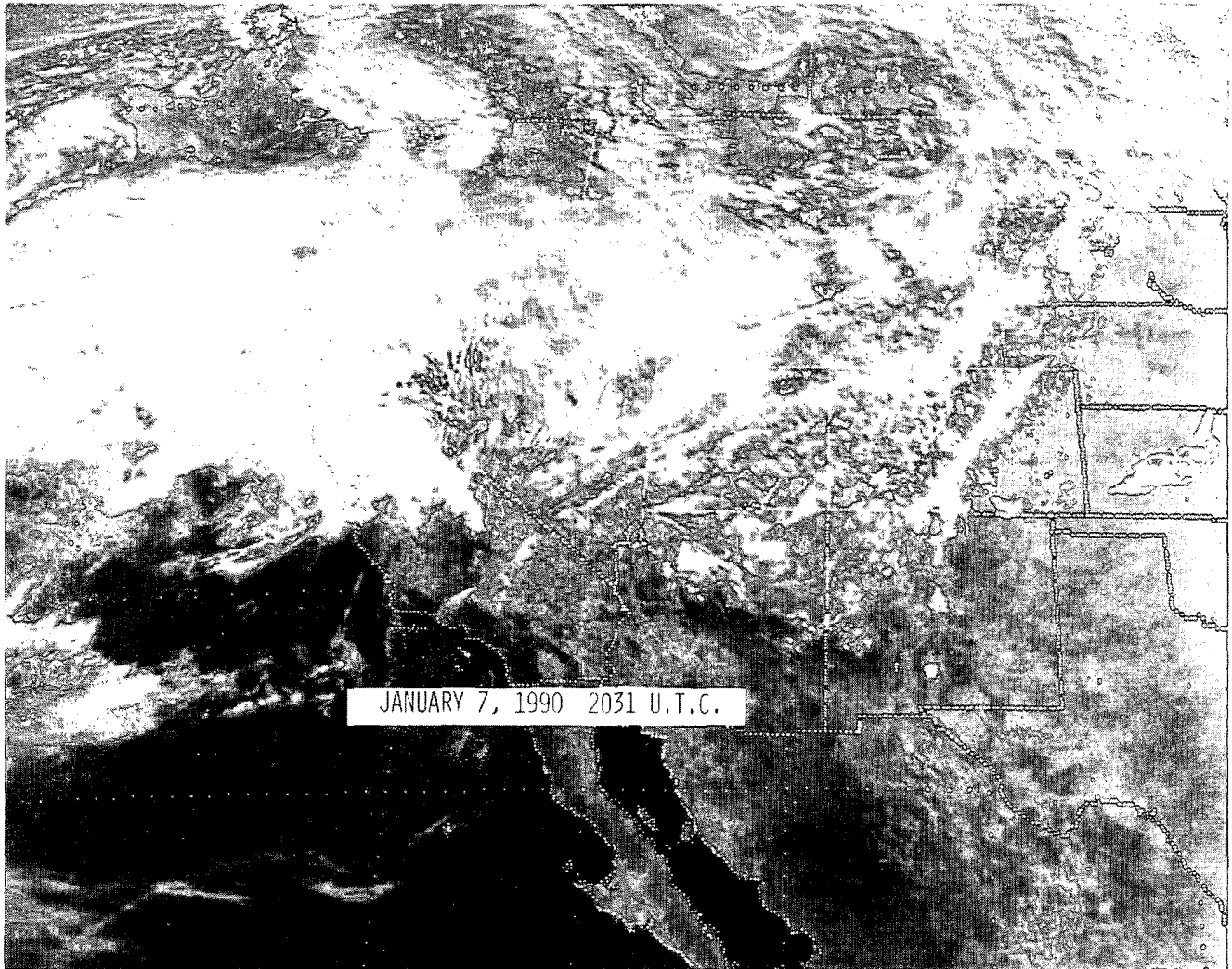


*Satellite Data Services Division, National Climatic Data Center*

### January 7-8:

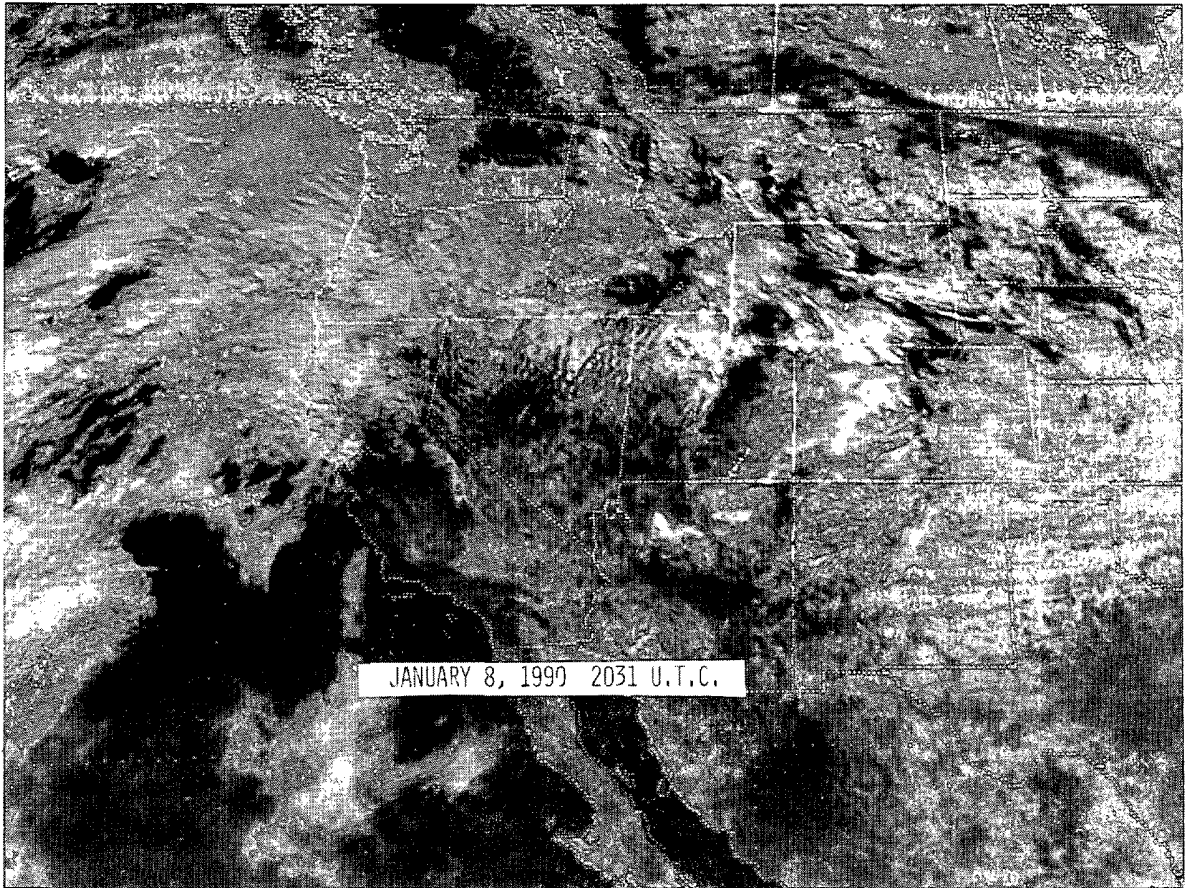
A rapidly intensifying low pressure center developed during the evening of January 7th near the mouth of the Columbia River. This low maintained its strength as it moved through most of Washington, but began to weaken as it approached the Idaho panhandle late in the morning of January 8th. Again heavy rains and high winds were the order of the day as this system swept across the Northwest U.S.

Two deaths occurred when a tree fell on a girl and when a young man's car drifted into the oncoming lane during "very heavy rain" in Oregon. One fatality related to this storm was reported in Idaho where a man died of injuries received when his pickup truck collided with a downed tree.



*Satellite Data Services Division, National Climatic Data Center*

Rain continued to pour into already swollen rivers and streams. Rainfall totals for January 7th and 8th were 2-5 inches in the western portions of Washington and Oregon. Wind damage was extensive in Washington, Oregon, Idaho, Wyoming, and Colorado as frequent gusts in excess of 70 mph were reported in these states. Winds gusting to 130 mph occurred on Rattlesnake Ridge in Washington while Rendezvous Mountain in Wyoming reported wind gusts to 120 mph.



*Satellite Data Services Division, National Climatic Data Center*

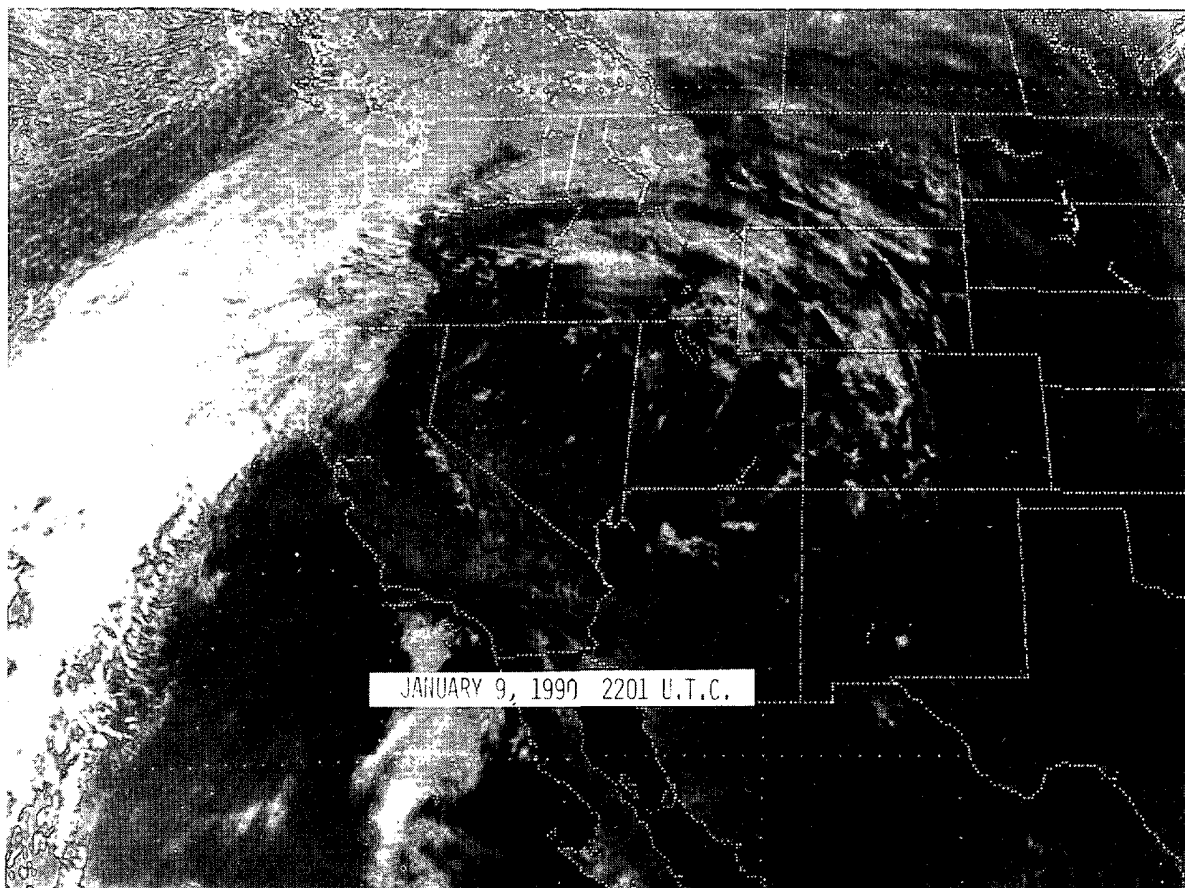


*Wind speeds to 84 mph bent these road signs near Prosser, Washington on January 8th. Photo by Roy Musitelli, courtesy of the Yakima Herald Republic. Submitted by Todd Dankers, WSFO Seattle.*

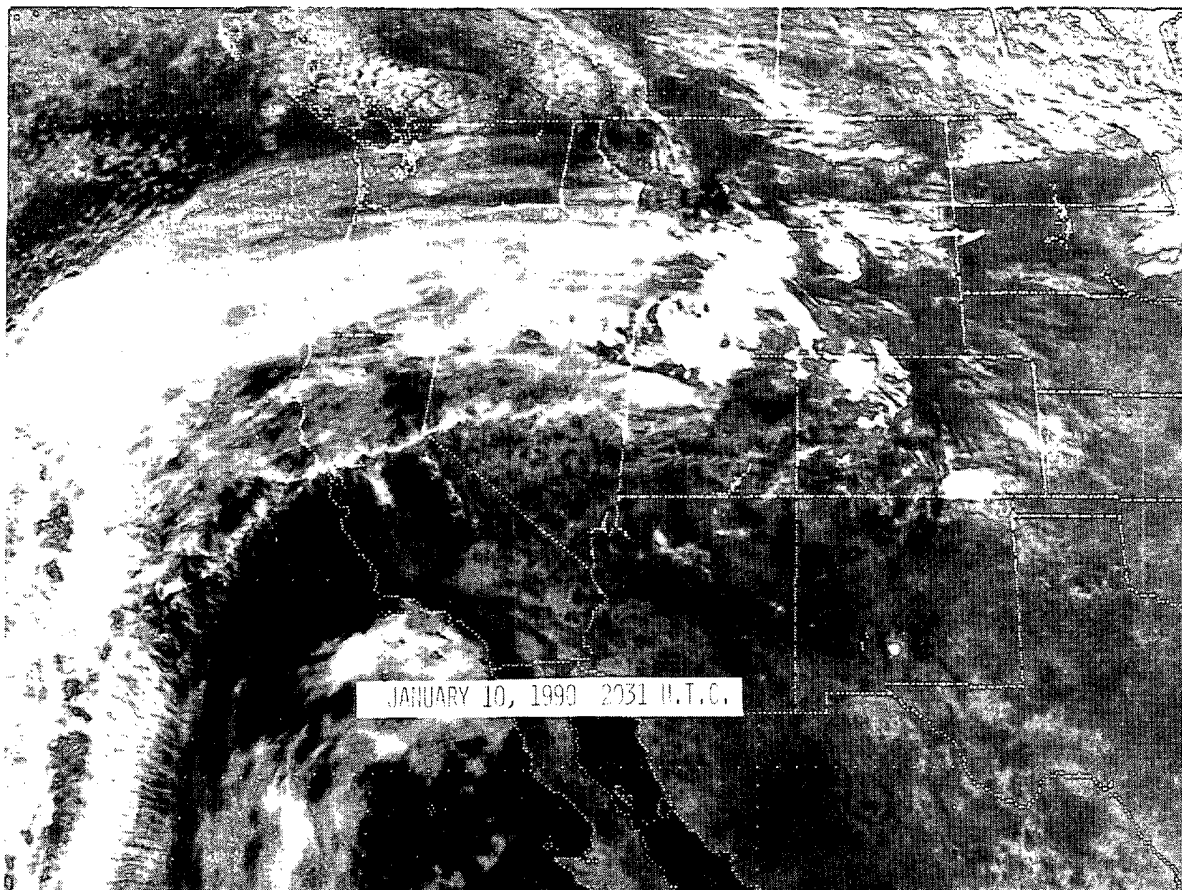
The third in a series of wet storms crossed the Northwest U.S. January 9th and 10th. This system stalled over western Washington and dumped heavy amounts of rain causing flooding of rivers and streams. Flooding was worst on the Chehalis River where record flooding was indicated at several river gages. The Chehalis River rose to eight-and-one-half feet above flood stage at Centralia, WA. The town of Centralia and a 2-mile stretch of Interstate 5 was flooded. Three people drowned and considerable property damage occurred in Washington as a result of this flooding.

A major problem caused by this weather system and the strong high pressure system that followed was property damage due to high wind speeds. Winds exceeding 100 mph were reported in Tillamook County, OR on the 9th. Eastern Wyoming experienced sustained winds of 40 to 50 mph and peak gusts to 90 mph.

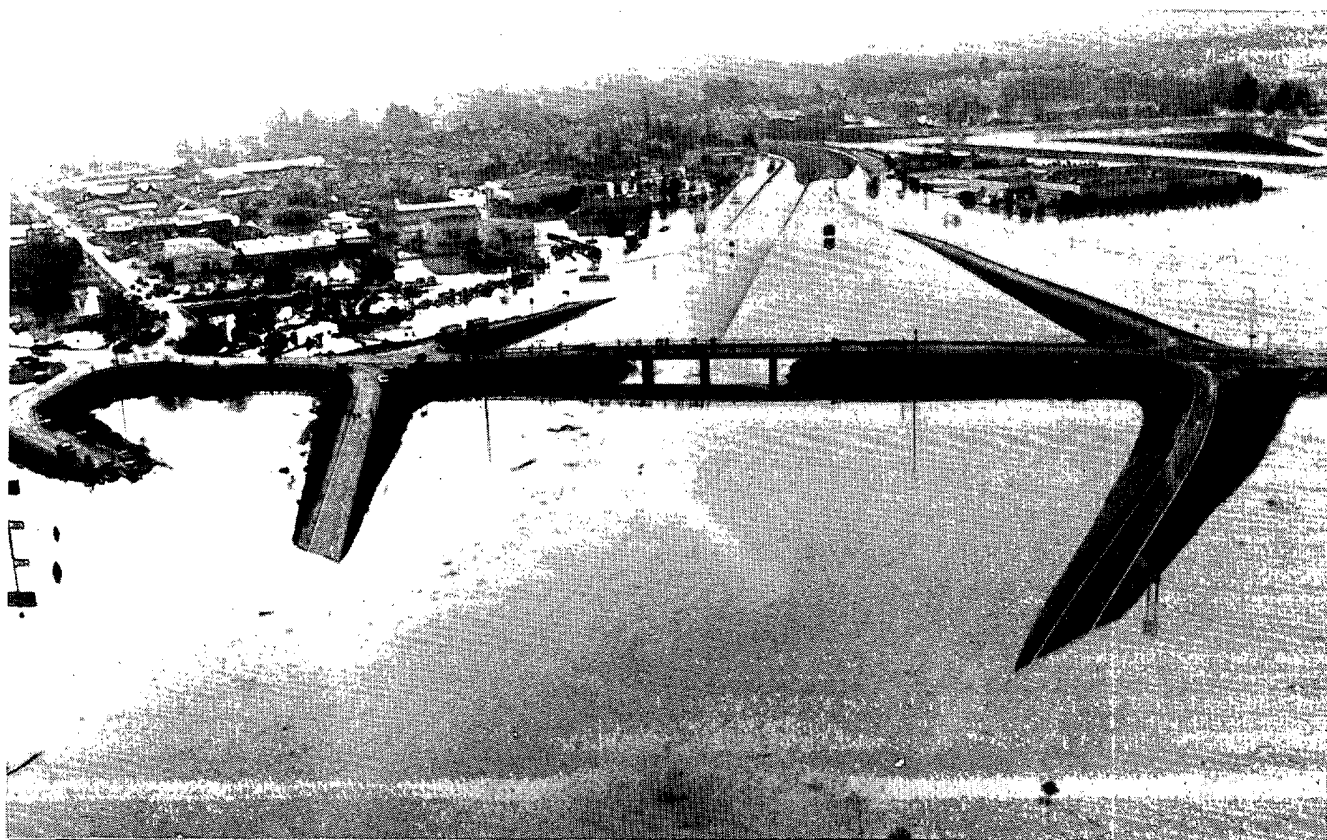
These systems continued gaining strength as they progressed across southern Canada until January 11th when the low pressure center was situated over southern Ontario. The low pressure area began to fill during the morning of January 12th and continued moving eastward along the U.S.-Canadian border. The area of high pressure weakened and moved southeastward. The steep pressure gradient produced earlier by the combined effect of these systems was no longer a threat by early in the morning of the 13th.



*Satellite Data Services Division, National Climatic Data Center*



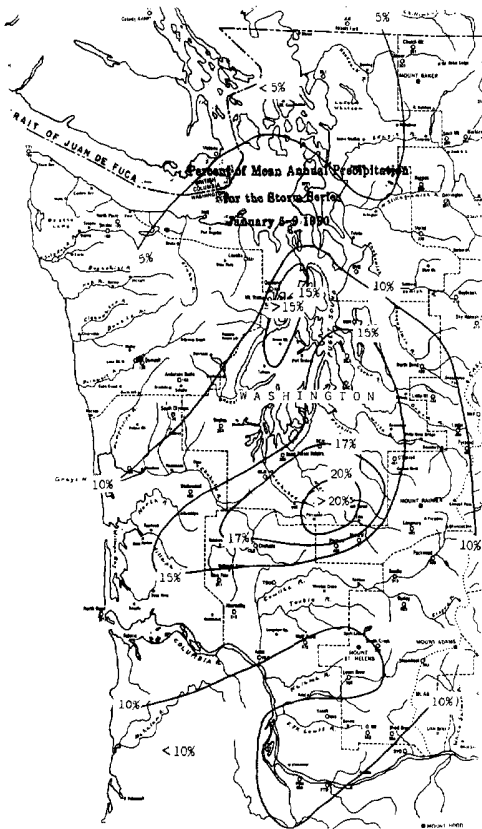
*Satellite Data Services Division, National Climatic Data Center*



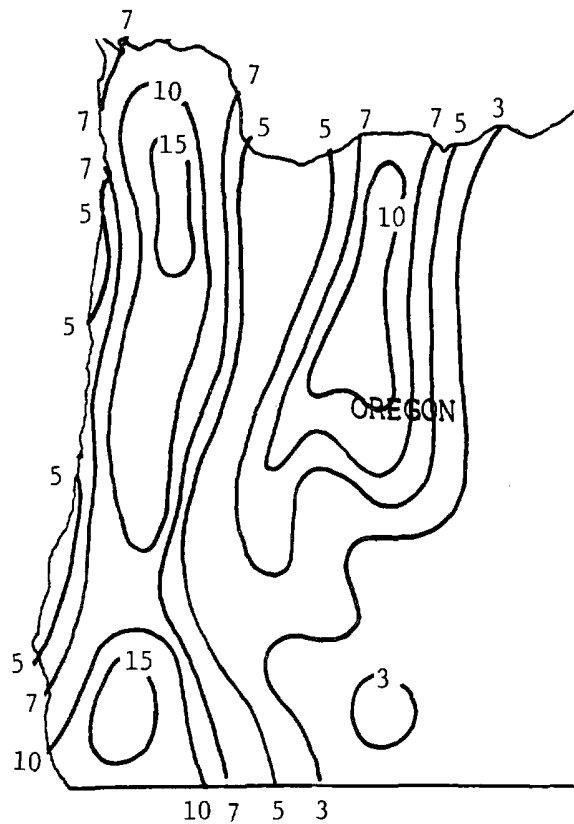
*Flooding of the Chehalis River in Washington on January 10th closes a 2-mile stretch of I-5. Photograph by Alan Berner/Seattle Times (copyrighted 1990) and supplied by Todd Dankers, WSFO Seattle.*



Skookumchuk River floodwaters raging through Centralia, WA - January 10, 1990. Photo by Mark Mansfield; courtesy of Daily Chronicle, Centralia, WA, and supplied by Todd Dankers, WSFO Seattle.



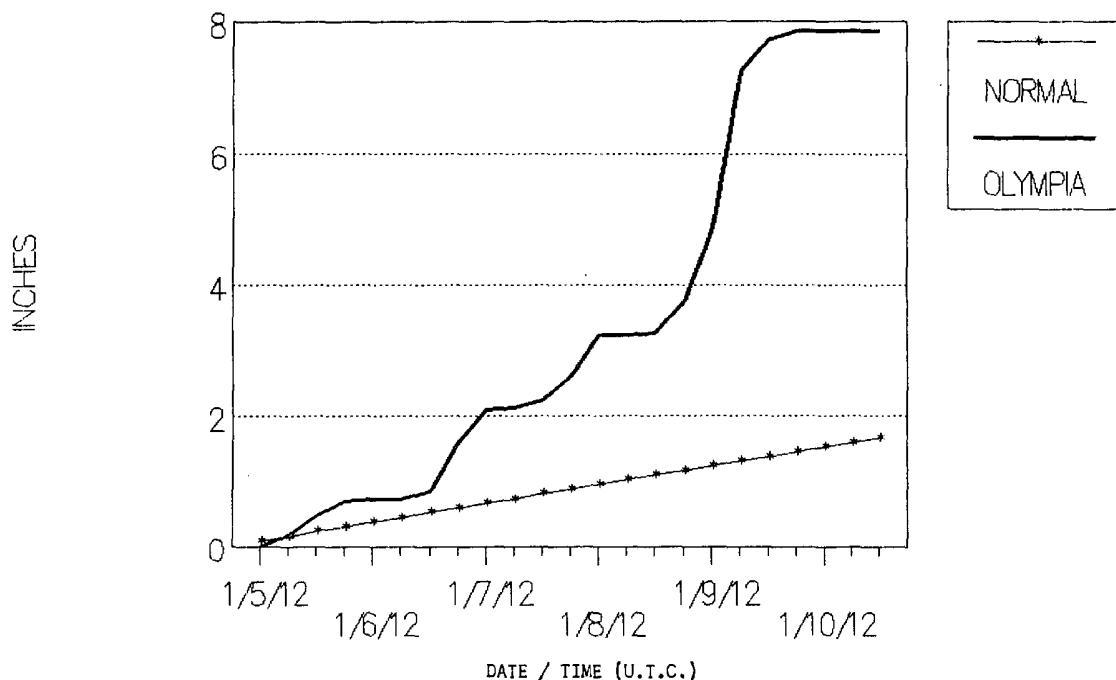
Supplied by Lee Krogh, WSFO Seattle



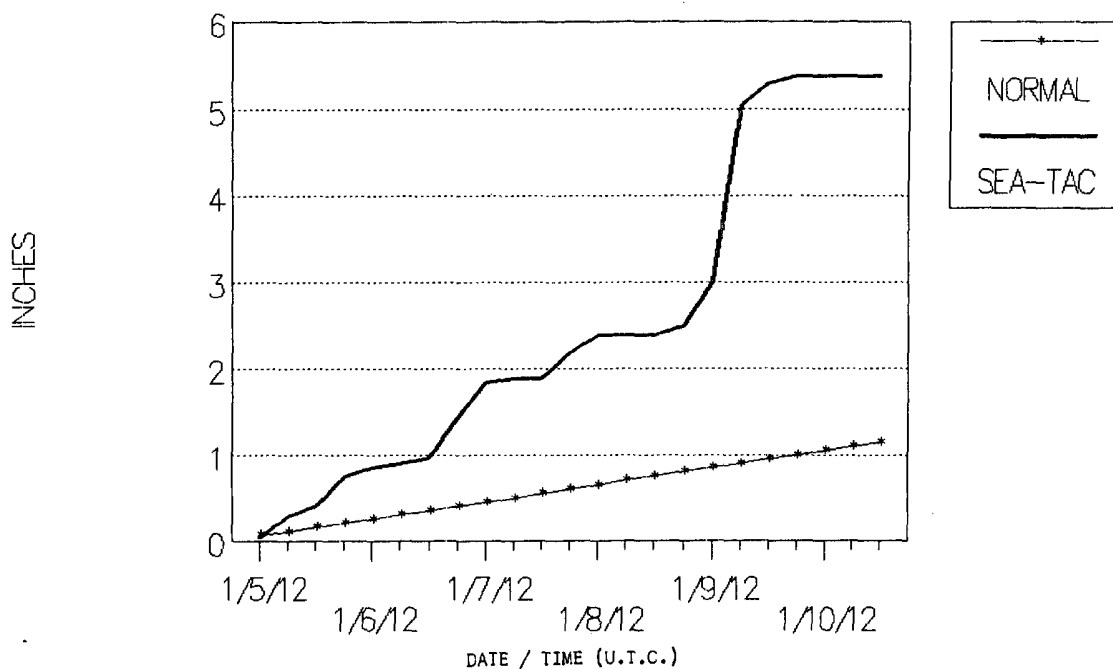
Accumulated precipitation in western Oregon, January 6-10. Redrawn from material supplied by Robert Roe, WSFO Portland.



