

**MARCH 2004
VOLUME 46
NUMBER 3**

STORM DATA

**AND UNUSUAL WEATHER PHENOMENA
WITH LATE REPORTS AND CORRECTIONS**



noaa

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