# 5 DAY ACCUMULATION OF RAIN AT OLYMPIA



# 5 DAY ACCUMULATION OF RAIN AT SEA-TAC AIRPORT



Above graphs supplied by Todd Dankers, WSFO Seattle.



Wind damage in Portland, OR caused by January 9th storm. Photo by Kraig Scattarella, Oregonian Publishing Company, Portland, OR. Supplied by Tom Ainsworth, WSFO Portland, OR.

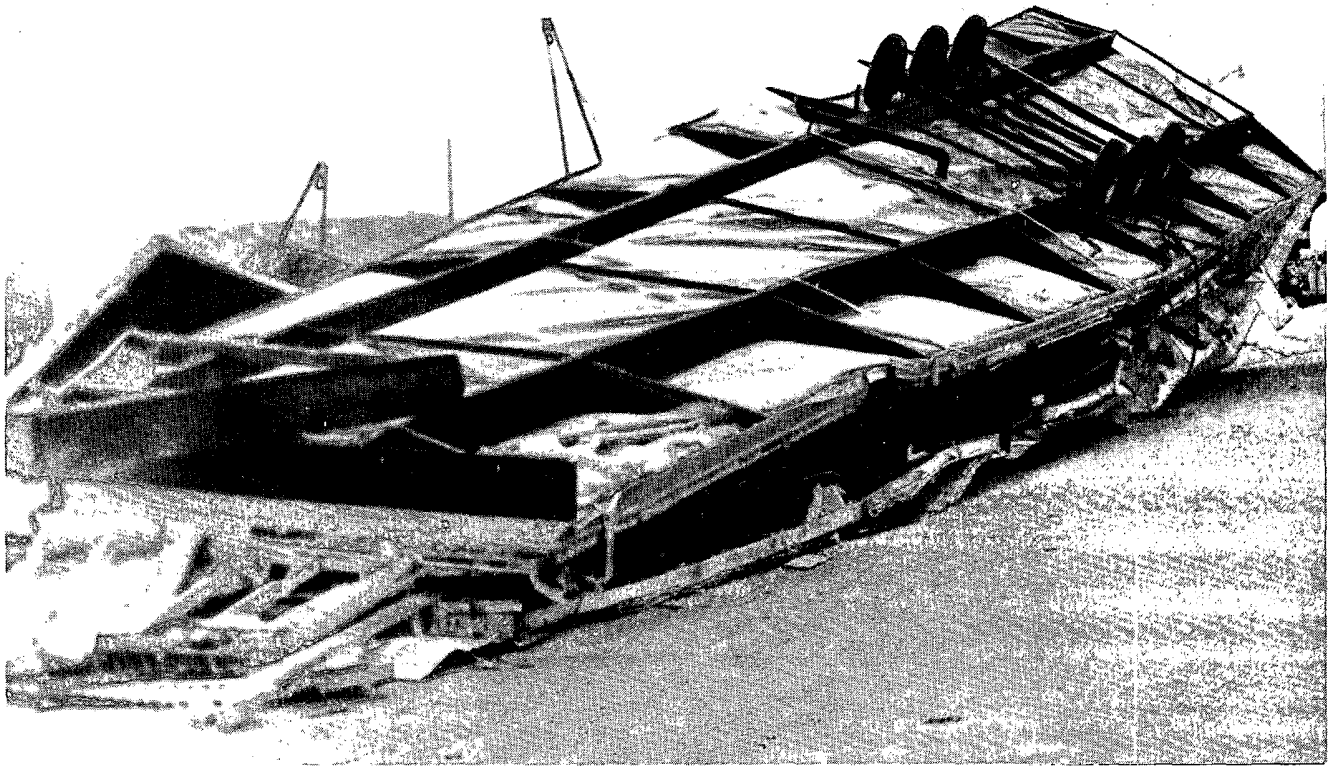
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Rainfall Amounts Across Western Washington for January 5-9

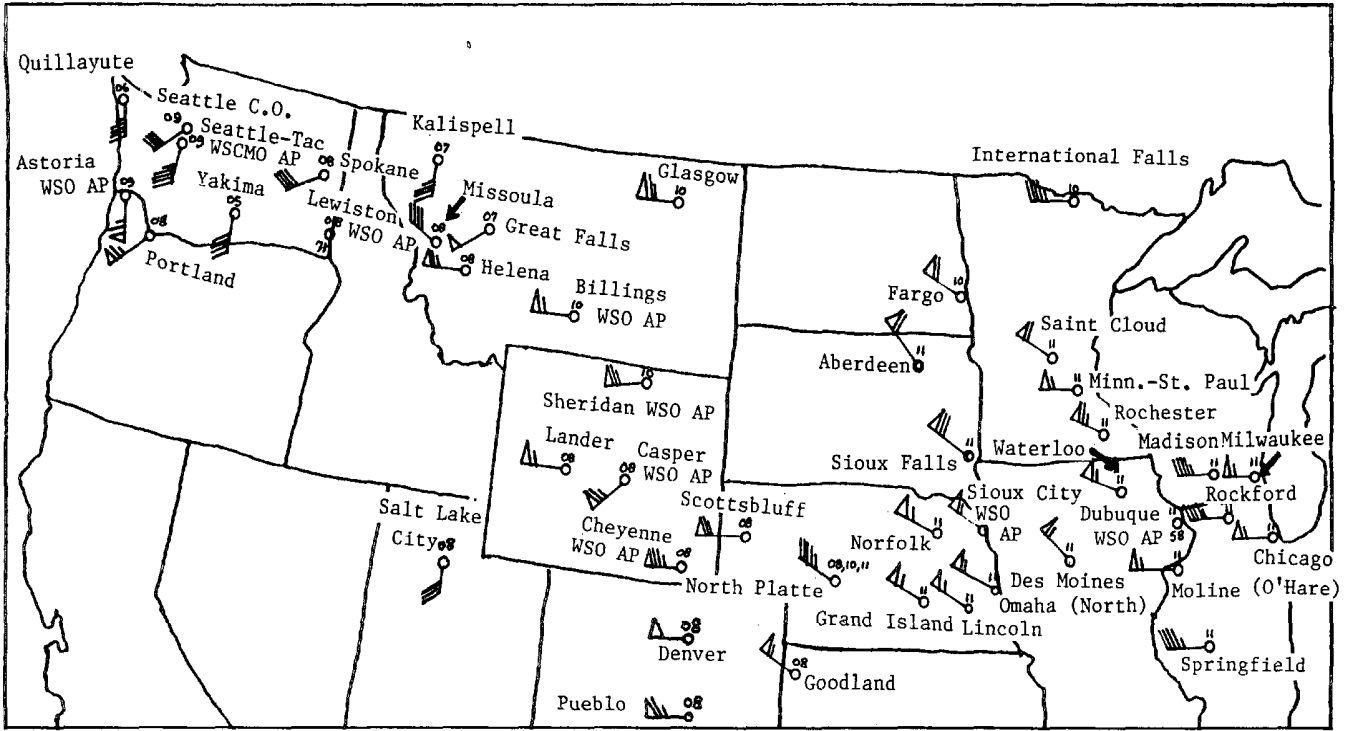
<u>STATION</u>	<u>1/5</u>	<u>1/6</u>	<u>1/7</u>	<u>1/8</u>	<u>1/9</u>
Forks	1.40	.48	1.31	.28	1.20
Ocean Shores	1.45	.59	1.83	.78	2.48
Aberdeen*	.98	2.48	1.59	2.36	1.05
Bellingham	.27	.03	.34	trace	.74
Everett*	.60	.60	.60	.45	.95
Monroe*	.82	.92	.48	2.75	trace
Bremerton*	1.22	2.29	.90	1.90	.54
Seattle	.41	.55	.93	.50	2.92
Tacoma	.28	.54	1.18	1.09	4.36
Puyallup*	.48	.98	.93	4.00	.20
Olympia	.46	.38	1.38	1.03	4.50
Longview*	.70	1.00	.93	.98	1.49
Vancouver*	.37	1.21	.71	1.01	1.11

\*Measurements taken at 8 a.m. the following morning. (Supplied by Todd Dankers, WSFO Seattle)

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*Wind damage in Buffalo, Wyoming on January 10th. Unofficial reports of wind gusts exceeding 120 mph. Photo by Carol Herman, Buffalo Bulletin. Supplied by Edward Berry, WSO Cheyenne.*

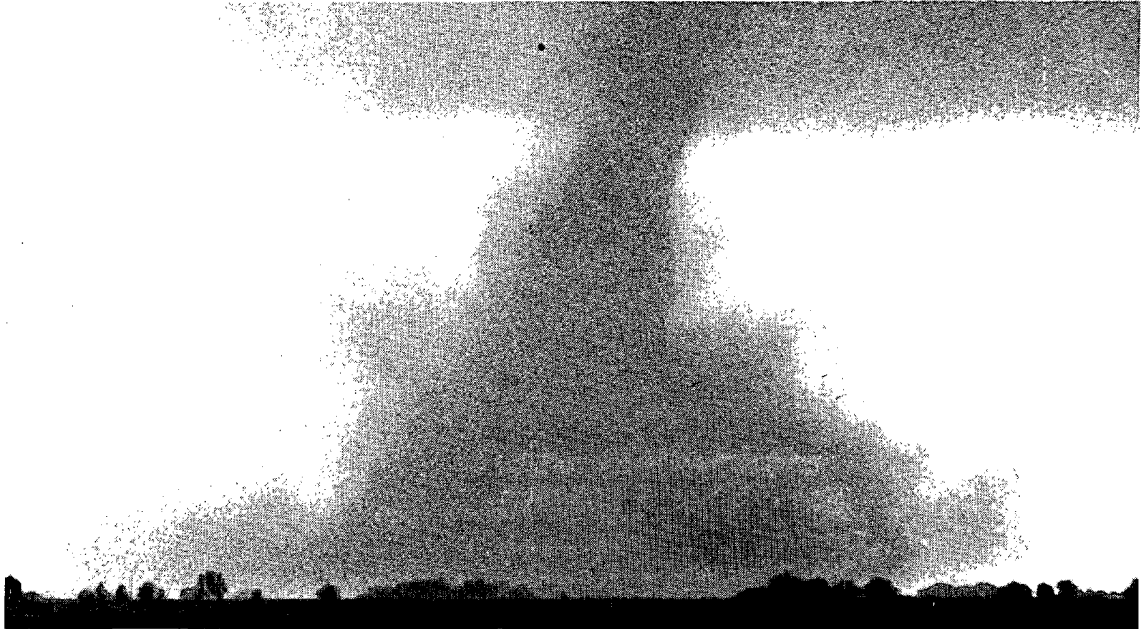


Peak wind gusts reported by National Weather Service stations January 5-11 and published in Local Climatological Data, National Climatic Data Center.

# ET CETERA

## 1. MAY 1989 TORNADOES IN IOWA:

Several F4 tornadoes raked parts of Iowa in May 1989. Although these events were covered in detail in the May 1989 issues of *STORM DATA*, the photographs appearing in this section are especially graphic and depict the awesome strength and capricious nature of such storms.



*This tornado occurred near Prescott, Iowa on May 24, 1989 where F3 and occasional F4 damage was produced. The photo was made with a zoom lens at about seven miles south of the tornado. Photo courtesy: Rita Miller of the Creston (Iowa) News Advertiser.*



*At about the same time that the above tornado photograph was taken, it destroyed several small buildings containing about 300 hogs--most were killed outright or soon had to be destroyed. Photo courtesy: Rita Miller of the Creston (Iowa) News Advertiser.*

An F4 tornado caused considerable damage near New Providence, Iowa on May 30, 1989. The Earl Reece farmstead, just south-southeast of New Providence, was leveled by the tornado. The photographs were taken on this property about one month later by Vince Miller of Marietta, GA.



*Debris which landed east of the farmstead. A 1987 Plymouth Horizon was tossed about for over 200 yards (right side of photo).*



*A close-up of the car in its final resting place after being deposited by the tornado. The tread marks on the ground were made when the barbed-wire fence in the foreground was replaced. The damage to the car is solely from the tornado.*



*Bark stripped and limbs torn away from nearby hardwood trees by the tornado.*



*A close-up photograph showing twisted wood fibers of a hardwood tree damaged by a tornado.*

## 2. STORMCHASE 1989:

### CHASE '89--COMING IN UNDER THE WIRE

by Jack "Thunderhead" Corso

Chase season 1989 began with an elated feeling, arriving in turbulent weather expecting to really clean-up. I was still beaming from a good 1988 season which netted me a rare Florida tornado. This "high" was soon to be broken. Acting on day old information, Tim Dorr and I broke through the extremely dense fog and warm front in western Oklahoma to be greeted by cumulus clouds and blue skies in the Texas Panhandle. Distant static filled the AM band as we prepared for the day's chasing activity. If I only had the chance to view a satellite photograph, the error we were about to make would not have occurred and the trip's pressure would have been off.

As we drove westward on this 13th day of May, I glanced southward and actually saw the storms on the horizon that would eventually spawn the spectacular Hodges tornado! These cells possibly would be embedded in the fog we just left since this could be a complex warm frontal system. From the great distance, they appeared hazy and soft.

As history will have it, we stayed on course for the development in the Panhandle. These storms gave us no real action until they reached Pampa at sunset. Here they exploded with large hail--up to lemon size--a fast, low moving gust front somewhat resembling the setup on the Snyder, OK tornadic storm of May, 14, 1986. A possible tornado might have touched down north of Pampa but the rain and heavy hail made cloud determination hard. After a night of wind, hail, and lightning we turned in only to realize the drastic mistake we made? Thus Chase '89 had begun on a sour note and our bubble had temporarily burst.

Hope was still with us as two weeks of potentially severe weather lay ahead. May 14th gave us our best lightning show in a year and became the best for 1989 (refer: *STORM DATA* - May 1989). Even though we "cleaned up" lightning-wise in San Angelo on this night, we again missed out on a small group of tornadoes that were spawned on the forward side of the system earlier in the day.

May 15th dawned promising as Lubbock to Vega, Texas appeared to be this day's game play. Tornadoes did develop in Hale County embedded in a massive hailstorm that clogged roadways with drifts of hailstones that measured a few feet deep! One tornado in Hale County tracked a good 6+ miles! Once again, however, we got cheated as we picked a storm further south and received nothing more than another hail beating and mean looking skies.

May 16th resulted in a better game play for the same area as the gates for warmer airflow from the south opened up and lifted north of Amarillo. A large and very slow moving CB exploded near Amarillo north of Vega on the surface low. This cell began to rotate as small tornadoes began forming and quickly dissipating, most lasting only a minute or two and many appearing as funnel clouds. Weather spotters here were quite on edge just waiting for "the big one". The sky here was very interesting. There was low scud and fog on the east, partly cloudy, muggy weather looking south, a sharp clear dry opening to the west, and a typical stormy look on the north horizon. Really hyped, we saw all this standing directly under the central circulation while recording the entire event on video. We saw excellent rotation and recorded a quick F0 twister that ran as a 2-minute dust tube. It was outrageous to feel the wind gusts rock from north to east to south then back to north again. For at least ten minutes this went on. We stayed here to await anything larger until the rain came blocking our visibility. We then traveled to Amarillo to experience some "Gorilla Hail".

May 17th turned out to be a "bust day" as the tornadic action that was expected occurred far down in southern Texas and did not move northward till the following day. The 18th

of May started early as storms began lining up along the dry-line front in eastern Oklahoma around 10 a.m. Traveling on the Indian National Turnpike to Route 270, south of McAlester, we turned east in anticipation of new towers that would build on the south inflow side. New cells did form and travel northeastward. We tagged along and once through the Sans Bois Mountains, a large cell developed to our southeast. We punched through this cell to stumble onto a wall cloud that gradually began to sprout a funnel cloud on its east side. This funnel was to become the elusive Van Buren F2 Tornado. Visibly, this appeared as a small, skinny funnel cloud, resembling a Florida-type cloud. After racing north on Route 59, we got to I-40 and made real time to again intersect this growing storm. Just past Fort Smith, Arkansas city limits we saw it off the highway! A gray-greenish cone, one quarter the way down hanging out of the edge of the wall cloud. Due to many trees at our observation sight, no debris cloud was observed from our location even though F2 damage occurred at this spot. The funnel began to dissipate while we watched. Occasional large cloud-to-ground lightning bolts ripped across the sky as we allowed the wall cloud to move directly overhead. At this time all we felt were brief gusts of wind similar to the Vega, Texas May 16th storm and a strange smell, quite sweet, and everything then became calm. Thinking that the smell was a potential lightning setup, we got back in the car and retreated westbound. The night was over, but not before we doubled-back once more that evening to capture a beautiful double rainbow on the storm's backside.

May 19th and 20th were dead days only to be followed by the 21st which took us to the annual STORM CHASE Party at Tim Marshall's place. It was on this evening that I caught my #1 lightning shot for the year. Oddly on a storm that other chasers missed the party for expecting an outbreak.

Seeing and hearing at the storm chase party about the Hodges tornado and all the spectacular video footage left us with great despair because we had yet to bag our "on-the-ground biggie". The pressure was really on now! Oh yes! We got tornadoes, but not TORNADOES!! We had no choice but to sit down and do our homework. Time was awastin'! I would not return without tornado classics--at least not in the first good season in a few years.

The evening maps of the 22nd presented a future severe weather setup that at that time appeared very good. With the forecast for "TORNADO ALLEY" at the southwest end to be quiet, dry and hot, we proceeded to head for the state of Iowa. Arriving in the state during the wee hours of the 24th, we attacked and made an entire night of warm front storms sliding southeast-bound across the state. Early in the morning, after a ton of lightning shots, we arranged for lodging in Des Moines and an update of weather conditions and forecasts. A quick sleep and then to await the main event that was to occur across the state later that afternoon.

Midday brought a solid cirrus cover which kept temperatures a little lower than expected. Thunderstorm watches were posted over much of Minnesota and Tim wanted to move. Being in strong south winds and brightening skies of broken stratocumulus to the west, I motioned to be patient. I stated by 4 p.m. we will know for sure where to move. Upon viewing a satellite photograph at 4 p.m., it displayed a CB exploding in Adams County over southwest Iowa in conjunction on a broken line that extended northeastward to Mason City, where another cell would later dominate. Movement by radar at this time was to the northeast at 34 mph. This information almost later cost us our big catch "UNDER THE WIRE".

Leaving the motel with the knowledge that this chase will be the "DO IT OR DIE" chapter of Chase '89, we headed out. Not knowing that our cell did indeed become a "right-mover" and thinking it was still on a northeast path, we moved north of it and turned down Route 169 to get behind and by-pass the rainfall zone. This plan of attack almost killed our prospects as we realized it here that the cell did become a "severe right". At Grant, we just missed a large tornado by eyewitnesses. HORROR!! We rushed back on the road



and moved east as we heard reports of our twister heading for the town of Kent. Rushing east on Route 34 crying that this storm will not beat us in driving sheets of intense rains and sporadic golfball-size hail, we reached I-35. This became our lucky break and pipeline to our "biggie" of 1989.

As we raced southward on I-35, still in heavy curtains of rain, hail, and lightning blasts, it was a race against time. Tim was nervous as I was hydroplaning at times. Reaching speeds over 80 mph with visibility at almost zero, there were a few hair-raising moments! Really there was not time! Approaching the Missouri border, the sky quickly brightened as we broke through the rain curtain. Scanning the immediate skies before us, I saw it coming across I-35 lowering down to the ground for its fourth and last touchdown for its life. At first it was hard to see as more rains were on its south side, but become more evident as we got closer. Hamming it up for the video camera moaning "OH GOD!" as if the world was ending, I quickly pulled off the road as it was moving to the southeast at a 40 mph clip. I picked off a couple of shots as the tornado assumed a classic stance. The whole passage being recorded by Tim Dorr on video and this time the video came out better due to this low-light meter. Well, that was it. UNDER THE WIRE at the last minute. We caught our big one--an F4 50-mile tracker. We reeled about the experience that night driving back to Oklahoma City while watching the eastward bound squall line flickering beneath the moon!



*An F4 tornado that struck Adams and Ringold Counties of Iowa on May 24, 1989 before moving into northern Missouri. Photo by Jack "Thunderhead" Corso of Harrison, New York -- copyrighted 1989.*

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CORPSES	

## ALABAMA

Mobile County	05	2125CST			0	0	0	0	Hail (0.75)
									Dime size hail fell at Mobile.
Clarke County	20	1430CST			0	0	0	0	TSTM Wind
	20	1630CST			0	0	4	0	TSTM Wind
									At 1430CST strong thunderstorm winds blew down about an acre of trees two miles north of Jackson. At 1630CST downburst thunderstorm winds blew trees and power lines down over about a 200-yard path about 10 miles northwest of Jackson. One house and a mobile home were damaged. Damage estimates were placed at approximately \$10,000.
Butler County	25	0500CST			0	0	0	0	TSTM Wind
									Trees were blown down at Georgiana.
Crenshaw County	25	0550CST	8	75	0	28	6	0	Tornado (F1)
									A tornado touched down about 6 miles northwest of Luverne, just southwest of County Road 11, then moved northeast about 8 miles to the Fullers Crossroads community on U.S. Highway 331. There were 28 injuries, three serious. Eight chicken houses were totally destroyed, one with major damage, and two with minor damage. Four outbuildings were destroyed, three with major damage, and five with minor damage. Four permanent homes were damaged, one recreational vehicle sustained major damage. Damage estimates were placed at 2 million dollars.
Pike County	25	0615CST			0	0	0	0	TSTM Wind
									Trees were blown onto power lines at Needmore.
Bullock County	25	0635CST			0	0	0	0	TSTM Wind
	25	0650CST			0	0	4	0	TSTM Wind
									At 0635CST trees were blown onto power lines 5 miles north of Perote. At 0650CST thunderstorm winds damaged the roof of a school in Union Springs. Damage estimates were placed at around \$5,000.

## ARIZONA

AZZ-006 White Mountains	02	Evening			0	0	0	0	Heavy Snow
									A winter storm moved through the eastern part of the state and left up to 2 feet of new snow above 8,000 feet. Part of Route 666 was closed due to snow. Hannagan Meadow reported 23 inches of new snow.
Gila County 25 S Globe	02	1830MST			0	0	3	0	TSTM Wind
									Thunderstorms hit the southern portion of Gila County with high winds. Power lines were downed and outages were reported in the towns of San Carlos, Christmas, and Dripping Springs.
AZZ-004-005 Central Arizona	17/18	0900MST			0	0	0	0	Heavy Snow
									A major winter storm with locally heavy snow moved through western Arizona late on Wednesday and into the Central Basins and Mogollon Rim on Thursday. Five to 7 inches of snow fell between Prescott and I-17. Highway 69 was closed due to the heavy snow, except for 4-wheel drive vehicles. Although light amounts fell in Flagstaff, areas to the west, along I-40 had a good snowfall of heavy snow. Williams had 12 inches, and Ash Fork, at an elevation of about 5,100 feet, had between 16 and 18 inches.

## ARKANSAS

Pope Russellville	17	1000CST			0	0	?	?	TSTM Wind
									Two mobile homes were blown over, one just west of Russellville, the other five miles north of Russellville.
Yell Ola	31	2200CST			0	0	4	0	Lightning
									Lightning struck the Ola School football athletic field house, causing a fire which destroyed the building and most of the equipment in it. Damage was estimated at around \$50,000.

## CALIFORNIA, Northern

CA09, 10, NV01, 02	12	2000PST-			0	0	?	0	Heavy Snow
	14	2400PST							
									A cold, moist Pacific storm brought amounts as high as 40 inches at Huntington Lake, 30 inches at the 8,000 foot level in CA09, and 14 inches at Echo Summit.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## CALIFORNIA, Northern

Santa Barbara County 12W Pt. Conception	13	1400PST			0	0	0	0	Waterspout
Weather observer at Platform Harvest reported a waterspout 1 mile west of platform moving north.									
Santa Barbara County	17	0625PST			0	0	0	0	Thunderstorm Wind
Thunderstorm produced wind gusts to 68 knots at Point Conception.									
CA01-03	29 30	1800PST- 2400PST			3	0	?	0	High Surf Coastal Flooding
An intense Pacific storm moved southeastward from the Gulf of Alaska and increased ocean swells to as high as 40 feet. A fisherman and two rock climbers were claimed by the high seas. Minor coastal flooding occurred at several locations along the northern and central California coast.									

## CALIFORNIA, Southern

San Diego County	14	0130PST	short	?	0	0	5	0	Waterspout
An unstable airmass, along with an upper level system from southern Nevada to San Diego, produced a waterspout which struck La Playa Cove between the Southwestern Yacht Club and San Diego Yacht Club early Sunday morning. Most of the damage was sustained to boats in dry storage and several other anchored boats. The waterspout went ashore throwing large planks into several parked vehicles in the parking lot. The estimated damage was \$75,000.									
Los Angeles County	16	2120PST	0.2	35	0	0	?	0	Tornado
A small tornado struck a residential section in the city of Pico Rivera, CA, 10 miles east-southeast of the Los Angeles Civic Center. There were 9 homes with variable roof damage to the extent of one home losing approximately one-third of its shingles. Many trees were toppled and/or lost branches. It appeared the funnel cloud touched down at two locations, otherwise the base of the funnel stayed at approximate treetop level during its short lifetime. Moderate to heavy rain was reported along with a moderately loud roaring noise according to several residents.									
CA2013	16 17	0700PST- 0700PST			0	0	0	0	Heavy Snow
A cold upper level low moved over Southern California bringing snow to as low as 2,000 feet with heavy snow in higher elevations. Reports of 15 to 17 inches of new snow fell around the Mt. Baldy Road at Snow Crest to the top of the road in 24 hours. Snow Valley of the Falls reported 13 inches and 10 to 12 inches fell at Crestline. Twenty-four-hour reports included 12 inches at Lake Arrowhead, 14 inches at Running Springs, 15 inches at Arrowbear and 16 inches at Green Valley Lake. Green Valley Lake area reported only 50% of their primary roads open and no secondary roads open with other areas reporting 40 to 60% of secondary roads open. These reports were all in the mountains of San Bernardino County.									

## COLORADO

Northeast Plains CO2011	08	All Day			0	2	5	0	High Winds
Fifty to 90 mph gusts raked the region with blowing dust and gravel through the day. Peak wind gusts measured included 108 mph just before sunrise in Masonville (Larimer County), 8 miles southwest of Fort Collins, 95 mph in Poudre Canyon (Larimer County), 36 miles northwest of Fort Collins, and 92 mph on Table Mesa in southwest Boulder (Boulder County), all between 0600 and 0800MST. In Fort Collins (Larimer County), 60 to 80 mph gusts were blamed for ripping a 3,000 pound roof off of a building under construction. A small grass fire whipped by high winds northwest of Fort Collins threatened several homes for nearly an hour before being brought under control. Sporadic electrical power outages were reported in many locations in and along the northeast foothills from Denver to the Wyoming border. Clouds of dust and gravel whipped by 70 to 90 mph gusts blinded commuters on the Denver/Boulder Turnpike (U.S. Highway 36) near Broomfield (southeast Boulder County) during the morning rush hour. Flying gravel shattered windows on 50 vehicles parked near a west side Boulder high school between 0800 and 1000MST. High winds were also blamed for partially dismantling a house under construction in Boulder and toppling over a number of fences, billboards, signs, and power poles. A semitrailer jackknifed just before rolling over on Interstate 70 near Golden (Jefferson County) during the evening rush hour. Strong cross winds were blamed for the accident. The male driver suffered minor cuts and bruises. A second semitrailer rolled over on Colorado Highway 93 just south of the Boulder city limits was also blamed on strong cross winds. Again, the male driver suffered only minor injuries. Several county airports were closed for a time during the day because of strong winds and blowing dust reducing visibilities. Wind-related delays of up to 30 minutes were also experienced at Denver's Stapleton International Airport.									
Northern and Central Mountains CO2002-004	08	0000MST- 1800MST			0	0	5	0	High Winds
During the predawn hours, wind gusts in excess of 40 mph had already developed over the higher passes. By early afternoon, gusts in excess of 80 mph prompted officials to close									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## COLORADO

a number of ski chair lifts and resorts in the northern and central mountains. Between 1400 and 1600MST, gusts of 60 to 90 mph pounded the Loveland, Keystone, Sunlight, and Snowmass skiarea with a peak gust of 104 mph measured at the Ski Cooper (Lake County) and Winterpark (Grand County) ski resorts. Several trees were uprooted at the Mary Jane Resort (Grand County) where the day's highest gust of 109 mph was recorded a few minutes after 1400MST. Twenty-one skiers were stranded for nearly 30 minutes just before noon at the Mary Jane Resort when their chair lift malfunctioned in the 100 mph winds. The skiers were evacuated by rope and without injury. Whiteout conditions near Frisco (Summit County) caused several multi-vehicle accidents on Interstate 70. Eighty plus mph gusts in the Georgetown, Empire, and Idaho Springs areas (Clear Creek County) were blamed for scattered power and phone outages. Several windows were blown out in the Georgetown area as well. In addition, a Clear Creek County Sheriff's deputy was driving on Interstate 70 from Georgetown to Idaho Springs when fierce cross winds blew out the side windows on the other side of the vehicle. Donning a pair of snowmobile goggles and a shielded helmet, the officer returned to his office but not before flying gravel pitted his car's windshield inside and out.

Northeast Colorado  
Southern Foothills  
and Palmer Divide  
CO2012-013-014-015

08	1100MST- 1800MST		0	4	5	0	High Winds
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In northeastern Colorado, wind gusts of 60 to 74 mph were recorded at Akron (Washington County), Fort Morgan (Morgan County), and Briggsdale (Weld County) during most of the afternoon. Gusts to 70 mph were measured just after midday in Haxtun (Phillips County) and Sterling (Logan County) creating severe dust storm conditions and near zero visibilities at times along Interstate 76. A pickup truck/semitrailer truck accident (1500MST) on U.S. Highway 6 west of Fleming (Logan County) was attributed to blowing dust and poor visibility. Two of the four passengers in the pickup suffered minor injuries, while the drivers escaped without injury. A second wind-related accident at 1530MST on Interstate 76 west of Fort Morgan involved a 59-year-old male driver and his 61-year-old male passenger when their semitrailer blew over onto its side. The truck's occupants suffered minor cuts and bruises. Several brief power outages were reported in the Fort Morgan areas as well between 1500 and 1700MST. Dark clouds of wind blown dirt and dust blanketed portions of Phillips and Yuma Counties during the afternoon. The dust storm reminded local old timers of the "Dust Bowl" days of the 1930s. Some fences were also blown down in the area. In southeastern Colorado, wind gusts of 60 to 84 mph were measured during the day in an area from the Air Force Academy (El Paso County) south to Walsenburg (Huerfano County) near the New Mexico border. On the northwest side of Colorado Springs (El Paso County) a gust of 84 mph was clocked at 1440MST as well as a measured gust of 63 mph at 1554MST in Pueblo (Pueblo County). Just north of Walsenburg, the southbound lanes of Interstate 25 were closed for more than two hours when an empty semitrailer was blown over on its side by strong cross winds shortly after 1200MST. The male driver escaped with only minor injuries.

Northeast Foothills  
and Adjacent Plains  
CO2011

09	0000MST- 0900MST		0	0	3	0	High Winds
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A second day of high winds buffeted portions of northeastern Colorado. During the predawn hours, 50 to 70 mph gusts rattled windows and blew over trash cans in the Fort Collins and Longmont (Boulder County) area. However, no significant damage was reported. In the higher foothills west of Denver and Boulder, predawn winds were already howling at speeds of 65 to 90 mph. The highest measured gust of 92 mph was recorded just southwest of Rollinsville (Boulder County) at 0800MST. Lesser gusts were noted in the Denver/Boulder area.

Northeast Foothills  
and Adjacent Plains  
CO2011

10	0000MST- 0800MST		1	2	5	0	High Winds
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The third consecutive day of 50 to 85 mph winds again rattled portions of the northeast foothills and adjacent high plains. High winds were blamed for numerous auto accidents in the Denver/Boulder area. Several accidents occurred along the Denver/Boulder Turnpike (U.S. Highway 36) near Broomfield (southeast Boulder County). One multi-car accident took the life of a 59-year-old woman and injured the 40-year-old female driver and her 20-year-old daughter. The accident occurred when their car drove into a cloud of blowing dust and gravel, colliding with two other vehicles of an earlier accident attributed to similar conditions. Three other accidents occurred within minutes after the fatal crash. No other injuries were reported. Colorado State Patrol closed a 5-mile stretch of the highway soon after the accidents for nearly two hours (1300 - 1500MST). A peak gust of 81 mph was recorded at the Jefferson County Airport at 1301MST, two miles west of the accident site. In Boulder, gusts to 85 mph were blamed for ripping off a portion of roof from a house as well as blowing out the home's large picture window while the homeowner stood inside. Though stunned, the female homeowner was not harmed. The down sloping Chinook winds also were largely responsible for the record high temperatures observed on the eastern plains. Record highs include a 72° reading in Wheat Ridge (Jefferson County), a 70° reading in Colorado Springs, and 74° in Pueblo. Denver's high of 71° tied the record previously set in 1928.

Boulder County  
CO2011

17	1900MST- 2200MST		0	0	0	0	Snow
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An intense localized snowstorm caught many people by surprise when it dumped from 3 to 6 inches of fluffy snow during a three-hour period across portions of Boulder County. The storm swath, approximately 20 to 30 miles wide, stretched northeast from Boulder to just east of Longmont. The sudden storm was blamed for dozens of fender-benders, many of which occurred on a portion of the Denver/Boulder Turnpike (U.S. Highway 36) southeast of Boulder (around 2030MST). Other than minor cuts and bruises, no serious injuries were reported. Elsewhere, only light snow fell during the same 3-hour period in the Fort Collins and Denver Metropolitan areas.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## COLORADO

**Mountains, Eastern Plains, San Luis Valley and Four Corners**  
COZ002-004-008-011-012-013-014

18-19 0 0 0 0 **Snow**

Snow fell across most of the state from a slow moving storm that tracked along the New Mexico/Colorado border during a two-day period. Snowfall totals varied from 3 to 7 inches across the southwest, 2 to 12 inches in the southern and central mountains, 5 to 8 inches in the San Luis Valley, to 5 to 17 inches on the Eastern Plains. A few significant snow amounts in the mountains include 12 inches at the Monarch Ski Area (Chaffee/Gunnison County), 10 inches at Telluride (San Miguel County), and 9 inches of powder on Wolf Creek Pass (Mineral County). Significant totals on the Eastern Plains include 17 inches in Holyoke (Phillips County), 15 inches in Limon (Lincoln County), Akron (Washington County), and Sedgwick (Sedgwick County), with 14 inches in Springfield (Baca County). Seven to 10 inches fell within the Denver Metropolitan area, with 8 to 13 inches of snow burying Colorado Springs (El Paso County). Numerous roads and highways were closed due to strong winds, drifting snow, and poor visibilities across the Eastern Plains. Interstate 70 was closed for several hours on the 19th due to these conditions from just east of Denver to the Kansas line. Numerous accidents were blamed on the storm including a serious 10-car pileup where one driver was killed and several were injured on Interstate 25 north of Colorado Springs (1030MST on the 19th). Several schools and businesses were forced to close. Weather related delays of up to 90 minutes hampered flight operations at Colorado Springs' Municipal Airport and Denver's Stapleton International Airport during the early morning hours of the 19th.

**Eastern Foothills**  
COZ011-014-015

22 1800MST-2400MST 0 0 3 0 **Winds**

Strong downslope winds along the Eastern Foothills reached gusts of 50 to 90 mph. Significant wind gusts include an 87 mph gust in Mesa west of Colorado Springs at 2312MST (El Paso County), and 62 mph in Fort Collins (Larimer County) at 2130MST. No significant damage reported.

**Eastern Plains and Adjacent Plains**

29 0000MST-2100MST 0 0 4 0 **Winds**

Gale to hurricane force wind gusts buffeted many communities along Colorado's Eastern Foothills and adjacent plains. Gusts of 50 to 90 mph were common, especially in the Boulder County area. Significant wind gusts observed include 94 mph recorded on Table Mesa in southwest Boulder between 0325 and 0350MST, 79 mph in Longmont (Boulder County) at 0430MST, and 71 mph on Bonner Peak northwest of Fort Collins (Larimer County) at 0720MST. Scattered power outages were reported as well as minor property damage, particularly within the Boulder area.

## CONNECTICUT

CTZ001-002-003

20 1500EST-21 1800EST 0 0 0 0 **Heavy Snow**

Two periods of snow fell during a two-day period and accumulated 2 to 5 inches over the northern quarter of the state.

## DELAWARE

None reported.

## FLORIDA

**Monroe County, 8NW Cudjoe Key**

30 1350EST Funnel Cloud

Cudjoe Key Air Force Station sighted a funnel cloud.

## GEORGIA

**WORTH COUNTY**  
Sylvester

07 1230EST-1430EST 0 0 ? ? **Flash Flood**

Countywide

07 1240EST-1430EST 0 0 ? ? **Flash Flood**

Flash flooding developed over many areas of Worth County after more than 5 inches of rainfall soaked the area. Along Town Creek in Sylvester, extensive flooding developed in low-lying areas. Across the city, about seven homes were evacuated as the water rose rapidly. Minor flood damage occurred at these homes. A portion of the James Young Road between Albany and Sylvester was washed out. Another twenty-five homes were evacuated along this roadway, though water did not enter these homes. Across Worth County, about 70 homes were cut off by heavily flooded roads. By 0300EST on the 8th, flooding had subsided around all except two dozen homes in the county.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## GEORGIA

### DOUGHERTY COUNTY Countywide

07	1230EST- 1430EST			0	0	?	?	Flash Flood
Acree	07	1240EST- 1430EST		0	0	?	?	Flash Flood

Flash flooding occurred in many low-lying areas of Dougherty County during the two-hour period. Flash flooding of three homes forced the residents to evacuate. At Acree, flood water remained just below the windows of homes located in low-lying areas near the Worth-Dougherty county line.

### BEN HILL COUNTY Fitzgerald Queensland Countywide

07	1230EST- 1530EST			0	0	?	?	Flash Flood
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Heavy rainfall developed over Ben Hill County, with totals of more than 6 inches measured in some areas. Roads were washed out by flash floods in Queensland and over the western portion of the county. In Fitzgerald, several automobiles were damaged, a gas tank was overturned, and mobile homes along one road had considerable interior water damage. Outdoor equipment, along with heating and air-conditioning units were damaged. The flooding damaged some of the county's wheat and rye crops.

### TATTNALL COUNTY Reidsville

07	0700EST- 18 0700EST			0	0	?	0	River Flood
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The Ochopee River at Reidsville flooded the yards of riverside homes in the Joy Bluff community and caused minor damage.

### APPLING COUNTY Plant Hatch TOOMBS COUNTY TATTNALL COUNTY

08	1000EST- 20 0700EST			0	0	?	?	River Flood
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The Altamaha River at Plant Hatch, north of Baxley, rose over its 74.5 feet flood stage. Agricultural and timber lands along the river were flooded. In addition, low-lying roads in Toombs, Tattall, and Appling Counties around the river were flooded.

### EFFINGHAM COUNTY Eden

11	1000EST- 22 1000EST			0	0	?	?	River Flood
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Pushed upward by waters from upstream and local rains, the Ogeechee River at Eden flooded into yards and threatened to enter several homes in low-lying areas. By the 19th, the flooding in the yards was slowly improving as the river continued a slow fall.

### BRANTLY COUNTY Atkinson

14	0700EST- 24 0700EST			0	0	?	?	River Flood
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The Satilla river had minor flooding of agricultural and forest lands. Several recreational fishing areas were also flooded.

### WINNETT COUNTY Norcross

20	2000EST			0	0	?	0	Flash Flood
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### DEKALB COUNTY Decatur

20	2000EST			0	0	?	0	Flash Flood
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### FULTON COUNTY Atlanta

20	2000EST			0	0	?	0	Flash Flood
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### COBB COUNTY Marietta

20	2000EST			0	0	?	0	Flash Flood
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### CLAYTON COUNTY Riverdale

20	2000EST			0	0	?	0	Flash Flood
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Heavy rainfall developed over the metropolitan area throughout the day. Rainfall amounts to be around 3 inches quickly produced flash floods over the metropolitan area. A small dam at Riverdale burst and flooded a subdivision. Little damage occurred, however, due to the small size of the dam.

### FLOYD COUNTY Rome

20	2100EST			0	0	?	0	Flash Flood
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### HENRY COUNTY 3 NE Ellenwood

20	Night			0	0	5	0	Flash Flood
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Heavy rainfall developed across the metropolitan area during the day. After about 3 inches fell, an earthen dam for a two-acre lake burst in extreme northwest Henry County near the town of Ellenwood. Four to 5 feet of muddy, clay-colored water emptied into Poole's Trailer Park about a half-mile downstream. Although the waters receded quickly, about thirty-five to forty mobile homes were swept off their foundations, damaging many. Extensive damage occurred to outbuildings and automobiles, along with other properties. Approximately six homes were left uninhabitable.

### CLAYTON COUNTY Riverdale

24	1502EST			1	0	0	0	Flash Flood
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A young boy drowned in a drainage ditch, full of swift-moving water near 4 feet deep, swollen from near 3 inches of rainfall in the general area. M020

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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## GEORGIA

**HARRIS COUNTY**  
6 NE Hamilton

25 0910EST 1.0 0 0 ? ? TSTM Wind

Thunderstorms moved across the northeastern portion of Harris County and caused scattered damage randomly over a mile-long path. Between Hamilton and Shiloh a few large tree limbs fell onto the county roads.

**NEWTON and WALTON COUNTIES**  
Little Cornish Creek

25 1000EST 0 0 ? ? TSTM Wind

Several trees were downed along the Little Cornish Creek at the Newton-Walton county line, just east of Georgia Highway 81.

**CRAWFORD COUNTY**  
5 SW Lizella

25 1000EST 0 0 ? ? TSTM Wind

Thunderstorm winds caused scattered power outages.

**CARROLL COUNTY**  
Whitesburg  
**SOUTH FULTON, COWETA and DOUGLAS COUNTIES**

25 1000EST-  
27 0100EST 0 0 ? ? River Flood

The Chattahoochee River rose out of its banks and flooded low-lying farms, pasturelands, and recreational areas in southern Fulton, Coweta, and Douglas Counties. At Whitesburg, the river rose to 18.5 feet, well above its flood stage of 15 feet, and flooded surrounding agricultural and recreational areas.

**GWINNETT COUNTY**  
Buford  
Norcross  
Countywide

25 1000EST 0 0 ? 0 Flash Flood  
25 1000EST 0 0 ? 0 Flash Flood  
25 1015EST 0 0 ? 0 Flash Flood

**BIBB COUNTY**  
Lizella

25 1015EST 0 0 ? ? TSTM Wind

At least three trees were blown down onto power lines near Lizella in western Bibb County.

**JACKSON COUNTY**  
3 NE Nicholson

25 1015EST 0 0 ? ? TSTM Wind

Along Hardeman Creek, several trees were downed by winds.

**MORGAN COUNTY**  
2.5 SW Godfrey

25 1015EST 0 0 ? ? TSTM Wind

Several trees were downed near Walton's Mill.

**OCONEE COUNTY**  
7 ENE Farmington

25 1015EST 0 0 ? ? TSTM Wind

Near Elders Lake, several trees were downed just east of Georgia Highway 15.

**COBB COUNTY**  
Austell

25 1300EST-  
27 0700EST 0 0 ? 0 Flood

Sweetwater Creek, a tributary that flows into the Chattahoochee River, rose over its 10-foot flood stage. Low-lying residential roads and an athletic field were flooded.

**LEE COUNTY**  
5 W Albany

25 1315EST 0.5 34 0 0 4 0 Tornado (F0)

A funnel cloud was sighted in the Glendale community in extreme southeast Lee County, near five miles north-northwest of Albany just off U.S. Highway 19, at 1305EST. As the parent thunderstorm continued northeast about one mile, a tornado touched down and remained on the ground briefly. Most of the damage occurred over a wooded area, with minor structural damage to several buildings along the path. A mobile home was shoved off its foundation, while the roofs and windows of several buildings, including a church, suffered damage. Over the total distance traveled by the tornado, damaged areas along the path were intermittent. By 1320EST, the tornado had dissipated.

**BIBB COUNTY**  
Macon

27 0700EST-  
28 1900EST 0 0 ? 0 River Flood

The Ocmulgee River at Macon began rising slowly as increased discharges came downstream from Lloyd Shoals Dam. In addition, local rainfall and runoff pushed in the river upward. Minor flooding developed along the river and in riverside businesses. The river crested around 21 feet late on the 27th and then dropped below its 18-foot flood stage.





# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## IDAHO

63 knots on January 11, 1972. At Pinehurst in Shoshone County, a gust of 78 knots took the roof off a supermarket. In west-central Idaho in Valley County, winds estimated in excess of 50 knots blew down two large trees which destroyed a home near Cascade. Two cars were damaged running into fallen trees in Round Valley. In central Idaho in Boise County, between Grandjean Junction and Bonner Summit, the wind released a snow slide 6 feet deep and 200 feet long which closed State Highway 21 for four days. In southwest Idaho the wind blew off part of the Wilder Elementary School roof resulting in damage estimated at \$10,000 to \$12,000. Power lines and poles were knocked down across Canyon and Owyhee Counties. South of Marsing a mobile home was smashed. Wind gusts between 52 knots and 56 knots were measured at Central Cove at 0430MST. In southeast Idaho a wind gust of 59 knots was measured at Pocatello Municipal Airport at 0748MST. A gust of 54 knots was measured on Pocatello Creek road. A gust of 52 knots was measured at Rockford at 0600MST. A shed was blown into a power line near Tyhee. On I-15 near McCammon three tractor-semitrailers and one car were blown off the road. Power lines were blown down and outages were extensive. Shingles were lost from several homes. A camper was blown over, and there was extensive damage to outbuildings. A 30-foot ham radio antenna was blown over 2 miles northeast of Pocatello. Commercial radio, television, and cable facilities were out of service in many areas of the state.

IDZ009 10 0535PST- 0 0 3 ? Flood  
11 2300PST

Heavy rains in northern Idaho the night of the 9th combined with unseasonably warm temperatures to rapidly melt snowpacks. This led to a significant rise in the Coeur d'Alene River. Minor flooding occurred near the river, which crested at 75.1 feet at Enaville, 3.1 feet above flood stage, at 1545 PST on the 10th. Near Kingston, Hunt Road was closed and impassable and an auto wrecking yard was flooded. Down river the flood reached Cataldo at 0812 PST, when the river reached 43.6 feet, 0.6 foot above flood stage. It crested at Cataldo at 44.6 feet at 1200 PST on the 10th. Upstream at Enaville the river had fallen below flood stage by 1135 PST on the 11th. The exact ending time of the flood at Cataldo is unknown as the readings were taken manually. An estimate was used based on projected drop in river level. By 0830 PST on the 12th the reading had dropped to 40.6 feet and the flood warning was canceled.

IDZ002-003 23 1000MST- 0 0 3 0 High Wind (G54)  
1200MST

Winds gusting to 54 knots at Burley caused power outages for 30 minutes to about 75 homes in the Burley to Idaho Falls area. Winds sustained over 43 knots were observed in this region.

IDZ009 28 0500PST- 0 0 0 0 Heavy Snow  
1700PST

IDZ004 28 1800MST-  
29 0600MST

Seven inches of snow fell in the Mullan area on the 28th causing traffic disruptions. In southeast Idaho the same storm brought heavy snow to Bear Lake County. At Bern 6 inches of new snow plus winds gusting to 42 knots, resulted in drifts 3 to 5 feet high.

IDZ002 28 0100MST- 0 0 2 0 High Wind (G56)  
29 0200MST

IDZ009 1800PST-  
1900PST

In the Magic Valley of south-central Idaho, winds gusted to 56 knots along I-84 southeast of Burley and 52 knots at Burley causing power outages in the Eden area. In northern Idaho in the Fernwood area, trees falling across the main transmission line of Clearwater Electric Company caused power outages.

IDZ009 30 0600PST 0 0 3 0 Heavy Snow  
1800PST

A snow storm in the Coeur d'Alene area brought 6 inches of snow and 24 traffic accidents.

## ILLINOIS

Moline, 11 1320CST 0 0 ? 0 High Winds (51)  
Rock Island County

Sustained winds of 30 to 40 mph occurred between approximately 1000CST and 1600CST. A peak wind of 59 mph occurred at 1320CST and 1411CST.

5 N Kankakee, 16 1350CST 0 0 ? 0 Hail (1.0)  
Kankakee County

Northern Illinois 25 0 ? ? 0 Major Winter Storm  
Lightning

A major winter storm blasted northern Illinois with heavy snow, strong winds gusting to 40 to 50 mph, thunder snowstorms, and blizzard or near blizzard conditions. The snowstorm began across northwest Illinois during the early morning hours of the 25th and ended by early afternoon. Over the Chicago metro area rain and thunderstorms began during the early morning

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLING	INJURING	PROPERTY	CROPS	

## ILLINOIS

hours of the 25th but the precipitation changed over to all snow by the late morning or early afternoon hours. Locally heavy rainfall of 1 inch fell during the morning hours across the Chicago area and caused local urban flooding of streets and viaducts. The storm dumped a 75-mile-wide band of heavy wet snow, measuring 6 to 12 inches deep, that was centered along a line from near Moline to just south of Rockford, northeastward to the Crystal Lake area of McHenry County and finally to Lake County in extreme northeast Illinois. Other snowfall totals under 6 inches reported include: 5 inches measured at Peoria; 4 inches at Marseilles; 3 inches at Galena; and 2 inches at Quincy. Further downstate, Springfield recorded around 1 inch of snow, and only a half inch of snow fell in Kankakee 50 miles south of Chicago. Snowfall in the immediate City of Chicago was generally in the 1 to 3 inch range but much heavier amounts occurred in the far western and northwestern suburban areas. Some of the heavier snow amounts reported: 12 inches at Crystal Lake and Carpentersville, 11.4 inches Lake Villa; 10.5 inches Algonquin; 8 inches Elgin, 7 inches Aurora and Lincolnshire; and 6 inches at Streamwood. Many rural roads across northern Illinois became impassable due to blowing and drifting snow and near blizzard conditions. State police closed a 40-mile-wide stretch of the Northwest Tollway near Elgin and the East-West Tollway from Aurora to Dixon was closed from about 11 am to 1 pm CST. Many schools and businesses were forced to close across parts of northern Illinois and to the northwest of the City of Chicago. In addition, sections of I-80 and I-280 near Moline were closed for a time because of the heavy blowing and drifting snow. Eleven persons were struck by lightning around 0830CST during a thunder snowstorm at a company parking lot in Crystal Lake. A lightning bolt hit a light pole in the company parking lot, then traveled through the snow cover, injuring eleven persons that were either shoveling snow or pushing stranded motorists. In a separate occurrence, a woman was struck by lightning at a Harper College parking lot in Palatine of Cook County.

Okawville,  
Washington County

25	0230CST		0	0	3	0	TSTM Downburst Winds
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The roof of a home in rural Okawville was blown off by high winds. In addition, one living room wall and a garage at the residence collapsed.

## INDIANA

Northern and  
Central Indiana

25	1000EST- 1600EST		0	0	5	?	High Winds
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A very deep low pressure system over lower Michigan produced a strong pressure gradient across Indiana. Wind gusts in excess of 60 mph were reported from late morning through late afternoon. Reports of peak wind include: Wabash 76 mph, Martinsville 60 mph, Kokomo 62 mph, Eagle Creek Airport near Indianapolis 63 mph, and Tipton 57 mph. Windows were blown out of a high rise office building in downtown Indianapolis. Damage was also reported to unsecured sheds, advertising billboards, and roofs from the strong winds. Two tractor-semitrailer were reported blown over on interstates in the Fort Wayne area.

South-central  
and East-central  
Indiana

29	0100EST- 1000EST		0	0	?	?	Heavy Snow
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Heavy snow fell during the morning of the 29th from Linton in Greene County east-northeastward to Richmond in Wayne County. Some reported snow depths were 6 inches at Linton, 5 inches at Martinsville, Richmond, Bedford, and 4 inches at Edinburg, Columbus, New Castle, Muncie, Connersville, and Brookville.

## IOWA

IAZ008-009-010-  
011-012-013  
Southwest, Central  
and Northeast Iowa

03 04	1900CST- 0700CST		0	0	4	0	Heavy Snow
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A low pressure system moved rapidly northeast from the Southwestern United States, passing just south of Iowa. Considerable gulf moisture was drawn north into the system, and resulted in a convective snow event. A narrow band, about 30 miles wide, of 4 to 10 inch snows fell from Shenandoah through Indianola, Newton, Vinton, to Dubuque. The heaviest snow was in Carlisle, where 11 inches fell. Most of the snow fell during a 4-hour period from Midnight through 4:00 AM. To the southeast of the heavy snow band, lesser 1 to 3-inch amounts fell across most of the remainder of southeast Iowa.

IAZ001-002-003-  
004-005-006-007-  
008-009-010-011-  
012-013-014-015-  
SDZ018-NWZ10-  
ILZ004-  
All of Iowa

11 12	0500CST- 0500CST		0	0	6	0	High Winds
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High winds overspread the State in the wake of a cold frontal passage. Winds were in the 30 to 50 mph range throughout most of the time period with occasional gusts of up to 60 mph. Unofficially, winds of 78 mph were reported near Carroll. A plate glass window was blown out in Eagle Grove. A church steeple was blown off in Denison. In addition, there were numerous reports of plate glass windows being broken by the force of the wind. Most of these came from the southwest half of the state. The wind blew down building walls at a few construction sites over the northwest counties. Two tractor-semitrailers were blown over on Interstate 35 north of the junction of U.S. Highway #20. The trailers were not loaded. There were numerous reports of trees and power lines being blown down by the high winds. Some damage was also done to the roofs of houses as winds lifted shingles. Another problem that developed was blowing dust. Visibilities were reduced to less than 50 yards at times. Soil erosion was placed at 2 to 3 tons per acre in a few areas.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## IOWA

IAZ001-002-003-004-005-SDZ018  
West Central and Northern Iowa

20	0700CST-2200CST	0	0	4	0	Heavy Snow
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A storm system from the Southwest United States moved into Iowa, dropping anywhere from 4 to as much as 12 inches of snow on parts of Iowa. West-central and northern Iowa received most of the snow, with 1 to 4 inch amounts common elsewhere in the state. The snow was quite wet. As a result, some tree and power line damage was reported. There was some freezing drizzle over the central and southeast counties, but not enough to cause any major problems.

IAZ008-011-013-014-015-1LZ004  
Southeast and East Central Iowa

24	2100CST-	0	0	4	0	Snow and Heavy Snow
25	1200CST					

A low pressure area developed explosively over east-central Missouri and moved into central Illinois. As it did, heavy snow fell over southeast and east-central Iowa. Some thunder occurred with the snow, making this the second convective snow event of the month in Iowa. A wind gust of 54 mph was recorded at Fort Madison at 0511CST as one thunderstorm moved through. For the most part, snowfall totals were in the 3- to 6-inch range over the area. There was a narrow band of 8- to 10-inch snows extending from just west of Burlington to just west of the Quad Cities. The snow brought travel in those areas to a standstill for a few hours. As the low intensified around daybreak, visibility was reduced to near zero in the heavy snow combined with northerly winds of 25 to 35 miles an hour.

## KANSAS

KSZ1>3-  
Extreme West Kansas

18	1700CST-	0	0	0	0	Heavy Snow
19	1700CST					

Heavy snow fell over extreme western Kansas for a 24-hour period from the evening of the 18th through the evening of the 19th. Snowfall amounts ranged from 11 inches in Dodge City to 15 inches west of Garden City.

## KENTUCKY

Robertson County

22	0700EST	0	0	0	0	Flood
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Minor flooding occurred on the Licking River at Blue Lick Springs when the river rose to 22.1 feet. Flood stage is 22.0 feet. No damage was reported.

Nelson County

22	0700EST	0	0	0	0	Flood
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Minor flooding occurred on the Rolling Fork Branch of the Salt River at Boston when the river crested at 35.9 feet. Flood stage is 35 feet. No damage was reported.

## LOUISIANA

DeSoto Parish, Grand Cane to Mansfield  
Caddo Parish, Caspiana  
Red River Parish, 5 N East Point

17	2330CST	0	0	?	?	Hail (1.00)
17	2250CST	0	0	?	?	TSTM Wind
17	2300CST	0	0	?	?	TSTM Wind Hail (0.88)

Severe thunderstorms developed in advance of a cold front and brought hail and strong wind gusts to a few parishes in northwest Louisiana.

DeSoto Parish, 3 NE Logansport  
Sabine Parish, 5 NE Zwolle  
Red River Parish, Coushatta to Hall Summit  
Bienville Parish, Liberty Hill

19	1715CST	0	0	0	?	Hail (1.00)
19	1850CST	0	0	?	?	TSTM Wind
19	1945CST	0	0	4	?	TSTM Wind
19	2010CST	0	0	?	?	TSTM Wind Hail (1.00)

Sabine Parish, 5 N Many  
Lincoln Parish, Simmsboro  
Granbling

19	2015CST	0	0	?	?	TSTM Wind
19	2020CST	0	0	?	?	TSTM Wind
19	2020CST-2030CST	0	0	5	?	TSTM Wind

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## LOUISIANA

Union Parish, 4 SSW Farmerville	19	2100CST			0	0	?	?	TSTM Wind
Natchitoches Parish, Marthaville	19	2130CST			0	0	?	?	TSTM Wind (52)
Ouachita Parish, Sterlington to Monroe	19	2140CST			0	0	?	?	TSTM Wind
Morehouse Parish, 2 W Bastrop	19	2150CST			0	0	0	?	Hail (1.00)
Winn Parish, Dodson	19	2205CST			0	0	0	?	Hail (0.88)
Jackson Parish, Chatham	19	2215CST			0	0	0	?	Hail (0.88)
Franklin Parish, Wisner	20	0110CST			0	0	?	?	Hail (1.00) TSTM Wind (52)
Tensas Parish, Newlight	20	0130CST			0	0	?	?	Hail (0.88)
Madison Parish, Afton	20	0140CST			0	0	?	?	Hail (1.00)

Severe thunderstorms raced across north Louisiana, some at speeds of 60 mph, during the late afternoon and evening hours producing wind gusts estimated to near 100 mph and hail. Most significant damage occurred in Lincoln Parish around Grambling where 10 to 15 houses suffered damage along with a number of mobile homes. Near Hall Summit two mobile homes were rolled over by wind gusts. Elsewhere, damage was confined mainly to downed trees and utility poles.

Mitchitoches Parish	20	0300CST- 0600CST			0	0	?	?	Flash Flood
Ouachita Parish	20	0300CST- 0600CST			0	0	?	?	Flash Flood
Winn Parish	20	0300CST- 0430CST			0	0	?	?	Flash Flood
Morehouse Parish	20	0300CST- 0430CST			0	0	?	?	Flash Flood
Jackson Parish	20	0300CST- 0500CST			0	0	?	?	Flash Flood

The same storm system which brought severe thunderstorms earlier in the evening produced 3 to 6 inches rainfall amounts over much of north Louisiana resulting in flash flooding in low-lying areas. There was considerable flooding of secondary highways and a few primary highways during the pre-dawn hours on the 20th. Interstate Highway 20 was flooded for a short time in Ouachita Parish. Only a few homes in the affected area were flooded.

Terrebonne Parish, 10 S Houma	20	1100CST			1	0	0	0	Lightning
Acadia Parish, Richard	24	1000CST	0.1	25	0	0	3	0	Tornado (F0)

Lightning struck a teenage boy fishing from a pirogue in Bayou Dularge. Burn marks indicated the charge entered through his head and exited at his waist. The boy was resuscitated and hospitalized, but succumbed to his injuries on the 30th. M130

A tornado touched down near a school causing minor damage to the roof.

East Baton Rouge Parish, Baker	24	1145CST			0	0	4	0	TSTM Wind
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A severe thunderstorm produced wind gusts which rolled two mobile homes and caused minor roof damage to a few nearby houses.

LAZ009-010 East Central and Southeast	25 31	0600CST- 1800CST			0	0	9	?	Heavy Rain, Flooding
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From the 23rd through the 25th, 3 to 6 inch rain amounts were common over southeast Louisiana north of a Baton Rouge-Slidell line. In adjacent areas of extreme southwest Mississippi, 6 to 10 inch rain amounts were the rule during the same time period. This large area of excessive rainfall produced significant flooding on the Amite, Comite, Tangipahoa, Bogue Chitto, Pearl, Tickfaw, and Teche rivers in southeast Louisiana. Total damage estimates ranged between \$80 to \$100 million. Approximately 48 secondary roadways were closed due to flooding in the area. The greatest flood damage occurred along the Amite River in East Baton Rouge and Livingston Parishes where damage approached that of the April 1983 flood. The Denham Springs area was especially hard hit. Approximately 820 homes were flooded in the area, with Livingston and East Baton Rouge Parishes accounting for the majority.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSSL	

## MAINE

MEZ 009-011-013  
014

21 0500EST- 0 0 4 0 Heavy Snow  
22 0300EST

Low pressure slowly moved northward through the Mississippi Valley to Pennsylvania and then east to the southern New England coast. This system produced most of the snowfall as it intensified off the coast; however, a stationary front remained in southern New England causing a prolonged period of light snow. A death indirectly caused by the weather included a Peru woman who was killed in a crash when her compact car struck a tractor-semitrailer on Route 108 in West Peru. Another semitrailer accident was reported in Wells. At 0850EST a multi-car pileup injured two people in Bridgewater. Heaviest snow totals occurred in the extreme south and the western mountains. Some of the snow totals (in inches) include:

Eustis	10	Brunswick	6
Jackman	8	Bethel	5
Gorham	7	Augusta	4
Portland	6	Albion	4

MEZ ALL

29 0600EST- 0 0 4 0 Heavy Snow  
30 1500EST

Low pressure systems were located over West Virginia and North Carolina on the afternoon of the 29th. By late in the evening the two lows combined over Maryland and passed off the New Jersey coast. On the 30th the storm intensified over Nantucket and reached its maximum strength while located south of Matinicus Rock during the afternoon. Numerous accidents were reported but most of them were minor. A pickup truck and semitrailer collided in Wells and icy roads caused a car pileup at Martin's Point Bridge. Interstate 95 was closed for a couple of hours near Houlton. Central Maine Power reported minor blackouts. A boat sank and another capsized at Moosabec Beach off Beals Island. Three people were injured at Reny's Department Store in Dexter when heavy snow collapsed the roof of the building. Wind gusts of 55 mph and 57 mph were reported in Eastport and Augusta. Heaviest snow amounts were located in the mountains. Snow totals (in inches) include:

Lovell	20	Farmington	15
Guilford	20	Skowhegan	15
Bethel	19	Bangor	13
Eustis	18	Ellsworth	12
Fort Kent	18	Portland	11
Houlton	17	Augusta	11
Rumford	15	Caribou	9

## MARYLAND

MDZ005-007

04 0500EST- 4 ? 5 0 Glaze  
1000EST

West-central  
Maryland

Rain falling on abnormally cold ground froze causing numerous traffic accidents and considerable hazard to pedestrians. A tanker truck overturned as a result of the icy conditions on I-70 near Hancock causing an oil spill. Four fatalities were reported as a result of weather-related traffic accidents.

DCZ001-  
MDZ005-009  
Western and  
Central Maryland  
and the District  
Columbia

08 0600EST- 1 ? ? 0 Glaze  
2000EST Heavy Snow

Freezing rain early in the morning caused numerous minor accidents in central Maryland and the District of Columbia. In the afternoon snow fell across western and west-central of Maryland. Five inches fell in Garrett County, 4 inches at Cumberland in Allegany County, and from 3 to 7 inches was reported in Carroll County following freezing rain in the morning. At least one fatality occurred as a result of a weather-related traffic accident.

## MASSACHUSETTS

MAZ001-002-004-005-  
006-007-008

20 1500EST- 0 0 0 0 Heavy Snow  
21 1800EST

Two periods of snow fell with the snowfall totals during a two-day period ranging from 6 to 10 inches across much of the state except the southeast portion including Cape Cod and the Islands. Close to 6 inches fell in the Boston area, up to 9 inches in the northern suburbs and generally 7 to 10 inches in central and western portions of the state. Chicopee reported a total of 9 inches and Pittsfield 7 inches. The snow was quite wet and mixed with sleet in some areas. Thunderstorm activity was observed with heavy snow over eastern portions of the state during the forenoon of the 21st. Arriving on a weekend, the snow did not affect the commutes but caused poor road conditions and resulted in numerous vehicle accidents.

MAZ001-004-005-006-  
008

29 0500EST- 0 0 0 0 Heavy Snow  
1900EST

Heavy wet snow fell from the west third across the north-central to extreme northeast portion of the state. It accumulated 3 to 12 inches before changing to sleet and rain. The greatest accumulations occurred at the highest elevations and included 12 inches at Charlemont and 10 inches at Ashfield. Numerous skidding accidents were reported throughout the region.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## MICHIGAN

<p>MIZ005-006-007-008-009-010-016-017-018-019-020-021 Northern Lower and Upper Peninsula</p>	11	0600EST			0	0	0	0	<p style="text-align: right;"><b>Heavy Snow Wind</b></p> <p>Heavy snow began falling during the early morning hours of the 11th over the Western Upper Peninsula and then spread across the rest of the Upper Peninsula and Northern Lower Michigan by noon. The snow ended over the Upper Peninsula by mid-morning on the 12th and over Northern Lower Michigan by late afternoon of the 12th. Strong north to northwest winds caused considerable blowing and drifting of the snow.</p> <p>UPPER PENINSULA SNOWFALLS (in inches)                      Wakefield. . .16                      Houghton . . .14                      Ontonagon. . .10</p> <p>LOWER PENINSULA SNOWFALLS (in inches)                      Gaylord. . .12</p>
<p>MIZ003-004-005-006-007-008-013 West and Northwest Lower Peninsula</p>	20	1800EST			0	0	0	0	<p style="text-align: right;"><b>Heavy Snow Wind</b></p> <p>Heavy snow fell from the mid-morning hours of Saturday into the late afternoon on Sunday. A 30-mile-wide area of heavy snow fell over Western Lower Michigan. In this area 4 to 5 inches of snow fell from Holland east across Grand Rapids to just east of Ionia. Northwest Lower Michigan had 4 to 5 inches of snowfall during this event. The strong winds that accompanied this storm caused considerable blowing and drifting of the snow. As a result, there were about 100 minor accidents. Most of these were Saturday evening and night when darkness was added to the already low visibility.</p>
<p>MIZ017-019-020 Western Upper Peninsula</p>	23	1200EST			0	0	0	0	<p style="text-align: right;"><b>Heavy Snow</b></p> <p>Heavy snow began falling from the early afternoon of Tuesday until around 10 a.m. Wednesday. Snowfalls of 4 to 6 inches were common. The maximum reported snowfall was 8 inches at Bergland Dam.</p>
<p>MIZ003-004-005-006-007-008-009-010-016-021 Northern Lower Peninsula and Eastern Upper Peninsula</p>	25	0500EST			0	0	0	0	<p style="text-align: right;"><b>Heavy Snow Wind</b></p> <p>A very strong storm crossed central Lower Michigan during Thursday afternoon. Heavy snow fell north of a line that extended from 30 miles north of Muskegon to northeast to near Alpena. Snowfalls of 6 to 12 inches were common. Eighteen inches was the highest reported snowfall from this storm. The 18 inches fell on the Leelanau Peninsula of Northwest Lower Michigan. Sixteen inches were reported in Antrim County, while 14 inches fell in many locations. These were: Cheboygan, Petoskey, Lake Ann, and Harbor Springs. Newberry in Eastern Upper Michigan also reported 14 inches. Near blizzard conditions were common over Northern Lower Michigan, where heavy snow and high winds continued for most of the afternoon and evening hours of Thursday, the 25th. East Tawas reported a wind gust to 52 mph. One hundred and twenty school districts were closed on Thursday due to the heavy snow and strong winds. Several dozen minor accidents resulted from the snow. No serious injuries were reported.</p>
<p>Wyoming, Kent County</p>	25	1145EST			0	0	5	0	<p style="text-align: right;"><b>Lightning</b></p> <p>Lightning struck a home and caused a \$200,000 fire.</p>
<p>Lenawee County</p>	25	1234EST			0	0	4	0	<p style="text-align: right;"><b>Thunderstorm Wind</b></p> <p>Numerous trees and power lines down as severe thunderstorms moved through the county.</p>
<p>Manchester Washtenaw County</p>	25	1310EST			0	0	4	0	<p style="text-align: right;"><b>Thunderstorm Wind</b></p> <p>Barn and roof blown off as severe thunderstorms moved across the Manchester area.</p>
<p>Livonia Wayne County</p>	25	1315EST			0	0	4	0	<p style="text-align: right;"><b>Thunderstorm Wind</b></p> <p>Power lines down.</p>
<p>Detroit Metropolitan Airport, Washtenaw County</p>	24	1315EST			0	0	0	0	<p style="text-align: right;"><b>Thunderstorm Wind (56)</b></p>
<p>Monroe County</p>	25	1320EST			0	0	4	0	<p style="text-align: right;"><b>Thunderstorm Wind</b></p> <p>Numerous trees and power lines blown down.</p>
<p>Ann Arbor Washtenaw County</p>	25	1321EST			0	0	4	0	<p style="text-align: right;"><b>Thunderstorm Wind</b></p> <p>Damage to Veterans' Hospital; wind gusts over 50 mph.</p>
<p>Ann Arbor Washtenaw County</p>	25	1321EST			0	0	3	0	<p style="text-align: right;"><b>Hail (0.75)</b></p>

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## MICHIGAN

Corunna Shiawassee County	25	1325EST			0	0	4	0	Thunderstorm Wind
									Damage to three buildings; roof blown off of one building.
Saline Washtenaw County	25	1326EST			0	0	2	0	Thunderstorm Wind
Pontiac Airport Oakland County	25	1335EST			0	0	0	0	Thunderstorm Wind (55)
Ann Arbor Washtenaw County	25	1338EST			0	0	0	0	Thunderstorm Wind (80)
Auburn Hills Oakland County	25	1357EST			0	0	6	0	Thunderstorm Wind
									Roof blown off of hotel. Wind damage to many buildings, including an inflatable dome. Numerous trees and power lines down.
New Baltimore/ Armada Macomb County	25	1358EST			0	0	5	0	Thunderstorm Wind
									New homes under construction were blown down.
MIZ011-012-013- 014-015-022 Southeast Lower Michigan	25	1400EST			0	3	6	0	Wind
									After the line of severe thunderstorms moved east of Michigan, gale force winds behind the cold front continued until mid-evening. Eighty-four thousand customers were without power due to winds blowing down trees and power poles across the area. There were many reports of trees falling on homes and buildings across the area. In the town of Woodhaven, in Oakland County, a golf dome was torn apart. This did over \$1.3 million in damage alone. The Milan Middle School had a plexiglass skylight shatter. Altogether, several million dollars in damage were a direct result of wind damage alone. Three people were injured in separate accidents when trees fell on three cars. One was reported in downtown Detroit around 5:00 p.m., while the other two happened in Romulus between 4:00 p.m. and 5:00 p.m.

## MINNESOTA

MNZ ALL Entire State	10- 11	1700CST			0	0	4	?	High Wind
MN2001	11	0400CST			0	0	4	0	Blizzard
									High winds hit the northwest corner of the state late in the afternoon of the 10th. High winds spread through the remainder of northern Minnesota during the early morning hours of the 11th and by 0700CST winds of 35 to 40 mph with gusts over 50 mph were occurring over most of the state. Winds of 69 mph were recorded at Willmar at 0446CST and a gust of 68 mph was recorded in Rochester at 0912CST. Several inches of snow accompanied the wind over northern Minnesota. Visibilities were restricted to near zero in the far north due to blowing snow and to less than a mile over sections of western and southern Minnesota in blowing dirt. The wind lifted top soil off farmers' fields turning snow and ice patches black. The winds downed trees and utility poles causing power outages, tipped over and ripped apart ice fishing houses, blew high profile vehicles off highways, destroyed road signs and commercial signs and tore off shingles. The winds diminished across northern Minnesota during the early afternoon of the 11th and during the late afternoon and evening across the south.
MN2007-008- 010-011-012- 013-014-015 Central	16- 17	1400CST			0	0	0	0	Ice Storm/ Heavy Snow
									Freezing rain across central Minnesota during the afternoon of the 16th glazed exposed surfaces. One-eighth inch of glaze accumulated at Aitkin by 1845CST. Early in the evening of the 16th, snow associated with thunder began to accumulate over portions of east-central Minnesota. A narrow swath of snow fell from Fergus Falls to Hibbing with accumulations generally from 2 to 4 inches. Exceptions were 6 inches at Grand Rapids, and 8 inches at Hackensack. A mixture of snow and freezing rain continued over central Minnesota into the early morning hours of the 17th. Traffic accidents due to the accumulation of glaze during the afternoon resulted in three deaths.
MN2019 Southeast	23	1500CST			0	0	0	0	Heavy Snow
									Heavy snow fell across a small section of southeast Minnesota during the afternoon. Eight inches fell at Red Wing and Frontenac. Snowfall accumulations trailed off to 4 to 6 inches at Cannon Falls, 3 inches at Wabasha, and 2 to 3 inches at Kenyon.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## MISSISSIPPI

Jefferson County Cannonsburg	04	0600CST			0	2	5	0	Lightning  Lightning struck a house and started it on fire. The flames from the fire spread quickly through the house and two people inside received severe burns before they could get out of the house.
Hinds County 2 N Raymond	17	1958CST			0	0	5	0	Thunderstorm Winds  Seven airplanes damaged at John Bell Williams airfield.
Hinds County 1 S Clinton	17	2000CST			0	0	5	0	Thunderstorm Winds  Numerous trees and large limbs blown down. Seven homes had major damage to roofs and windows. Ten homes had moderate damage. Twenty-five homes had light damage. One car was totaled and two storage sheds were destroyed. Several fences and mail boxes were blown down.
Hinds County 1 W Bolton	17	2030CST			0	0	?	0	Thunderstorm Winds  Several trees blown down.
Rankin County Thompson Field (Jan)	17	2031CST			0	0	0	0	Thunderstorm Winds (G51)
Rankin County 5 S Brandon	17	2100CST			0	0	?	?	Hail (1.75)
Warren County 10 NW Vicksburg	20	0230CST			0	0	5	0	Thunderstorm Winds  Around Eagle Lake two mobile homes were destroyed. Ten homes had minor damage, two houses with roofing blown off, others with windows blown out or damage to porches. A farm implement shed had the second floor totally destroyed.
Adams County Natchez	24	2000CST- 2330CST			0	0	?	0	Flash Flood  Numerous streets were flooded in and around Natchez. Along Highway 61 near Natchez high water created a mudslide and caused trees to fall across the roadway.
Franklin County	24	2000CST- 2315CST			0	0	4	0	Flash Flood  Highway 556 between Bude and Meadville was closed due to water running over it. Several other county roads were under water.
Amite County	24	2000CST- 2330CST			0	0	?	0	Flash Flood  Numerous roads flooded throughout the county. One car was washed off a bridge north of Liberty. A man was forced to swim to safety after driving his truck into flood waters on Highway 24 west of Liberty. His truck was found the next day upside down in a pasture.
Wilkinson County	24	2000CST- 2330CST			0	0	?	0	Flash Flood  Extensive street and road flooding throughout the county.
Pike County McComb	24	2130CST- 2330CST			0	0	5	0	Flash Flood  Over 2.50 inches of rain fell in just over an hour. Numerous streets had to be closed in McComb due to flooding. Portions of Highway 51 were under water north of McComb. Several other county roads in northeast Pike County were under 2 to 3 feet of water. Several gravel roads were washed out in northeast Pike County. Seven bridges were washed out and 30 roads were extensively damaged. Water from an overflowing creek got into one house in north McComb.
Marion County	25	0045CST- 0200CST			0	0	5	0	Flash Flood  Up to 9 inches of rain fell over northern Marion County in about a 3-hour period. Numerous roads were covered with water and had to be closed over the northern half of Marion County. Twenty-five to thirty people had to be evacuated along Silver Creek in the Foxworth community. A residential area in Columbia had minor flooding.
Hancock County 2 W Kiln	25	0330CST			0	0	4	0	Thunderstorm Winds  A house trailer was destroyed and several trees and power lines were blown down.



# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## MISSISSIPPI

Marion County  
Columbia

25	0600CST-								Flooding
26	1800CST				0	0	5	0	

Several houses were flooded along the Pearl River at Columbia.

## MISSOURI

None reported.

## MONTANA

MT2007	04	0955MST							High Wind (G60)
MT2003	04	1700MST			0	0	0	0	High Wind (G57)
		High winds near Augusta.							
MT2007	05	2000MST			0	0	0	0	High Wind (G58)
	06	0914MST			0	0	0	0	High Wind (G58)
MT2007	07	0100MST			0	0	0	0	High Wind (G76)
		2200MST			0	0	0	0	High Wind (G76)
MT2003	07	1100MST			0	0	0	0	High Wind (G50)
		High winds at Choteau.							
MT2004	08	0400MST			0	0	0	0	High Wind (G70)
		1350MST			0	0	5	0	High Wind (G57)
		Power lines and tree down. Minor building damage Helena Valley.							
MT2003	08	1030MST			0	0	0	0	High Wind (G70)
MT2007	08	1200MST-			0	0	4	0	High Wind (G60)
		1600MST							
		Some damage in the Big Timber and Cooke City areas. Trees down and roads into Yellowstone closed due to blowing snow.							
MT2007	09	2200MST			0	0	4	0	High Wind (G70)
		Red Lodge had roof damage and trees downed.							
MT2004	10	0430MST			0	0	3	0	High Wind (G57)
		Jefferson City had wind damage.							
MT2008 Glasgow	10	0725MST			0	0	0	0	High Wind (G53)
MT2007	10	0750MST-			0	0	0	0	High Wind (G54)
		1015MST							
MT2003	10	1100MST			0	0	0	0	High Wind (G61)
		Strong winds at Choteau.							
MT2004	23	1000MST			0	0	3	0	High Wind
		Sign blown down at Belgrade.							
MT2007	25	0600MST-			0	0	0	0	High Wind (G55)
	26	0600MST							
MT2003	25	1200MST			0	0	5	5	High Wind (G86)
		1700MST							
		Tractor-semitrailer blown over in Browning. Tractor-semitrailer tipped over at "Y" southeast of Browning. Heart Butte had 100 mph winds and roof was blown off Post Office. Lots of blowing dust.							
MT2006	25	1926MST			0	0	0	0	High Wind (G53)
MT2007	28	1656MST-			0	1	0	0	High Wind (G63)
		2000MST							
		A truck driver was injured near Livingston when he climbed on top of his truck to secure tarp and was blown off.							

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## MONTANA

**MTZ006**      28    1600MST-2205MST      0   0    5   0    **High Wind (G64)**  
 Roof and sign damage around White Sulphur Springs. Judith Gap reported a 77 mph gust.

**MTZ001**      29    0200MST-      0   0    5   0    **Winter Snow**  
**MTZ003**      31    1700MST  
 Heavy snow fell over northwest Montana with more than 2 feet in the mountains. An Arctic front then moved east of the Rockies on the 30th and 31st causing Highway 2 to be closed. In addition, an avalanche on the 31st covered the road near Essex with 6 feet of snow.

## NEBRASKA

**NEZ020**      03    2000CST-      0   0    1   1    **Heavy Snow**  
**Southeast**      04    0400CST  
**Nebraska**  
 Snow accumulated to 7 inches at Tecumseh and Auburn.

**NEZ001-005-011**      08    1330CST-      0   1    6   4    **High Wind (59)**  
**Panhandle Nebraska**      1600CST  
 West to northwest winds gusted at times to near 70 mph breaking tree limbs, damaging signs, and downing power lines and poles. The winds created areas of blowing dust with visibility near zero at times. Poor visibility in blowing dust was blamed for a ten vehicle chain reaction accident on I-80 just east of Sidney and a fatal accident 7 miles north of Big Springs. The dust clouds later moved into southwest Nebraska. A Gering woman was injured when blown down by a strong gust. In Mitchell a roof was blown off of a mobile home and the mobile home blown over. A mobile home was also damaged at Scottsbluff and some buildings had windows blown out. A portion of a roof was blown off a barn 5 miles northwest of Kimball and several buildings were damaged in Kimball. Peak gusts included 69 mph at Scottsbluff at 1348CST and 68 mph at Sidney at 1501CST.

**NEZ005**      08    1847CST      0   0    3   2    **High Wind (53)**  
**Panhandle Nebraska**  
 Northwest winds gusted briefly to 61 mph in a passing rain shower at Scottsbluff.

**NEZ005**      10    1300CST-      0   0    4   2    **High Wind (55)**  
**Panhandle Nebraska**      11    0015CST  
 Northwest winds gusted upwards to 63 mph in the Scottsbluff area. Tree limbs were broken and traffic lights damaged. The peak wind gust to 63 mph at Scottsbluff occurred at 1327CST.

**NEZ002-003-008**      11    1045CST-      0   1    4   3    **High Wind (55)**  
**North Central**      1330CST  
**Nebraska**  
 Northwest winds gusted upwards to 63 mph. Tree limbs were broken and power lines and signs were damaged. One person received minor injuries when an empty converted school bus was blown over north of Valentine. Peak wind gusts included 63 mph at Ord at 1145CST, 58 mph at Valentine at 1100CST and 58 mph at Oneill at 1145CST.

**NEZ004-009-010**      11    1215CST-      0   1    5   3    **High Wind (52)**  
**Northeast and**      1630CST  
**East Central**  
**Nebraska**  
 Strong northwest winds gusted upwards to 60 mph breaking tree limbs and damaging power lines and poles resulting in outages. Signs and traffic signals were damaged. Near Madison one person was injured when an empty semitrailer was blown over. Another empty semitrailer was blown over near Winside. At Bancroft a metal storage shed was destroyed. In Omaha windows were blown out of downtown buildings and a small plane was flipped over at Eppley Airport. A portion of the school roof was blown off at Decatur. At Fremont utility lines were reported damaged. Peak wind gusts included 60 mph at Omaha Eppley Airport at 1341CST, 59 mph at the National Weather Service North Omaha Office at 1345CST and 56 mph at Norfolk at 1336CST.

**NEZ005**      29    1315CST-      0   0    3   2    **High Wind (52)**  
**Panhandle Nebraska**      1400CST  
 West winds gusted to 60 mph in the Scottsbluff area. The winds caused minor property damage and at times reduced visibility to around one-half mile in blowing dust.

**NEZ005-011-016-**      19    1100CST-      0   0    3   3    **Heavy Snow**  
**017**      20    0900CST  
**NEZ006-007-012-**      19    1800CST-  
**013**      20    1300CST  
**NEZ003-004-008-**      19    2300CST-  
**009-010-014-015**      20    1400CST  
**Panhandle North**  
**Central, Southwest,**  
**Central, Northeast,**  
**and East Central**  
**Nebraska**  
 Heavy snow of 6 inches or more fell north of a line from Alma to York to Omaha and south of a line from Scottsbluff to Theftord to Niobrara. Heaviest snow fell in portions of the southeast panhandle, southwest, and central areas. Some reported snowfalls in these areas included 15 inches near McCook, 14 inches at Madrid, 13 inches at Palisade, Benkelman, Trenton, Chambers, and Burwell, and 12 inches at Dalton, Sidney, Anselmo, Imperial, Culbertson, and Cambridge.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## NEVADA

NVZ003 Extreme Western Nevada	07 08	2200PST- 0530PST			0	0	0	0	High Winds
NVZ006 Northeast Nevada	08	0400PST- 0640PST			0	0	3	0	High Winds

Strong westerly winds aloft sagged across northern Nevada producing high winds along the lee side of the higher mountain ranges. Winds gusted to 70 mph along the lee of the Sierra Nevada in extreme western Nevada. A 70 mph gust was reported in southwest Reno.

Winds estimated between 70 and 90 mph were reported along the lee of the Ruby and East Humboldt mountains in northeast Nevada. The strongest winds were in Clover Valley about 20 miles south of Wells. There was no major damage, however, haystacks and trees were blown over, shingles were blown off buildings, and farm equipment was blown around. Two spotters stated that the winds were the strongest that they ever observed.

NVZ006 Northeast Nevada	14 15	0500PST- 0500PST			0	0	0	0	Heavy Snow
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A cold upper level low pressure area moved inland over northern California and spread bands of clouds and snow across northeast Nevada. Up to 20 inches of snow fell on parts of northeast Nevada.

NVZ003-004 Extreme Western and West Central Nevada	16 17	1730PST- 0500PST			0	0	0	0	Heavy Snow
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A cold surface low pressure area developed over western Nevada resulting in heavy snowfall over parts of extreme western Nevada and west-central Nevada. Six to 7 inches of snow fell in Lemmon Valley north of Reno. Ten to 15 inches fell in west-central Nevada from the Hawthorne area north to the Fallon area and on to the southern part of Pyramid Lake.

NVZ009 Extreme Southern Nevada	16 17 17 18	2330PST- 1000PST 2200PST- 1000PST			0	0	0	0	Heavy Snow Heavy Snow
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A cold storm moving through central California produced heavy snow over the higher elevations of extreme southern Nevada. Both Cajon Pass on Interstate 15 and Mountain Springs Pass were closed for several hours. Later, the snow level lowered to the valley floor. Snowfall ranged from a trace at McCarran International Airport, in Las Vegas, to 12 inches at Sandy Valley and Goodsprings.

NVZ003 Extreme Western Nevada	26	0500PST- 1000PST			0	0	0	0	High Winds
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A Pacific storm pushed high winds into extreme western Nevada. Sustained winds of 40 mph with gusts to 65 mph extended from the area west of Gerlach south through the Reno-Carson City area.

NVZ003 Extreme Western Nevada	28 29	1800PST- 0100PST			0	0	3	0	High Winds
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A fast moving Pacific cold front produced high winds in the Reno-Carson City area. Gusts to more than 60 mph were common. The peak gust reported was 78 mph in southwest Reno.

NVZ001 The Nevada portion of the Truckee-Tahoe Area	30	0000PST- 1600PST			0	0	0	0	Heavy Snow
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A cold low pressure system produced heavy snow over the mountains east of Lake Tahoe. Twelve to 18 inches of new snow was reported.

Clark County	30	1420PST	?	?	0	0	0	0	Tornado (F0)
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Two pilots reported a tornado touched down 22 miles east of Las Vegas.

## NEW HAMPSHIRE

NHZ001-002-003- 004-005-006-007	21- 22	0300EST- 0200EST			0	0	4	0	Heavy Snow
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Low pressure slowly moved northward through the Mississippi Valley to Pennsylvania and east to the southern New England coast. This system produced most of the snowfall as it intensified off the coast; however, a stationary front remained in southern New England causing a prolonged period of light snow. The state's largest airport in Manchester was shut down several times. A tractor-semitrailer rig overturned in Peterborough on Route 202 causing three injuries. Speed limits were reduced on the turnpike. Heaviest snow totals were located in the southern half of the state. Snow amounts (in inches) include:

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## NEW HAMPSHIRE

Francestown	11	Nashua	8
North Groton	10	Rochester	7
Concord	8	Keene	7
Dover	8	North Conway	6
Portsmouth	8	Berlin	4

NHZ ALL 29 0400EST- 30 0200EST 0 0 4 0 Heavy Snow

Low pressure systems were located over West Virginia and North Carolina on the afternoon of the 29th. By late in the evening the two lows combined over Maryland and passed off the New Jersey coast. On the 30th the storm intensified over Nantucket and reached its maximum strength while located south of Matinicus Rock during the afternoon. Several serious accidents were indirectly caused by the weather. A man was killed in a three-car crash on Route 125 in Kingston. Three were injured in a head-on collision in Albany. A semitrailer went off the road on Route 9 in West Chesterfield. I-89 was closed for a couple of hours. Minor outages were reported by the Public Service Company of New Hampshire. Heaviest snow amounts were reported in central parts of the state. Totals (in inches) include:

New London	19	Rochester	10
North Conway	16	Keene	9
Plymouth	12	Lincoln	8
Walpole	12	Nashua	6
Concord	10	Portsmouth	5

## NEW JERSEY, Northern

NJZ001 21 0000EST 0 0 ? 0 Winter Storm  
Northwestern New Jersey

A complex low pressure system over West Virginia and a high pressure system over the Canadian Maritimes combined to produce snow, freezing rain and sleet across northwestern New Jersey. Snow accumulated to around 3 inches before changing to freezing rain and sleet. This combination of precipitation played havoc for motorists. Numerous accidents were reported as roads became skating rinks. One state trooper was reported to say, "They're crashing everywhere," "We're seeing accidents causing other accidents." Fortunately no fatalities or serious injuries were reported.

Somerset County 30 Morning 0 0 ? 0 Flood

An intense low pressure system moving across New Jersey the night of the 29th dumped locally heavy rains. The main stem Raritan at Manville began to flood at 9:45 AM on the 30th finally cresting as a little over one foot above flood stage at noon. At Bound Brook at 11:30 AM minor flooding was reported.

## NEW JERSEY, Southern

None Reported.

## NEW MEXICO

BERNALILLO COUNTY 18 1230MST 0 1 0 0 High Wind  
Albuquerque

Forty-eight-year-old male was blown off roof of hotel.

SAN JUAN COUNTY 18 AM 1 0 0 0 Winter Storm  
Farmington

Twenty-eight-year-old male was crushed when forklift slid on snow and overturned on him.

CIBOLA COUNTY 18 1500MST 1 0 0 0 Winter Storm  
Laguna

An Illinois resident died in a weather-related car collision.

LEA COUNTY 18, 19 Unknown 2 0 0 0 Winter Storm

Two males, 17 and 18, possibly died of exposure. Deaths are being investigated.

BERNALILLO COUNTY 18 AM 0 4 0 0 High Wind  
Albuquerque

People were injured when a plate glass window exploded because of high winds. Venetian blinds confined glass from injuring others.

This significant winter storm affected most of New Mexico from about January 18th through the 19th. The synoptic factors which caused the storm were typical and consisted of a deep upper level, closed low over Arizona, moving into New Mexico and combining with an Arctic airmass heading south through the eastern plains and west over and through the central and western mountains of the state.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## NEW MEXICO

The significant snow fell over the mountains and the northern two-thirds of the state. The largest snowfall was recorded at Gascon which is along the eastern slopes of the Sangre de Cristos and to the northwest of the Town of Las Vegas, New Mexico.

High winds in the Albuquerque area also caused damage and generally were confined to the eastern portion of the metropolitan area. Cold air descended from over the top of the Sandia/Manzano Mountains one mile to the valley floor, creating wind gusts of from around 60 mph to near 100 mph and snow drifts along the western slopes of the mountains to 6 feet.

Three deaths were directly attributed to the storm while two others were believed to have died from exposure during this time period. Damage estimates could have exceeded \$500,000 around the state; but, as always, even getting rough estimates is difficult.

## NEW YORK, Coastal

NYZ014 Rockland and Westchester Counties	21	0000EST	0	0	?	0	Winter Storm
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A complex low pressure system over West Virginia and a high pressure system over the Canadian Maritimes combined to produce snow, freezing rain, and sleet across southeastern New York. Snow accumulated to around 3 inches before changing to freezing rain and sleet. This combination of precipitation played havoc for motorists. Numerous accidents were reported as roads became skating rinks. Fortunately, no fatalities or serious injuries were reported.

## NEW YORK, Central

Area Wide	01 31	AM- PM	0	0	0	0	Record Heat
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The month of January was recorded as the fourth warmest January on record.

Warren County	10	0730EST	0	3	4	0	Freezing Rain
Saratoga County	10	0730EST	0	5	4	0	Freezing Rain

Freezing rain covered all exposed surfaces and made roads nearly impassable. One male was critically injured.

Dutchess County Millbrook	15	0835EST	1	4	4	0	Snow/Freezing Rain
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One male was killed on snow and ice-covered roads. State police attributed the accident to local weather conditions. Police departments closed several roads in Dutchess County due to snow and ice buildup on road surfaces. M-42-V

Area Wide	20 21	AM- AM	1	15	5	?	Snow
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A winter storm dumped in excess of 6 inches over the area. This was the heaviest snow storm in over two years, for eastern New York. One male was killed while shoveling snow in Green County. M-69-0

Essex County 1 E Upper Jay	18	1230EST	0	0	4	?	Flash Flood
Lincoln Corners	18	1800EST	0	0	3	?	Flash Flood
Au Sable Forks	19	0100EST	0	0	5	?	Flash Flood

Ice movement earlier this month produced ice jams on the Au Sable River at Keene, Upper Jay, Yankee Flats, Hull Falls, and the village of Au Sable Forks in Essex County. The combination of rain and melting snow broke up the series of small ice jams which had formed very early Thursday morning along the east branch of the Au Sable River. These jams later merged into a large jam in the vicinity of Stewarts Bridge. Water and ice behind this jam was backed up over 12 feet. When the jam broke Stewarts bridge was lifted up and carried downstream as rubble. The water and ice jammed up again near Lincoln Corners (about 2 miles west of the village of Au Sable Forks), at the junction of the East and West Branches of the Au Sable River. Here ice was piled in excess of 10 feet high. Later in the day, this jam broke and reformed in the Jersey Swamp section of Au Sable Forks. This time ice and water produced the worst flooding in over 50 years. Over 30 homes had to be evacuated. Many local residents compared this to the flood event of 1937-1938.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSSLS	

## NEW YORK, Central

Montgomery County	26	0330EST- 1159EST			0	0	?	?	Small Stream Flooding
Washington County	26	0400EST- 1159EST			0	0	?	?	Small Stream Flooding

In Montgomery County flooding occurred along the Caroga Creek, Auries Creek, and the Millpoint Creek rose out of their banks. In Washington County several small streams rose above flood stage in the towns of Easton and White Creek. Local flooding was the result of melting snow and nearly 2 inches of rain.

Area Wide	29 30	AM- AM			3*	26	0	0	Snow
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The biggest snow storm in two and one-half years hit eastern New York. Hardest hit were Essex, Clinton, and northern Warren counties. Largest snow fall recorded was in the town of Minerva, Essex County. In Essex County, a school bus slid on icy roads and resulted in 15 minor injuries. In Saratoga County, an elderly male fell in a snow bank. He was discovered a few hours later and treated for hypothermia. Near Pattersonville, Montgomery County, a 38-year-old female was killed in a car accident which police said was caused by the snow storm. On Oneida Lake five persons, who were ice fishing, became lost during a blinding snow storm. Four people have been found. A 40-year-old male has not been found and is presumed dead. In Caanan, Columbia County, police attributed a fatal accident to snow-covered roads and stated no charges would be filed. F-38-V; M-61-V; and \*M-40-0 (presumed dead)

Columbia County Claverack	31	0840EST			1	1	4	0	Fog
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State police attributed a fatal car accident to heavy fog which reduced visibility to "less than 3 feet." F-56-V

## NEW YORK, Western

NY2004-005 LEWIS COUNTY: Barnes Corners	11 14	1800EST- 0330EST			0	0	3	0	Heavy Snow
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Deep low pressure over the Canadian maritimes provided a brisk westerly flow of cold air across the relatively warm waters of Lake Ontario producing lake effect snow squalls. Snowfall reports included: Barnes Corners 14 inches on the 12th and an additional 13 inches on the 13th; Syracuse 8 inches; Central Square 20 inches.

NY2003-022 ALLEGANY COUNTY: Belmont	20	0600EST- 1800EST			0	0	3	0	Heavy Snow
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Low pressure over the Mississippi Valley spread heavy snow and ice across the western and central southern tier of New York. Five inches of snow was reported at Belmont. Steuben County sheriff reported 4 to 5 inches of new snow. Temperatures remained near the freezing mark and the snow mixed with freezing rain at times to make conditions even more hazardous.

NY2001-021-022 ERIE COUNTY: Depew	25 26	1800EST- 1000EST			0	0	4	0	High Winds
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Low pressure over Michigan moved northeast and swept a cold front across western and central New York bringing strong winds to the area. Wind gusts between 50 and 60 mph were not uncommon. The high winds blew down a building wall at a shopping plaza in Depew. Trees were downed by the wind in Lockport and Jamestown.

NYZALL Area Wide	29 30	0800EST- 0800EST			0	0	4	0	Heavy Snow
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Low pressure moved from Tennessee to Maine and brought heavy snow to all of western and central New York ranging from 4 inches to over a foot. Sheriff Departments across the region reported numerous traffic accidents due to the hazardous driving conditions. Specific reports from across the region: Lowville 14 inches, Prattsburg 12 inches, Syracuse and Friendship 10 inches, Avon, Angaelica, and Bath 9 inches, Watertown 8 inches, Locke, Colden, Warsaw, and Chemung 7 inches, and Rochester 8 inches.

## NORTH CAROLINA

Northampton County 7 W Conway	01	0557EST			0	0	5	0	TSTM Winds
Union County 5 NE Monroe	29	1320EST			0	0	3	0	TSTM Winds

A combination of strong thunderstorm winds and gradient winds damaged a mobile home and two farm buildings near Conway. In Union County strong thunderstorm winds blew over a barn 5 miles northeast of Monroe.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## NORTH CAROLINA

Northampton County 29 2050EST 0.75 100 0 0 4 0 Tornado (F0)  
1 E Vulture

A small tornado touched down briefly near Vulture in western Northampton County. The tornado moved north northeast taking the tops of trees and blowing two mobile homes off their foundations.

## NORTH DAKOTA

NDZALL 10 1000CST-  
All of 11 0100CST  
North Dakota 2 0 5 ? High Winds

A deep low pressure system was centered over Saskatchewan the morning of the 10th. This system continued to intensify and moved rapidly southeastward. At 1500CST the center of this system was over Gimli, Manitoba at 979.7mb.

The low pressure system then moved slowly east-southeastward, at about the same intensity, and was centered over northern Lake Superior by 0900CST on the 11th.

Winds of 30 to 50 mph, with gusts over 60 mph, spread into western North Dakota, late morning on the 10th. The winds spread into central and northeastern North Dakota during the afternoon, and into the southeast late afternoon and evening.

A peak gust of 69 mph was recorded at the Minot airport, 67 mph at Bismarck and Grand Forks, 62 mph at Williston, 60 mph at Jamestown, and 58 mph at Fargo. There were unofficial reports of gusts to 70 mph.

Strong cross winds blew over a tractor-semitrailer truck on I-29 ten miles north of Hillsboro, killing the driver. A pedestrian on I-94, leaving his ditched vehicle, was killed when winds blew him into the path of an oncoming vehicle. Reduced visibilities in blowing dust may have contributed to the accident.

The windstorm damaged structures, downed trees and limbs causing power outages, blew over fish houses, blew out windows, and caused airline flight cancellations.

The winds occurred with unseasonably warm and dry conditions causing considerable blowing dirt and loss of topsoil. M46V, M850.

## OHIO

OHZ006 01 0000EST-  
Hocking County 1130EST 0 0 ? 0 Flood

The Hocking River at Enterprise went above flood stage due to ice jams on the river. It crested at 12.5 feet, which is one-half foot above flood stage, at 0630 EST. Only minor lowland flooding occurred.

Washington County 01 0000EST-  
02 1200EST 0 0 4 0 Ice Jam Flooding

Ice jams caused flooding of streams and rivers across the county. A ferry boat was sunk by the excessive ice near Marietta on the Ohio River.

Lake County 01 0000EST-  
02 1200EST 0 0 4 0 Ice Jam Flooding

Ice jams on the Chagrin River flooded residences along the river in Eastlake.

OHZ001>004-010-011 11 1300EST-  
Northwest, Central 1800EST 2 ? 5 0 High Wind  
Lakeshore, Northeast  
Lakeshore, Northeast  
& Central Highlands

A brief period of winds gusting between 40 and 60 mph blew down trees and power lines and damaged buildings across northern Ohio. Two men lost their lives. One man, in East Toledo, was killed when he was struck by a door that was caught by the wind. Another man was killed when winds blew down a tree onto his moving car. This occurred in Columbiana County on State Route 172 in West Township. High Wind M70P, M27V.

OHZ003 12 Morning-  
Northeast Lakeshore Evening 0 0 ? 0 Heavy Lake Effect  
Snow

Heavy lake effect snow developed over extreme northeast Ohio during the morning of the 12th. Accumulations reached 6 inches in Burton and Chardon at 2000EST. Final snowfall totals were between 4 and 8 inches across extreme northeast Ohio.

Statewide 25 1200EST-  
2400EST 1 19 7 0 High Wind

Sustained winds between 30 and 50 mph with gusts between 50 and 70 mph blew down trees and power lines, damaged buildings, blew over mobile homes and high profile vehicles across Ohio during the afternoon and evening of the 25th. Nineteen people were injured from mainly flying debris and falling objects. One man was killed when the truck he was driving was flipped

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## OHIO

over as the trailer he was pulling was lifted. Nearly 100,000 Ohioans were without electrical power for some time on the 25th. Some people, in the hardest hit areas of northwest Ohio, did not have electrical power returned until the evening of the 26th. High Wind M60V.

OH2003-005>007  
Northeast Lakeshore,  
Miami Valley,  
Central, and East  
Central

29 Morning-Evening 0 0 ? 0 Heavy Snow

Heavy snow moved into western Ohio during the morning of the 29th and accumulated mainly north of Interstate 70. Snowfall reached 4 inches across the northern parts of the Miami Valley, central, and east-central Ohio at 1000EST, 1300EST, and 1500EST, respectively. Heavy snow reached extreme northeast Ohio during the afternoon and accumulated to a depth of 6 inches over the Northeast Lakeshore around 1900EST.

## OKLAHOMA

Grant County,  
8 S Manchester  
Grant County,  
5 ENE Nash

03 1725CST 0 0 ? ? Hail (0.75)  
03 1740CST 0 0 ? ? Hail (1.00)

Thunderstorms developed in north-central Oklahoma and produced hail up to quarter-size. Many reports of hail covering the ground were received across Grant County.

DeWey County  
5 S Taloga  
Roger Mills County,  
Demsey  
Major County  
2 NW Orienta  
Alfalfa County,  
1 S Aline  
Grant County,  
Wakita  
Tillman County,  
9 NE Loveland  
Comanche County,  
Chattanooga  
Bryan County  
Durant  
Harmon County,  
6 NE Gould  
Greer County,  
Mangum  
Custer County,  
7 S Butler  
Washita County,  
Rocky  
Greer County,  
Granite  
Kiowa County,  
4 S Lone Wolf  
Kiowa County,  
2 W Hobart  
Washita County  
2 S Lake Valley  
Kiowa County,  
Gotebo  
Caddo County  
2 ESE Alfalfa  
Washita County,  
13 SSW Colony  
Caddo County  
Near Cogar  
Oklahoma County,  
Warr Acres  
Canadian County,  
6 W El Reno  
Oklahoma County,  
Edmond  
Lincoln County,  
Lincoln  
Carter County,  
Ardmore  
Garvin County,  
Lindsay  
Garvin County,  
Lindsay  
McClain County,  
5 SW Purcell  
McClain County,  
5 SW Purcell

16 1156CST 0 0 ? ? Hail (0.88)  
16 1205CST 0 0 ? ? Hail (0.75)  
16 1307CST 0 0 ? ? Hail (1.00)  
16 1315CST 0 0 ? ? Hail (1.00)  
16 1402CST 0 0 ? ? Hail (0.75)  
16 1515CST 0 0 ? ? Hail (0.75)  
16 1520CST 0 0 ? ? Hail (0.75)  
16 1641CST 0 0 5 0 Lightning  
16 1825CST 0 0 ? ? Hail (0.75)  
16 1848CST 0 0 ? ? Hail (0.88)  
16 1900CST 0 0 ? ? Hail (0.75)  
16 1900CST 0 0 ? ? Hail (0.75)  
16 1903CST 0 0 ? ? Hail (0.75)  
16 1924CST 0 0 ? ? Hail (0.75)  
16 1925CST 0 0 ? ? Hail (1.00)  
16 1945CST 0 0 ? ? Hail (0.75)  
16 2010CST 0 0 ? ? Hail (1.00)  
16 2020CST 0 0 ? ? Hail (0.75)  
16 2035CST 0 0 ? ? Hail (1.00)  
16 2115CST 0 0 ? ? Hail (0.75)  
16 2159CST 0 0 ? ? Hail (0.75)  
16 2200CST 0 0 ? ? Hail (0.75)  
16 2210CST 0 0 ? ? Hail (0.88)  
16 2345CST 0 0 ? ? Hail (0.88)  
17 0330CST 0 0 ? ? TSTM Wind  
17 0410CST 0 0 ? ? Hail (0.75)  
17 0410CST 0 0 3 ? TSTM Wind  
17 0410CST 0 0 ? ? TSTM Wind (50)  
17 0410CST 0 0 ? ? Hail (0.75)



# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## OKLAHOMA

Muskogee County,  
Muskogee

17 0755CST 0 0 5 0 Lightning

Thunderstorms developed in western Oklahoma during the late morning hours and produced hail up to the size of quarters. A small area of severe thunderstorms moved into western Oklahoma during the early evening hours and moved into central sections of the state during the late evening. Hail up to quarter-size was reported along with some wind damage. Dime-size hail covered the ground one and one-half-inches deep near Lone Wolf and in Cougar. A house sustained \$5,000 in roof damage when strong thunderstorm winds occurred in Lindsay. In Ardmore thunderstorm winds damaged a carport, camper trailer, and resulted in damage to a softball park when a large light pole was toppled. In Bryant County, lightning struck a building containing an attorney's office. The roof collapsed partially due to the lightning, and partially due to heavy rains which accumulated on the roof. Damage was estimated between \$50,000 and \$100,000. In Muskogee, lightning struck an EZ GO convenience store. The resulting fire produced \$80,000 damage to the building and its contents.

OKZ001-002-003-004-005-009  
Panhandle and Northwest

18 1000CST-19 1200CST 0 0 ? ? Heavy Snow

Heavy snow developed over the panhandle during the morning of the 18th and spread eastward. Snow amounts ranged from 12 inches in Boise City in the western Panhandle to 3 inches in Woodward in northwest Oklahoma. Many roads in the Panhandle were closed due to the heavy snow and drifts of up to 4 feet.

## OREGON

ORZ001  
North Coast

5 0 0 ? ? High Wind

An approaching storm brought 45 mph wind to Neartarts and Oceanside with gusts as high as 55 mph.

ORZ001-004  
Western Oregon

6-10 0 ? 6 6 Flood

Ten rivers in eight counties flooded during five days of moderate to heavy rain. Rural areas on the north and south coasts had total amounts for the five days close to 20 inches. The greatest damage occurred along the Nehalem River, Tillamook County, which crested 11.9 feet above flood stage. Fifty-one cattle drowned on a farm there and the water was 5 feet high in downtown Nehalem. Several bridges were wiped out, some by boats that broke loose from the docks by the fast moving waters.

ORZ001-004  
Western Oregon

6-7 1900PST-0400PST 0 ? 5 ? High Wind

An intense storm emerged from a larger Pacific storm center and moved inland prompting warnings for wind and rain. Numerous huge fir trees fell onto homes, vehicles and other buildings but were not responsible for any injuries. Damages from the trees was estimated to be in the hundreds of thousands of dollars.

All of Oregon

7-8 1600PST-0400PST 2 9 7 6 High Wind Heavy Rain

A stronger storm than the day before brought more wind to all of Oregon. Trees that were weakened by the previous storm came falling down this day smashing more homes and automobiles. Damages were in the millions of dollars. Fatalities occurred when a tree fell on a girl in her back yard and when a young man's car drifted into the oncoming lane during "very heavy rain". Injuries resulted when a tree crashed onto an occupied backyard shed and another fell on a tree feller cleaning up the debris from the previous storm. A drive-in movie screen, radio towers, and several barn roofs were also victims of wind speeds in excess of 75 mph. Fifty-five million board-feet of lumber, valued at over \$20 million, was blown down in the State and National Forests within Oregon. High wind F11P, M23V.

ORZ001-002, 004  
NW Oregon

8-9 2300PST-1900PST 0 0 5 ? High Wind

The last of a series of strong storms created some of the highest wind speeds in the last 30 years in this state. Wind exceeded 100 mph at Neartarts and Oceanside, Tillamook County.

ORZ001-003, 006-007, 013  
Coast, Cascades  
Columbia Basin

28 All Day 0 0 4 0 High Wind Heavy Snow

An intense frontal system, similar to the storms earlier this month, charged through Oregon. Wind speeds 50 to 70 mph blew down a 20-foot metal car dealer sign in Lincoln County and toppled trees into homes in Marion County. Speeds reached near 60 mph in Umatilla County. The wind resulted in loss of power to at least 13,100 homes just before the Super Bowl kick-off. The Cascades received more snow. Nine inches fell at Crater Lake. Elsewhere 6 inches fell at Tipton and Dixie Mountain.

ORZ001-004  
Western Oregon

29 Afternoon 0 0 ? 0 High Wind

Wind reached 65 mph in Portland while storm force winds generated 22 to 26 foot seas that battered the coast.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## OREGON

ORZ001-003,  
007, 013

30 All Day 0 0 5 0 High Wind Heavy Snow

The fury continued. Huge swells generated by several days of storms smashed into five windows at 2:30 p.m. at the Surftides Beach Resort, Lincoln County. Other ocean front hotels suffered wind and water damage. Just up from the mouth of the P River, at Devils Lake, a \$25,000 fish retaining structure was washed away by the wind and rough seas. A U.S. Coast Guard fuel pier in Curry County broke in half and closed the jetty. The same storm dumped 12 to 18 inches of new snow in the South Cascades within 24 hours. Ten inches fell at Santiam Pass, North Cascades. Wind speeds reached 54 mph at Pendleton, Umatilla County.

## PENNSYLVANIA, Eastern

PAZ007-008-010-016  
North Portion of  
Eastern Pennsylvania

20 1400EST 0 0 4 0 Snow and Ice Storm

Snow began falling over the south portion of eastern Pennsylvania between 0400 and 0700EST, but changed to rain in 3 to 5 hours. There also was a little freezing rain for an hour of two. Over the north portion of eastern Pennsylvania snow began between 0600 and 0800EST and continued until around 1300EST. Accumulations were 1 to 2 inches in the Middle Susquehanna Zone, 1 to 3 inches in the Northeast Metropolitan Zone, and 2 to 4 inches in the Upper Susquehanna and Poconos Zones. The precipitation then changed to freezing rain and sleet and continued for most of the afternoon. In much of the areas, except the Middle Susquehanna Zone, it continued until near midnight or longer. The result was a significant ice accumulation with some downed utility lines and treacherous traveling conditions.

PAZ007

29 1100EST 0 0 2 0 Heavy Snow

PAZ008

29 1200EST 0 0 2 0 Heavy Snow

PAZ010-016

29 1300EST 0 0 2 0 Heavy Snow

North Portion of  
Eastern Pennsylvania

Snow began falling from around 2200EST in the west to around 0300EST in the east. The snow continued through the morning and most of the afternoon before mixing with and changing to rain. Accumulations reached 6 inches in portions of the zone by 1100EST in the Upper Susquehanna Zone, 1200EST in the Middle Susquehanna Zone, and 1300EST in the Northeast Metropolitan and Poconos Zones. The final accumulations before changing to rain were: 4 to 8 inches in the Upper Susquehanna Zone, 4 to 7 inches in the Middle Susquehanna and Poconos Zones, and from 4 inches in the west to 6 inches in the east in the Northeast Metropolitan Zone.

## PENNSYLVANIA, Western

PAZ002  
Northwest

13 0700EST 0 0 0 0 Heavy Snow

Eight inches of snow in Union City and Corry. Eleven inches at Conneautville and Meadville.

Cambria County  
Johnstown

21 1130EST 0 0 0 0 High Wind

Nonconvective high wind gusted to 61 mph at Flight Service Station Johnstown.

24 N Johnstown

21 1300EST 0 0 0 0 High Wind

Nonconvective high wind downed trees in Hastings and Gallitzin.

Johnstown

21 1530EST 0 0 0 0 High Wind

Nonconvective high wind gusted to 60 mph at Flight Service Station Johnstown.

Beaver County  
6 NW Beaver

25 1628EST 0 0 0 0 High Wind

Nonconvective high wind at Beaver County Airport with gusts to 69 mph.

9 SE Beaver

25 1630EST 0 0 0 0 High Wind

Tree damage at Economy from high wind.

Allegheny County  
6 N Pittsburgh

25 1709EST 0 0 0 0 High Wind

Nonconvective wind gusted to 58 mph at Sewickley Heights.

Washington County  
13 SE Washington

25 1725EST 0 0 0 0 High Wind

Nonconvective wind gusted to 59 mph at Marianna.

Crawford County  
Meadville

25 1730EST 0 0 0 0 High Wind

Trees and power lines down in Vernon, East Mead, and Greenwood Townships. Also north of Harmonsburg and Hartstown all due to high wind.

Butler County  
19 N Butler

25 1756EST 0 0 0 0 Thunderstorm Wind

Harrisville trees down causing power outages.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CORPS	

## PENNSYLVANIA, Western

Fayette County 6 NW Connellsville	25	1800EST			0	0	0	0	High Wind
Trees downed by nonconvective high wind 6 miles northwest of Connellsville.									
McKean County Bradford	25	1850EST			0	0	0	0	High Wind
Power outages at Bradford Airport due to high wind.									
PAZ015 Southwestern	29	1000EST			0	0	0	0	Heavy Snow
Six inches of snow at Findleyville and Indiana.									
PAZ005 Laurel Mountains	29	1200EST			0	0	0	0	Heavy Snow
Seven inches of snow at Chalk Hill; 6 inches at Johnstown; 6 inches at Meyersdale and Seven Springs.									
PAZ006 South Central Mountains	29	1200EST			0	0	0	0	Heavy Snow
Up to 6 inches of snow fell throughout the area.									
PAZ003 Western	29	1500EST			0	0	0	0	Heavy Snow
Six inches of snow fell at West Hickory and Dubois.									
PAZ014 North Central Mountains	29	1500EST			0	0	0	0	Heavy Snow
Up to 7 inches of snow throughout the zone.									
PAZ004 Northern Mountains	29	1900EST			0	0	0	0	Heavy Snow
Eight inches of snow at Bradford and Kane.									
PAZ002 Northwest	29	1900EST			0	0	0	0	Heavy Snow
Six inches of snow at Meadville and Warren.									

## RHODE ISLAND

RIZ001	20	1500EST-			0	0	0	0	Heavy Snow
	21	1800EST							
Two periods of snow fell during a two-day period and accumulated 3 to 8 inches over the northern portion of the state. Numerous skidding accidents were reported.									

## SOUTH CAROLINA

SCZ007-008 Coast	06	0030EST-			0	0	?	?	Heavy Rain
	08	0000EST							
A low pressure area formed off the Gulf of Mexico coast, and tracked northeastward, bringing heavy rain to the South Carolina coastal areas. Heavy rain caused urban flooding and broke a 4-year-old record for the most rain in 24 hours in January at Charleston when 2.69 inches fell on January 7. There was up to 6 inches of standing water on some streets in Charleston County.									

## SOUTH DAKOTA

SDZ001-002-006-008-009-013-014 Western Third South Dakota	10	0930MST-			0	0	0	0	High Wind
		1500MST							
A cold front moving across western South Dakota during the afternoon hours produced strong northwesterly winds. Winds were sustained from 25 to 45 mph with a maximum wind gust up to 61 mph at Buffalo in the northwest corner of the state.									
SDZ004-005-010-011-012-017-018-020 Eastern Half South Dakota	11	1030CST-			0	0	?	0	High Wind
		1600CST							
Very strong northwest winds occurred across much of central and eastern South Dakota from the late morning into the late afternoon hours. The winds did produce some damage, mostly from fallen trees and branches. A small aircraft received minor damage when it was flipped over by the winds at the Pierre Municipal Airport. Fallen power lines in the Volga-Bruce area left customers without electricity for about 30 minutes. Some of the stronger wind gusts included 75 mph in Yankton, 67 mph at Sioux Falls, 63 mph in Pierre, 61 mph at Brookings, 55 mph in Aberdeen, and 46 mph at Huron.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## SOUTH DAKOTA

SDZ020  
Extreme southeast  
South Dakota

19	1600CST-	0	0	0	0	Snow
20	1600CST					

A narrow band of snow began falling in extreme southeastern South Dakota the morning of the 19th and ended late afternoon on 20th after dumping from 8 to 12 inches of snow. The band of snow extended from Bon-Homme County through Yankton and Clay Counties and into Union County. The maximum snow depth reported was 12 inches at Vermillion with lesser amounts elsewhere.

## TENNESSEE

None reported.

## TEXAS, Northern

Tarrant County Fort Worth	03	1745CST	0	0	?	?	TSTM Wind
A downburst damaged four carports and tore shingles off the roof of a couple of buildings in Fort Worth.							
Collin County Princeton Plano	17	0730CST	0	0	?	?	TSTM Wind (60)
	17	0730CST	0	0	?	?	TSTM Wind
Strong winds, measured at 69 mph in Princeton, tore the roof off a hangar and damaged a water tower. A downburst damaged a roof and blew off the chimney and roof shingles at a residence in Plano.							
Kaufman County Kemp	17	0900CST	0	0	?	?	TSTM Wind
A downburst blew the roof off a barn and windows out of a pickup truck in Kemp.							
Van Zandt County Van	17	0945CST	0	0	?	?	TSTM Wind
A downburst damaged the roofs of two barns and several residences, blew down numerous trees onto power lines and across roadways, and shattered several vehicles' windshields.							
Bowie County DeKalb	17	1030CST	0	0	?	?	TSTM Wind
A downburst uprooted a few trees in DeKalb.							
McClennan County 8 NW Waco	17	1620CST	0	0	?	?	Hail (0.88)
Henderson County Murchison	17	1800CST	0	0	4	?	Lightning
Lightning killed seven cows valued at \$14,000 in Murchison							
Cherokee County Jacksonville	17	2020CST	0	0	?	?	Hail (0.75)
Shelby County 5 W Tenaha	17	2125CST	0	0	?	?	Hail (1.00)
Nacogdoches County 6 N Nacogdoches	17	2135CST	0	0	?	?	Lightning
Lightning ignited a fire that caused extensive electrical damage to a residence in Central Heights (6 N Nacogdoches).							
Panola County 2 S Gary	17	2140CST	0	0	?	?	TSTM Wind and Hail (1.00)
A downburst blew down numerous trees 2 miles south of Gary.							
Cherokee County Jacksonville	18	0235CST- 0500CST	0	0	?	?	Flash Flooding
In Jacksonville, heavy rains of 5 to 6 inches in a 12-hour period resulted in extensive flooding of low-lying areas and high water of unknown depth over several streets in Jacksonville.							
Lamar County 5 N Paris	18	2320CST	0	0	?	?	TSTM Wind (57)
Hunt County Hunt County	18	2320CST-	0	0	?	?	Flash Flooding
	19	0500CST					

High water of unknown depth forced the closing of Farm to Market Road 36 at the junction of Caddo Creek in Caddo Mills, U.S. Highway 69 in Celeste, and State Highway 50 south of Commerce.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## TEXAS, Northern

Grayson County Sherman	18	2332CST			0	0	?	?	Mail (0.75)
Hunt County Greenville	19	0010CST			0	0	?	?	TSTM Wind
A downburst blew down several trees over power lines in Greenville.									
Red River 1 N Clarksville	19	0025CST			0	0	?	?	TSTM Wind
A downburst blew down several large trees 1 mile north of Clarksville.									
Kaufman County Forney	19	0100CST- 0500CST			0	0	?	?	Flash Flooding
Mabank	19	0100CST- 0500CST			0	0	?	?	Flash Flooding
Four and one-half inches of rain in a 12-hour period washed out several roads near Forney where barricades were required and closed Farm to Market Road 198 near Mabank.									
Wood County Western Wood County	19	0100CST- 0500CST			0	0	?	?	Flash Flooding
High water closed U.S. Highway 69, State Highway 82, and Farm to Market Roads 198, 274, and 17 in the western part of Wood County.									
Henderson County Western Henderson County	19	0115CST- 0500CST			0	0	?	?	Flash Flooding
Several secondary roadways in the western portion of Henderson County were closed due to high water.									
Ellis County Ellis County	19	0230CST- 0600CST			0	0	?	?	Flooding
Four and three-quarters of an inch of rainfall in a 24-hour period washed out several bridges and rural roadways in the flood plain along Chambers Creek throughout Ellis County.									
Van Zandt County Van Zandt County	19	0245CST- 0630CST			0	0	?	?	Flash Flooding
High water of unknown depth flooded Farm to Market Road 80 located west of Edgewood, Farm to Market Road 47 located north of Interstate 20, Farm to Market Road 63 located east of Interstate 20 and several secondary roadways.									
Hopkins County Western Hopkins County	19	0300CST- 0645CST			0	0	?	?	Flash Flooding
Four inches of rain in a 24-hour period resulted in high water of unknown depth across Farm to Market Road 2653 and numerous other secondary roads in the western part of the county. Several streets in Sulphur Springs also had high water.									
Rains County Emory	19	0320CST- 0545CST			0	0	?	?	Flash Flooding
Several roads in the southern portion of Emory were impassable due to high water over the roadway.									
Collin County Allen	19	0730CST			0	0	?	?	TSTM Wind
A downburst knocked down several fences, shattered the windshields of four automobiles, and damaged the shingles of several roofs in Allen.									
Dallas County Grand Prairie Duncanville	19	1018CST			0	1	4	?	TSTM Wind
Irving	19	1045CST			0	0	5	?	TSTM Wind
Garland	19	1100CST			0	0	?	?	TSTM Wind
Garland	19	1130CST			0	0	4	?	TSTM Wind
Garland	19	1130CST- 1132CST	0.8	50	0	1	6	?	Tornado (F2)
A downburst in Grand Prairie uprooted trees, shattered windows, tore the roof off an apartment complex, destroyed a brick wall, and damaged roof shingles and carports of twelve homes resulting in approximately \$25,000 damage. A downburst in Duncanville tore the roof off a restaurant, damaged the structures of three homes and two businesses, peeled shingles off the roof of 37 residences, blew down 198 fences, 4 patio covers and 3 street signs. Damage estimates were near \$84,000. In Irving, a downburst damaged a metal storage building and a patio cover, broke limbs off several trees, while blowing down a fence and shingles off a couple of roofs. A downburst in Garland damaged the fence of a high school tennis court and baseball field as well as the schools athletic scoreboard. Several power lines, trees, and the awning of both a gas station and several patio covers were also blown down. A tornado also tracked across an area of Garland located between Broadway Street and Country Club Road. Eighteen homes had major damage although several residences had minor damage to roof shingles, fences, trees, and outbuildings. Six of these homes were uninhabitable with the entire roof and most of the exterior walls severely damaged. Damage estimates in Garland were expected to exceed \$500,000.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CRODS	

## TEXAS, Northern

Denton County Denton	19	1330CST			1	0	?	?	Flash Flooding
A woman in an automobile was swept off Corbin Street in Denton where Hickory Creek crosses the roadway. W29V.									
Trinity County Pennington	19	1530CST			0	0	?	?	TSTM Wind
A downburst destroyed a barn and damaged or uprooted numerous trees at Pennington.									
Trinity County Angelina County Apple Springs to 5 W Lufkin	19	1540CST- 1600CST	13	100	0	2	6	?	Tornado (F3)
A tornado touched down at Apple Springs at 1540CST and moved northeast. In Apple Springs, one mobile home was overturned and moved 70 feet off its foundation, 20 homes were damaged with 7 of these homes heavily damaged, 6 power poles were snapped while one tree fell on a truck. The tornado entered Angelina County 10 miles west of Lufkin before dissipating at Hudson located five miles west of Lufkin at 1600CST. From 10 miles west of Lufkin to Hudson (5 W Lufkin), numerous trees were blown down or snapped. At Hudson (5 W Lufkin), 3 mobile homes were damaged with one being overturned, 41 homes were damaged with 9 homes having major damage, 3 barns were destroyed, 36 utility buildings, a satellite dish, and numerous fences were blown down. Numerous windows were also shattered. Two persons were injured in a mobile home at Hudson (5 W Lufkin). Total damage estimates in Hudson alone were estimated at \$484,000.									
Angelina County Lufkin	19	1615CST			0	0	?	?	TSTM Wind
A downburst damaged the porch and garage roof of two homes, destroyed an outdoor shed, and blew down several trees in Lufkin.									
Shelby County 4 W Huxley	19	1650CST			0	0	?	?	TSTM Wind
A downburst blew down numerous trees over roadways in Huxley Bay (4 W Huxley).									
Panola County 3 W Joaquin	19	1715CST			0	0	?	?	Hail (1.00)
San Augustine 5 W Brookeland	19	1810CST- 1815CST			0	0	?	?	Tornado- Waterspout
A waterspout was observed over Lake Sam Rayburn Reservoir (5 W Brookeland).									

## TEXAS, Southern

None Reported

## TEXAS, Western

Midland County: Sprayberry	17	0136CST			0	0	0	0	Hail (1.00)
Sprayberry		0149CST			0	0	0	0	Hail (1.00)
1 E of Sprayberry		0158CST			0	0	0	0	Hail (1.00)
Glasscock County: St. Lawrence		0200CST			0	0	0	0	Hail (1.00)
The Midland County Sheriff's office reported dime to quarter-size hail in the vicinity of Sprayberry in eastern Midland County very early in the morning. The storm then crossed into southwest Glasscock County where one-inch hail was also reported by the public in St. Lawrence. There was no damage reported.									
Texas Panhandle	18 19	Morning- Morning			0	0	5	0	Heavy Snow
A vigorous winter storm system left 4 to 11 inches of snow across most of the Panhandle. The snowfall began in earnest shortly after daybreak on the 18th and ended during the morning of the 19th.									
The snowfall was heaviest in the northwest Panhandle where 9 to 11 inches was common. Snow drifts of 3 to 4 feet, and some areas of sleet, severely impacted travel and forced closure of several major highways. U.S. 287 to the north of Dumas and U.S. 87 northwest of Dalhart remained closed most of the night of the 18th and morning of the 19th. There were numerous minor fender-benders but no injuries from any of the collisions.									
In spite of the dangerous affects, the moisture was welcomed by most people. This was the first substantial precipitation in the Panhandle since mid-September.									
Texas South Plains	18 19	Morning- Early AM			0	0	5	0	Sleet
The storm responsible for the heavy snow in the Panhandle was a healthy sleet producer across the South Plains. Patchy glazed roads during this period resulted in a number of traffic accidents, mostly minor in nature. However, a slippery Loop 289 in east Lubbock contributed to the death of a truck driver. Sixty-year-old Benjamin Thorpe of Big Spring died instantly when his tractor-semitrailer skidded off an overpass and fell 30 feet to the pavement below.									

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## TEXAS, Western

Many locations across the South Plains received an inch or more of water equivalent precipitation during this event; the first of any consequence in over four months.

## UTAH

UTZ010  
Northern Utah  
Mountains

02	0100MST-	0	0	0	0	Heavy Snow
03	0100MST					

A slow moving Pacific storm brought from 12 to 23 inches of snow to the northern mountains of Utah.

UTZ001-002-003  
Northwest Utah  
Valleys

02	0400MST-	0	0	0	0	Heavy Snow
	2100MST					

The same storm system brought 3 to 8 inches of snow to valley locations in the northwest.

UTZ011  
Southern Utah  
Mountains

14	0300MST-	0	0	0	0	Heavy Snow
	2000MST					

Bands of moisture rotating around a stationary upper low over the western United States deposited 18 to 24 inches of snow in southwest portions of the southern mountains.

UTZ010-011  
Utah Mountains  
UTZ003  
Davis County

15	1400MST-	0	0	0	0	Heavy Snow
16	0900MST					

Another surge of moisture around the upper low brought 17 to 35 inches of snow to the northern mountains and 12 to 16 inches to the southern mountains. Also, up to 7 inches of snow fell along the southeast shore of the Great Salt Lake in Davis County.

UTZ006-008-011  
Southwest Utah

16	1800MST-	0	0	0	0	Heavy Snow
17	1200MST					

An upper trough moving east through Southern California and along the southern border of Utah brought up to 14 inches of snow to southwest Iron and parts of Washington, Kane, and Garfield Counties. Snowfall of 10 to 17 inches occurred in the mountains in this area.

UTZ008-011  
Southeast Utah

18	1100MST-	0	0	0	0	Heavy Snow
19	0800MST					

The same trough wrapped back up into southeast Utah bringing 14 inches of snow to Monticello in the southern mountains and 10 inches to Blanding.

## VERMONT

Statewide

21	AM	0	5	5	0	Snow
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A winter storm dumped over 6 inches of snow across the state.

Statewide

29	PM-	4	10	6	?	Snow
30	AM					

A fatal plane crash occurred at the Burlington International Airport during a heavy snow storm. The cargo plane crashed about one minute into its flight. Time of impact was 2103EST. A fatal car accident occurred in Milton. Police attributed the accident to weather-related causes. M-02-V; F-21-V; M-31-V (aircraft); and M-Unk-V (aircraft)

## VIRGINIA

VAZ017

01	1300EST-	0	0	4	0	Flood
04	1500EST					

An ice jam on the Rappahannock River about 3 miles southeast of Fredericksburg caused a rapid rise on the river. Overnight rains of an inch or so added to the rise. The resulting flood reached a depth of 3 to 5 feet in low-lying areas in Stafford and Spotsylvania Counties. The Steamboat Wharf in Fredericksburg was covered by flood waters to a depth of 3 to 4 feet. Flood waters stayed at those levels through January 4th when effects of mild temperatures finally eased the flooding as the ice jam gradually broke up and melted.

VAZ011

01	1200EST-	0	0	4	0	Flood
03	0530EST					

Ice jams on the lower North and South Forks of the Shenandoah River caused minor flooding at several locations. Minor flooding was noted at Front Royal, near the US Route 522 bridge, and near the Route 619 bridge; the latter flooding stranded a car. Lowland flooding also occurred near Strasburg, where a bridge on Route 744 was covered. Mild temperatures gradually caused the ice jams to break up and melt by the morning of the 3rd.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CRODSS	

## VIRGINIA

Russell County	02	1400EST- 1430EST			0	0	3	0	Landslide
Alternate freezing and thawing apparently caused a landslide several hundred feet along on Route 63 between St. Paul and Dante. One car was trapped in the slide.									
VAZ011-012-014 Shenandoah Valley	04	0500EST- 1000EST			?	?	?	0	Glaze
Light rain falling on abnormally cold ground froze causing numerous minor accidents and presenting a hazard to pedestrians.									
Greene County Stanardsville	29	2000EST		20	0	0	4	0	Thunderstorm Winds
Strong winds reportedly in connection with a thunderstorm followed a narrow path and destroyed a mobile home by picking it up, moving it 25 feet, and dropping it.									

## WASHINGTON

WAZ001-002- 003-004-005 Western Washington	06	Evening			0	0	5	0	High Winds
A strong frontal system extending from a low pressure center crossing over the Queen Charlotte Islands caused strong winds over much of western Washington. Wind gusts to 58 mph occurred at Ocean Shores and Westport, 54 mph in Bellingham, and 48 mph in Port Townsend. Scattered power outages occurred in Whatcom, Snohomish, King, Thurston, and Clark counties. In one campground in Clark County, three cars and a trailer were damaged by falling trees. Elsewhere in western Washington numerous houses and cars sustained damage from falling trees or branches.									
WAZ008-009- 010-013 Clark County and Southeast Washington	08	Morning			0	?	6	0	High Winds
A low pressure center formed near the mouth of the Columbia River on the evening of the 7th and rapidly intensified as it moved inland. The low moved eastward up the Columbia Gorge, across the Columbia Basin of eastern Washington and then northeast into the Idaho panhandle by late morning. Wind gusts to 52 mph were reported in the Camas-Washougal area of Clark County causing damage at the local marina and interrupting electrical service to 15,000 PUD customers. The strongest winds occurred as the storm moved up the Columbia Gorge and across the Columbia Basin. Wind gusts were to 96 mph at Stevenson, 84 mph at Prosser, and 68 to 78 mph in the White Salmon-Bingen area before the power was knocked out. Pullman also reported sustained winds as high as 72 mph. Small airplanes at Goldendale, Tri-Cities and Pullman area airports were flipped over when anchor lines snapped. Most areas of eastern Washington experienced power interruptions during the storm and in towns from Spokane to Walla Walla to Yakima, falling trees caused damage to houses and parked cars. In the Tri-Cities area several houses also sustained wind damage to roofs. On the campus of Washington State University in Pullman over 100 trees were blown down and a tractor-semitrailer was blown off a southeast Washington highway. Elsewhere, farm shops and barns had roofs torn off and empty grain tanks were picked up and tossed about by the winds.									
WAZ001-003-005 South Puget Sound and Southwest Washington	09	Morning			3	?	8	?	Floods and Urban Flooding
Heavy rain from the third in a series of very wet Pacific storms moving across the Pacific Northwest caused urban flooding and mudslides in the Seattle-Tacoma-Bellevue area and caused flooding on ten western Washington rivers. Rivers which flooded included the Chehalis, Skookumchuck, Nisqually, Puyallup, White Cedar, Skykomish, Snoqualmie, Snohomish, and Cowlitz. Flooding was worst on the Chehalis River where the flood of record was observed at several river gages. The river rose to eight-and-a-half feet above flood stage at Centralia, flooding the town as well as a 2-mile stretch of Interstate 5. Three thousand people were forced to evacuate their homes and the freeway was closed for four days. At the Centralia airport 75 planes received water damage and one car dealer sustained a \$2,000,000 loss. In Centralia a 68-year-old man was swept off his feet and drowned after abandoning his flooded car and a 72-year-old man drowned after being trapped in a car which has stalled on a flooded roadway. Near Tacoma, a 32-year-old male drowned when his pickup truck drove off a flooded section of Interstate 5 and into a ditch. Rainfall amounts of 2 inches in six hours in the South Puget Sound area caused flooding of parking lots and several major roads with up to a couple feet of water. Thirteen state highways and numerous county roads were temporarily closed after the heavy rain. In Bellevue, a store roof collapsed under the weight of the rain, no one was injured. Mudslides over roadways also contributed to some road closures. A mudslide in Kent crashed into an apartment building causing major damage and giving one tenant back injuries. In Bellevue a store roof collapsed under the weight of the rain, no one was injured. A 200-foot section of rail line near Vader, 60 miles north of Portland, was washed out closing the main north-south route in western Washington for three days and erosion along a rail bed near Stevens Pass also closed the main east-west rail route across the state for three days. M680, M72V, M32V.									
King County	11	0600PST- 1800PST			0	0	4	0	High Winds
As strong high pressure developed over eastern Washington, strong outflow winds along the western slopes of the Cascades caused winds in Enumclaw to gust as high as 93 mph. Scattered power outages were reported and some trees were knocked down but no other damage was reported.									



# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## WASHINGTON

WAZ002  
Clallam and Whatcom  
Counties

25 0530PST 0 0 5 0 High Winds

A vigorous Pacific frontal system moving across western Washington caused strong southerly winds in Clallam and Whatcom counties. Peak gusts in the Bellingham area were 55 mph. Winds were strong enough to knock over trees in the Port Angeles, Sequim, and Bellingham areas. Falling trees blocked roads and temporarily knocked out power. At least one house a few miles east of Port Angeles was damaged by a falling tree landing on the roof.

WAZ012  
WAZ001  
Washington Cascades  
and Snohomish  
County

27 0600PST-  
27 1800PST 0 0 0 0 Heavy Snow  
0 1 0 0 High Winds

A series of vigorous frontal systems moving across Washington dumped 5 feet of new snow in the higher elevations of the Washington Cascades in five days between the 23rd and 27th. A weather system moving over western Washington on the 27th brought gusty winds to the lowlands and continued to dump heavy snow in the mountains. Wind gusts to 50 mph were recorded in Snohomish and Whatcom Counties causing scattered power outages affecting up to 35,000 customers. One man was injured near Granite Falls, 15 miles northeast of Everett, when a tree fell on the pickup truck he was driving. In the mountains, the heavy snow and high avalanche danger caused temporary closures of Stevens and Snoqualmie passes during most of the day. Four cross country skiers were briefly buried by an avalanche in the Kendall Peak ski area near Snoqualmie Pass. None of the skiers were injured though a dog was lost in the slide.

WAZ001-002-003-  
004-005-012-008-  
009-010-013  
Western, South  
Central, Southeast  
Washington

28 0600PST-  
1800PST 0 0 6 0 High Winds

A deep low pressure center moved on shore over Vancouver Island during the morning and tracked eastward across southern British Columbia during the afternoon. Many parts of the state experienced wind gusts of 50 mph or more as the accompanying frontal system moved across the state. Wind gusts were clocked to 74 mph in the Tri-Cities areas, 73 mph at Hanford, and 70 mph in Enumclaw. Power outages were scattered across most western Washington counties and Yakima, Benton, Franklin, and Walla Walla counties in southeast Washington. Falling trees and branches damaged cars and houses in Oak Harbor, the Seattle area, the Olympia area, Yakima, and Walla Walla. Minor wind damage to some roofs also occurred in several areas. Football fans in several parts of the state suffered through interruptions in coverage of the Super Bowl because of power outages or local cable service problems. Heavy rain, which also occurred, caused a major mudslide on U.S. Highway 101 near Hoodport, at the south end of Hood Canal. The road was closed for a few days while cleanup crews removed up to 15 feet of mud and debris from the roadbed. In the mountains, heavy snow continued to fall causing the closure of Stevens and Snoqualmie passes much of the day due to high avalanche danger.

## WEST VIRGINIA

WVZ003, 004, 005,  
009

9 Daytime 0 0 0 0 Heavy Snow

A very localized band of heavy snow developed by midmorning. The band was only about 60 miles wide. Radar VIP levels of 3 and 4 were noted in the band near Charleston. Snow flakes were the largest most people had ever seen. Two-to-three inch diameter flakes were common. Some 4-inch flakes were seen by NWS personnel. During a three-hour period just before noon, snow accumulated at the rate of 2 inches per hour at Charleston. The band extended from southern Wayne County through Charleston, Clay, Braxton, and Webster Counties into the northern mountains near Elkins. Snowfall of 4 to 7 inches was common.

## WISCONSIN

WIZALL  
Statewide

12 Early morning into  
Evening 0 0 5 0 High Wind

An intense low pressure system produced very strong west to northwest winds of 40 to 50 mph across Wisconsin. Winds gusted to 62 mph at Rice Lake (Barron County) and 58 mph at La Crosse. The winds knocked out power to thousands of people and toppled hundreds of trees. A roof was blown off a bowling alley in La Crosse. A home under construction in Friendship (Adams County) was blown off its foundation. Hundreds of ice shanties were damaged or destroyed on frozen lakes. Walls were knocked down at a school being built in Tomah (Monroe County) and a recycle building in Friendship.

WIZ003-005-006-007-  
008-010  
Central Wisconsin

23 Morning into  
Late Evening 0 0 ? 0 Heavy Snow

A band of heavy snow fell across central Wisconsin causing a few accidents and scattered power outages. Some snow amounts were enhanced by thunderstorms and included 10.5 inches at Bloomer and 9 inches at Augusta (Chippewa County) and 8.5 inches at Wausau.

WIZ008-009-012-013-  
016-017-018-019-020  
Southeast Wisconsin

24 Late Evening into  
25 Evening 0 0 ? 0 Heavy Snow

A major snowstorm generated a band of heavy snow of 6 to 12 inches across southeast Wisconsin. Strong winds of 20 to 40 mph created drifts of 2 to 4 feet and near blizzard conditions. Snow amounts included 12 inches at Twin Lakes (Kenosha County) and Burlington (Racine County), 10.5 inches in Beloit (Rock County) and 10 inches in Racine and Milwaukee. The storm caused power outages to over 12,000 people and numerous accidents. Many businesses and schools shut down as well as Milwaukee's Mitchell International Airport.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROSSLIS	

## WYOMING

WY2002  
Northwest Chinook

04 0500MST-1000MST 0 0 0 0 High Wind

On the morning of the 4th, strong winds occurred at Cody. Sustained winds from 40 to 50 mph, with a peak gust to 59 mph, were reported.

WYZALL  
Entire State

07 0600MST-08 2100MST 0 0 5 0 High Wind

A two-day severe wind event occurred across Wyoming during the 7th and 8th. On the 7th, a peak wind gust of 82 mph was reported about 5 miles southeast of Wheatland. Casper logged a peak gust to 69 mph and Cheyenne had a peak wind of 68 mph. Cody recorded a peak gust of 60 mph.

The most severe winds occurred during the 8th. Essentially every location in Wyoming had sustained wind speeds from 40 to 60 mph with frequent gusts greater than 70 mph. Some of the strongest wind gusts were 120 mph at Rendezvous Mountain, located in Teton Village, 100 mph 8 miles south of Wheatland, 79 mph at Casper, 77 mph in Cheyenne, 73 mph at Jackson Hole, 69 mph in Laramie, and 64 mph at Rock Springs.

Damage was reported statewide. Thirty-five flat cars of a freight train were blown off the tracks between Cheyenne and Laramie on the early morning of the 7th. On the early afternoon of the 8th, a large section of the roof of a high school gymnasium in Cheyenne was torn off. There was also widespread tree damage and several downed power lines. Power outages were common. Damage was also done to mobile homes, cars, windows, and house doors.

WY2012-016-017  
Eastern Plains  
Laramie Valley  
Southeast Plains

09 0800MST-1500MST 0 0 0 0 High Wind

From the morning through the midafternoon of the 9th, high winds blew across extreme southeast Wyoming. Vedaawoo, 30 miles west of Cheyenne, recorded peak winds as high as 63 mph. A peak gust of 66 mph was observed 25 miles northeast of Cheyenne during the early afternoon.

WY2002-004-005-006-011-012-016-017  
Northwest Chinook  
Eastern Wyoming

09 2000MST-10 1500MST 0 0 5 0 High Wind

A severe windstorm blew across a large portion of the Cowboy State from the evening of the 9th through the midafternoon of the 10th. Cody experienced sustained winds of 40 to 50 mph with a peak gust of 70 mph during that period. Sheridan logged a peak wind of 68 mph on the early morning of the 10th. From the late morning through the midafternoon of the 10th, there were numerous reports of wind gusts of 75 to 90 mph between Wheatland and Chugwater. Also, Laramie logged a peak gust of 66 mph, Cheyenne had a peak wind of 60 mph, and Casper experienced sustained 40 to 50 mph winds. Widespread wind damage was done to mobile homes, roofs, and trees. There were also reports of power lines being blown down and vehicles forced off the highways.

WY2015  
Southern Mountains

13 1900MST-14 0700MST 0 0 0 0 Heavy Snow

During the overnight of the 13th into the 14th, heavy snow occurred in the Medicine Bow Mountains. Reports of 10 inches were common.

WY2002-012-014-016-017  
Northwest Chinook  
Eastern Plains  
Red Desert  
Laramie Valley  
Southeast Plains

23 0001MST-1800MST 0 0 3 0 High Wind

From the early morning through late afternoon of the 23rd, very strong winds tore through parts of Wyoming. Most locations in the extreme northwest and southern sections of the state experienced 40 to 50 mph sustained winds with gusts in excess of 70 mph. Some peak winds were 74 mph in southern Goshen County, 66 mph at Cody and 64 mph at Rawlins. There were reports of power lines blown down.

WY2002-012-014-016-017  
Northwest Chinook  
Eastern Plains  
Red Desert  
Laramie Valley  
Southeast Plains

25 0900MST-2330MST 0 0 3 0 High Wind

During the morning through late evening of the 25th, strong winds blew across extreme northwest and southern Wyoming. Sustained winds from 40 to 50 mph with gusts greater than 60 mph occurred. Wind gusts of 80 mph were reported 8 miles south of Wheatland and in the Laramie Range. Vedaawoo, 30 miles west of Cheyenne, logged a 71 mph gust and Rawlins experienced a peak wind of 69 mph. There were reports of downed power lines.

WY2001  
Northwest Mountains

25 1200MST-26 2000MST 0 0 0 0 Heavy Snow

From the early afternoon on the 25th through the evening of the 26th, heavy snow fell on the mountains of extreme northwest Wyoming. Togwotee Mountain Lodge, just west of Togwotee Pass, accumulated 24 inches of new snow.

WY2016  
Laramie Valley

26 1000MST-1200MST 0 0 0 0 High Wind

On the late morning of the 26th, Vedaawoo, 30 miles west of Cheyenne, experienced sustained 40 to 50 mph winds with gusts greater than 60 mph.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

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		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CRODAS	

## WYOMING

WY2002-014-016  
Northwest Chinook  
Red Desert  
Laramie Valley

27 1500MST-2200MST 0 0 0 0 High Wind

The extreme northwest and southern sections of the Cowboy State experienced a round of high winds from the late afternoon through late evening of the 27th. Some peak winds were 62 mph at Cody and 58 mph in Rawlins. Vedauwoo, 30 miles west of Cheyenne, had sustained winds from 40 to 50 mph.

WY2002-012-016  
Northwest Chinook  
Eastern Plains  
Laramie Valley

28 0001MST-2359MST 0 0 0 0 High Wind

During the 28th, very strong winds were reported over extreme northwestern and southern Wyoming. Winds were sustained from 40 to 50 mph with numerous gusts greater than 60 mph. Some peak winds were 78 mph at Cody, 71 mph in southern Platte County, and 62 mph at Vedauwoo, located 30 miles west of Cheyenne.

WY2001  
Northwest Mountains

28 1800MST-29 0600MST 0 0 0 0 Heavy Snow

During the overnight from the 28th into the 29th, heavy snow was reported in the northwest mountains of Wyoming. Grant Village, located inside of Yellowstone Park, received 10 inches of new snow.

WY2011-012-017  
Central Plains  
Eastern Plains  
Southeast Plains

29 0001MST-1800MST 0 0 0 0 High Wind

From the early morning through the late afternoon on the 29th, strong winds occurred over central and southwest Wyoming. During the early morning of the 29th, Cheyenne had a peak wind of 73 mph. Other peak winds were 71 mph in southern Platte County and 66 mph at Casper.

WY2014  
Red Desert

30 1100MST-1200MST 0 0 0 0 High Wind

On the early morning of the 30th, Rawlins experienced a brief high wind event. Sustained winds of 40 mph with a peak gust to 60 mph were reported there.

## ALASKA, Northern

No report.

## ALASKA, Southern

WESTERN ALEUTIANS

9-10 N/A High Winds

A strong 960 mb low moved northeast and became stationary in the western Bering Sea. Winds from the southwest gusted to 61 mph at Shemya.

NORTH GULF COAST  
COOK INLET north  
portion

10-13 N/A Heavy Snow

A series of lows moved north out of the Gulf of Alaska and into the Kenai Peninsula or Prince William Sound, producing heavy snow over portions of Prince William Sound. Valdez received 33.1 inches in a 24-hour period from noon on the 10th to noon on the 22th, and 11 inches on January 12th and 13th. Residents were warned to shovel snow off roofs and boats. "Rush hour snowstorm" in Anchorage area on the 11th dumped 5 to 9 inches in a six-hour period between 11 am and 5 pm accompanied by gusty winds and visibilities as low as one-sixteenth of a mile.

ALEUTIANS, PRIBILOFS  
COOK INLET

12-13 N/A High Winds

An intense 958 mb low moved northeast into the eastern Bering Sea. West winds gusted to 68 mph at Amchitka on the 12th, and Saint Paul had northeast to northwest winds gusting to near 55 mph. Also Chinook winds hit the Anchorage hillside area on the 13th with Glen Alps reporting a peak gust of 70 mph in the morning.

WESTERN ALEUTIANS

13-14 N/A High Winds

An intense 950 mb low moved northeastward into the western Bering Sea bringing winds 60 to 70 mph to the western Aleutians. Shemya reported peak wind of 69 mph from the southwest on both days and Amchitka had a peak gust of 67 mph from the south on the evening of the 13th.

WESTERN ALEUTIANS

16 N/A High Winds

A strong 976 mb low moved northward to the western Aleutians then stalled and weakened. East winds gusted to 69 mph at Amchitka in the morning.

NORTH GULF COAST  
SUSITNA VALLEY

15-19 N/A ? Heavy Snow

More heavy snow buried portions of the Prince William Sound area as a series of northward moving lows caused strong moist southerly flow onshore over an Arctic front. Valdez received 47.5 inches of snow on the 16th, a new 24-hour record, and 64.9 inches fell from the evening of the 15th to the morning of the 17th. The heavy snow prompted repeated warnings to

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## ALASKA, Southern

residents to clear snow off roofs and boats. Six vessels in the harbor sank under the weight of the snow, including a 44-foot pleasure yacht. A city storage building collapsed about a week later causing extensive damage to its contents and total loss of the structure. Also heavy snow fell in the Susitna Valley with nearly 4 feet (44 inches) burying Chulitna River Lodge. One greenhouse and several sheds and unoccupied cabins collapsed in Trapper Creek. Roads were blocked and schools closed.

**ALEUTIANS, PRIBILOF ISLANDS** 18-19 N/A High Winds

An intense 938 mb low passed just south of the Aleutians heading for the Alaska Peninsula. East winds gusted to 66 mph at Amchitka early on the 18th. Saint Paul reported northeast winds gusting to 61 mph along with near blizzard conditions. A ship, the "Sea Fisher", just south of the Pribilofs at 6 pm on the 18th, reported east winds 50 knots with gusts to 70 knots.

**WESTERN ALEUTIANS** 24-25 N/A High Winds Heavy Snow/Blizzard

A strong 972 mb low moved northeast across the western Aleutians bringing winds 70 to 80 mph, heavy snow, blowing snow and very low visibility. Shemya reported southwest winds gusting as high as 82 mph on the night of the 24th, and Amchitka had a peak wind of 78 mph. Heavy snow and blowing snow reduced visibility to near zero at Shemya.

**ALEUTIANS, PRIBILOFS** 27-28 N/A High Winds

A 970 mb low moved northward across the central Aleutians into the central Bering Sea. After passage of the low center Adak reported west winds gusting to 64 mph. Saint Paul reported southeast winds to 54 mph to the northeast of the low center.

**ALEUTIANS, ALASKA PENINSULA** 30 N/A 2 2 ? High Winds Heavy Snow

A 973 mb low moved along the eastern Aleutian Islands and the Alaska Peninsula accompanied by high winds and snow. Among land stations Cold Bay and Nikolski reported peak winds of 58 mph and 56 mph, respectively. A ship off Atka Island reported winds gusting to 75 knots. Adak received about a foot of snow. Two U.S. Fish and Wildlife Service workers died and two others were injured when their 25-foot boat capsized in heavy seas off Adak Island.

## ALASKA, Southeastern

**Northern SE Alaska** 27-31 0 0 0 0 Anticyclone

Strong Arctic high pressure became established over the Yukon Territory during the last week of January. High winds to 45 mph with gusts to 65 mph were observed along with temperatures below 0°F. Wind chills were estimated to approach -60°F. Other than short-term power outages, no injuries or damage were reported due to the fact that this event was well covered in the forecasts and that this was not a rare occurrence for the month of January in southeast Alaska.

## HAWAII

**All Islands** 14-22 0 0 6 5 Flash Flooding

A low pressure system remained in the vicinity of the Hawaiian Islands for an extended period causing heavy rains and cloudy, dreary conditions. The low at first was located north of the islands but later settled in south and west of the chain. The heavy rains caused some flooding on all islands but heaviest amounts in excess of 20 inches fell along the Kau slopes on the 19th and 20th and over much of southern Kauai on the 21st. Some road damage and many road closures were caused by the rains in these districts. Also minor flooding on the other islands. This pesky low was still present just west of the islands near the dateline on the 28th.

**All Islands** 20-21 0 0 0 0 Surf

High surf reported at 20 to 25 feet with some sets at 30 feet occurred along the north and west shores of Kauai and Oahu. No damage was reported. The swell originated in a very deep low pressure system at 940 mb in the northwest Pacific with winds at 60 to 70 kn. This storm contained the former circulation and moisture of Typhoon Koryn.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

JANUARY 1990

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## PACIFIC

Mariana Islands	14				0	9	6	6	Typhoon Koryn
-----------------	----	--	--	--	---	---	---	---	---------------

Typhoon Koryn was a relatively rare January storm which moved northward just east of the islands of Guam, Rota, Tinian, and Saipan. Koryn had maximum sustained winds near its center up to 80 kn while winds over land were slightly lower except where affected by terrain. Some damage to tender agricultural crops and to tin roofs and light structures. Seven light injuries were reported on Guam with two more on Tinian.

## PUERTO RICO

None Reported.

## VIRGIN ISLANDS

None Reported.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

PLACE	DATE	TIME	LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL STANDARD			KILLED	INJURED	PROPERTY	CROPS	

## CORRECTIONS

### MAY 1989

**CONNECTICUT** - Page 34 - Add:

Hartford County	24	1020EST		0	0	?	?	Small Stream Flooding
-----------------	----	---------	--	---	---	---	---	-----------------------

More than 4 inches of rain fell in Hartford County, including about 4.40 inches at Bradley International Airport, during an 11-hour period ending at 1000LST. Numerous small streams were flooded.

### JUNE 1989

**NEW MEXICO** - Page 58 - 16 1338MST - Change narrative to read:

A 38-year-old male was struck by lightning near Roswell while working outside. He died June 20. M380.

### AUGUST 1989

**LOUISIANA** - Page 30 - Add:

Caddo Parish, Rodessa	06	2010CST		0	0	0	0	Hail (0.88)
-----------------------	----	---------	--	---	---	---	---	-------------

Severe thunderstorms over northeast Texas moved into the extreme northwest corner of Caddo Parish and produced hail at Rodessa.

Acadia Parish, Crowley Crowley	07	1330CST	0.2	30	0	0	4	0	Tornado (F1)
	07	1330CST			0	0	3	0	TSTM Wind

A severe thunderstorm spawned a tornado which tore a portion of the roof and siding off of a shopping center in Crowley. Strong winds associated with the thunderstorm also ripped large branches from trees which downed power lines.

Livingston Parish, Watson	07	1515CST		0	0	4	0	TSTM Wind
---------------------------	----	---------	--	---	---	---	---	-----------

An apparent thunderstorm downburst wind in the vicinity of Watson knocked down several large trees and ripped numerous large branches from trees along Louisiana Highway 16. A car was heavily damaged by the fallen branches, and the highway was blocked by debris for several hours.

Livingston Parish, Killian	27	1710CST		2	0	0	0	Lightning
----------------------------	----	---------	--	---	---	---	---	-----------

Lightning struck a boat in the Tickfaw River knocking two of the four occupants into the river. One of the victims was pulled from the river unconscious and responded to CPR treatment, but died the following day. The other victim's body was not recovered until the following day. Drowning was listed as the cause of death in both instances, though the lightning strike precipitated the drownings. The two other boat occupants were not injured. F180, M190.

**MICHIGAN** - Page 54 - Number of lightning injuries should be 5 and not 4.

Page 55 - Number of national lightning injury totals should be 51 and not 50.

**SOUTH CAROLINA** - Page 44 - Lightning; should be -

Killed	- 0
Injured	- 1
Property	- 4
Crop	- 0

### SEPTEMBER 1989

**CALIFORNIA, Northern** - Page 31 - Delete narrative at 1625PST.

- Add:

Contra Costa County Concord	18	1510PST		0	0	0	0	Tornadoes (F0)
-----------------------------	----	---------	--	---	---	---	---	----------------

Public reported two separate tornadoes. Heavy rains and street flooding associated with activity.

Solano County 15 NE Vacaville	18	1640PST		0	0	0	0	Tornado (F0)
-------------------------------	----	---------	--	---	---	---	---	--------------

Pilot reported tornado had intermittent contact with the ground.

# STORM DATA AND UNUSUAL WEATHER PHENOMENA

PLACE	DATE	TIME		LENGTH OF PATH (MILES)	WIDTH OF PATH (YARDS)	NO. OF PERSONS		ESTIMATED DAMAGE		CHARACTER OF STORM
		LOCAL	STANDARD			KILLED	INJURED	PROPERTY	CROSSL	

**CALIFORNIA, Northern (Continued)**

Solano County 8 SW Woodland	18	1645PST				0	0	0	0	Funnel Cloud
--------------------------------	----	---------	--	--	--	---	---	---	---	--------------

A total of 7 funnel clouds and 3 tornados occurring in a 4-county-area were spawned by an upper low swinging southeastward across the area. The thunderstorms also produced moderate winds, hail, and heavy rainfall over a wider area of central California. Some urban and small stream flooding was reported.

**NEW MEXICO** - Page 42 - 19 1100MST - Change narrative to read:

A Pecos man was killed by a lightning strike as he was loading his truck after a logging operation. M460.

**OCTOBER 1989**

**NEW YORK** - Page 17 - Number killed should be 2 and not 1.

Also change narrative to read: Powerful thunderstorms spawned a tornado of F2 intensity.

Page 27 - Number of tornado deaths should be 2 and not 1.

Number of National Deaths should be 4 and not 3.

# STORM SUMMARY

January 1990

TYPE	ALABAMA	ARIZONA	ARKANSAS	CALIFORNIA	COLORADO	CONNECTICUT	DELAWARE	FLORIDA	GEORGIA	IDAHO	ILLINOIS	INDIANA	IOWA	KANSAS	KENTUCKY	LOUISIANA	MAINE	MARYLAND & DC	MASSACHUSETTS	MICHIGAN	MINNESOTA	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEVADA	NEW HAMPSHIRE
<b>TORNADOES</b>						0	0	0						0	0				0				0				
Number																											
Days	00001																										
Deaths																											
Injuries																											
Property Damage	00000																										
Crop Damage																											
<b>HAIL</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>THUNDERSTORM WINDS</b>																											
Deaths	0000																										
Injuries																											
Property Damage	0000																										
Crop Damage																											
<b>HIGH WINDS</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>LIGHTNING</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>FLASH FLOODS</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>FLOODS</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>HEAVY SNOWSTORMS AND BLIZZARDS @</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>ICE STORMS #</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>HURRICANES AND TROPICAL STORMS</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>ALL OTHERS</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											

SEE REFERENCE NOTES FOR STORM DAMAGE CATEGORIES



# STORM SUMMARY

January 1990

TYPE	NEW JERSEY	NEW MEXICO	NEW YORK	NORTH CAROLINA	NORTH DAKOTA	OHIO	OKLAHOMA	OREGON	PENNSYLVANIA	RHODE ISLAND	SOUTH CAROLINA	SOUTH DAKOTA	TENNESSEE	TEXAS	UTAH	VERMONT	VIRGINIA	WASHINGTON	WEST VIRGINIA	WISCONSIN	WYOMING	ALASKA	HAWAII	PACIFIC	PUERTO RICO	VIRGIN ISLANDS	NATIONAL DEATH & INJURY TOTALS
<b>TORNADOES</b>										0			0		0					0		4			0	0	
Number				1										1												0	0
Days																											
Deaths																											
Injuries																											37
Property Damage																											
Crop Damage																											
<b>HAIL</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>THUNDERSTORM WINDS</b>																											
Deaths																											
Injuries																											4
Property Damage																											
Crop Damage																											
<b>HIGH WINDS</b>																											
Deaths																											
Injuries																											8
Property Damage																											50
Crop Damage																											
<b>LIGHTNING</b>																											
Deaths																											
Injuries																											
Property Damage																											
Crop Damage																											
<b>FLASH FLOODS</b>																											
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Injuries																											
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Crop Damage																											

SEE REFERENCE NOTES FOR STORM DAMAGE CATEGORIES

STORM DAMAGE CATAGORIES

REFERENCE NOTES

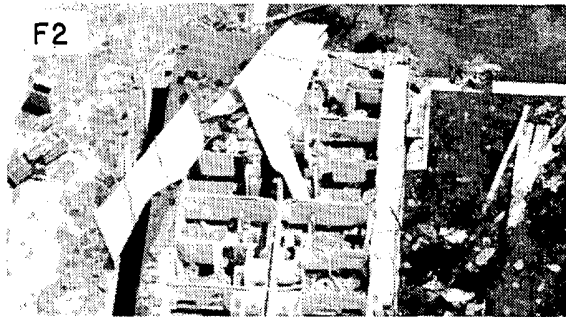
- 1 Less than \$50
- 2 \$50 to \$500
- 3 \$500 to \$5,000
- 4 \$5,000 to \$50,000
- 5 \$50,000 to \$500,000
- 6 \$500,000 to \$5 Million
- 7 \$5 Million to \$50 Million
- 8 \$50 Million to \$500 Million
- 9 \$500 Million to \$5 Billion

- 0/Blank None reported.
- \* Miles instead of yards.
- \*\* Yards instead of miles.
- @ Includes heavy sleet storm.
- # Freezing drizzle and freezing rain, commonly known as glaze.
- ≠ Report incomplete.
- ≠≠ Report not received.
- o/c Indicates Crop Damage amount is included in the value given for property damage.

When reports are not received or are incomplete, the Storm Summary National Death and Injury totals may also be incomplete.

Definition of Fujita Tornado Scale (F scale)

(F0) 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.

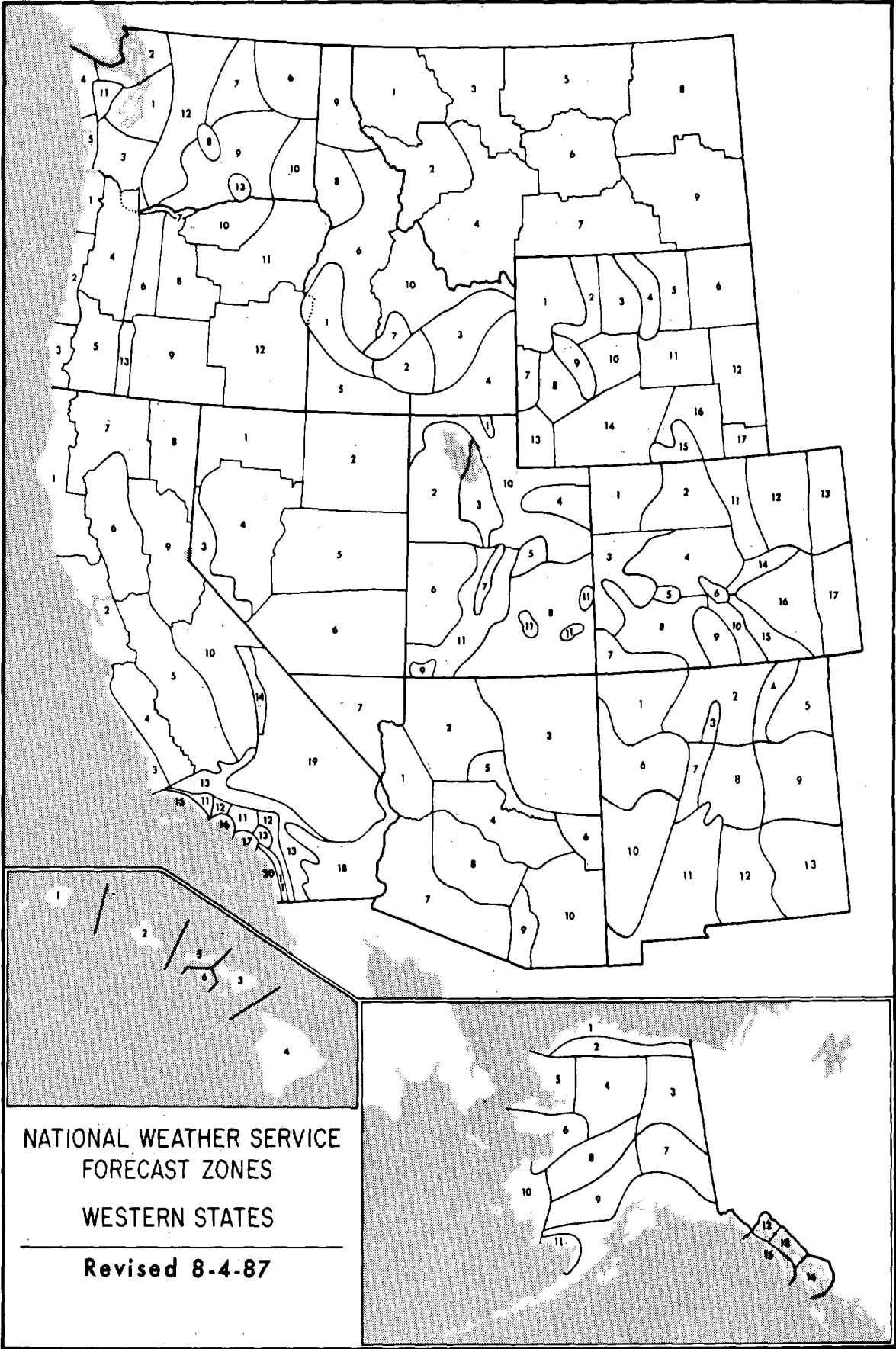
(F5) Incredible tornado (261-318 mph): Incredible damage  
Strong frame houses lifted off foundations and carried considerable distance to disintegrate; automobile-sized missiles fly through the air in excess of 100 m; trees debarked; incredible phenomena will occur.

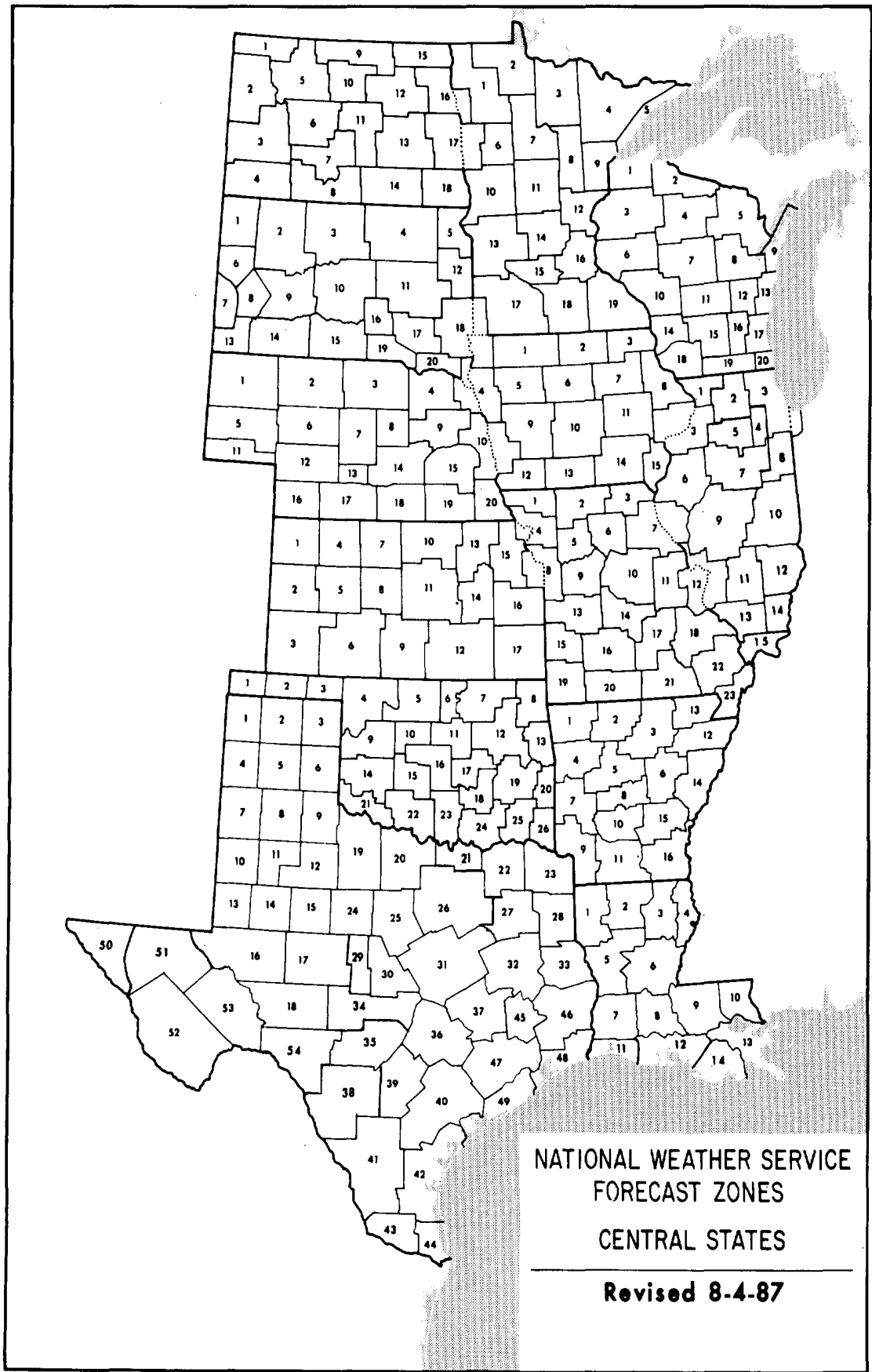


(F6-F12) (319 mph to Mach 1, the speed of sound):  
The maximum wind speeds of tornadoes are not expected to reach the F6 wind speeds.

- 
- (F0+F1) Weak Tornado
  - (F2+F3) Strong Tornado
  - (F4+F5) Violent Tornado
- 

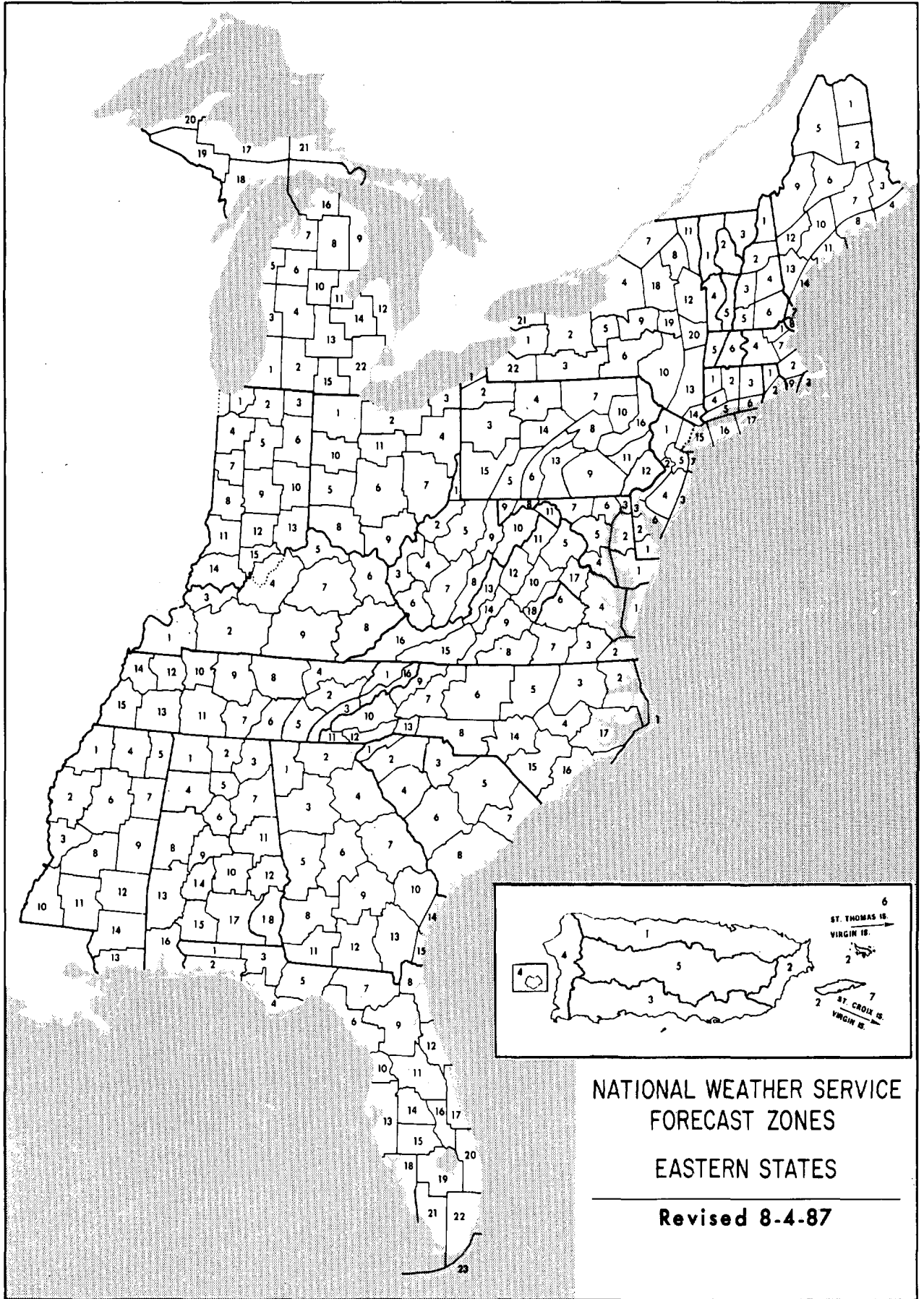
From J. Atmos. Sci., August 1981, p. 1517-1519





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FORECAST ZONES  
CENTRAL STATES

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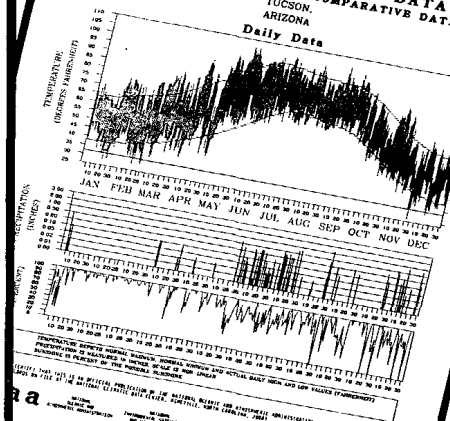
CLIMATOLOGICAL DATA  
ARIZONA

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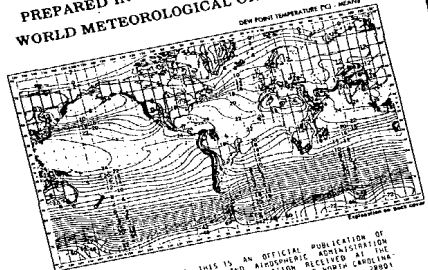
LOCAL  
CLIMATOLOGICAL DATA  
Monthly Summary

STATION	DATE	TEMPERATURE	PRECIPITATION	WIND	RELATIVE HUMIDITY	SEA LEVEL PRESSURE	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS	WIND VELOCITY	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS	WIND VELOCITY	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS	WIND VELOCITY	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS	WIND VELOCITY	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS	WIND VELOCITY	WIND DIRECTION	WIND VELOCITY	WIND GUSTS	WIND RUN	WIND SQUALLS	WIND CALMS																																																				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA  
TUCSON,  
ARIZONA  
Daily Data



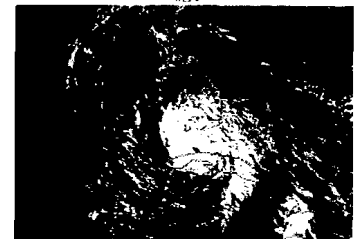
MONTHLY CLIMATIC  
DATA FOR THE WORLD  
PREPARED IN COOPERATION WITH THE  
WORLD METEOROLOGICAL ORGANIZATION



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STORM DATA



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## FIRST CONFERENCE ANNOUNCEMENT

THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
Invites you to attend



OPERATIONAL SATELLITES:  
SENTINELS FOR THE MONITORING OF CLIMATE AND GLOBAL CHANGE  
OCTOBER 16-19, 1990  
HOTEL WASHINGTON, WASHINGTON, D.C.

The changing nature of the Earth and its climate is a growing area of study that is being undertaken by scientists throughout the world. These changes may effect future human activities and habitability. Warming of the global climate, depletion of ozone, redistribution of snow and ice cover, trends in ocean temperatures, deforestation, and drought are but some of the subjects of immediate concern to the scientific and public communities. Certain changes are viewed as anthropogenic in origin while others may be the result of interrelated natural processes. Regardless of the process, the ability to monitor these changes is fundamental to all research and decision making. The National Oceanic and Atmospheric Administration (NOAA) is responsible for in situ and operational satellite observations and climate monitoring within the U.S. Global Change Research Program. This Conference will provide a forum for the exchange of information between the providers of these observations and the user community who are studying climate and global change.

### THE CONFERENCE PROGRAM

This is a 3 1/2 day program of general sessions addressing Atmospheric, Land Surface, and Oceanic topics. Sessions on Calibration/Validation and Data Availability/Accessibility are also scheduled. Presentations on both domestic and international operational remote sensing systems, current and planned, are being organized. The Conference will be held at the Hotel Washington in the heart of the Washington, D.C. business district. The Conference registration begins on the morning of October 16th, and sessions will convene at 10:00 A.M.. The conference will conclude with a session, Friday morning, October 19th, that will detail the constellation of future satellite systems that are planned to meet the data requirements for the study of climate and global change. An evening reception is planned on October 16th. A registration fee will be charged. The preliminary program brochure, containing the technical program as well as Conference registration fees and hotel reservation information will be available early in the summer of 1990. Conference papers will be published as post-conference proceedings. For more information, please contact: Dr. Donald B. Miller, NOAA/NESDIS, Satellite Applications Laboratory, E/RA21, World Weather Building Rm. 601, Washington, D.C. 20233.

### ANOTHER EVENT OF INTEREST

Washington, D.C. offers many business and vacation opportunities. Conference attendees may wish to extend their visit and participate in the co-sponsored NOAA/NASA/ERIM Conference, Earth Observations and Global Change Decision Making: A National Partnership; to be held the following week, October 23-24, 1990, in Washington, D.C.

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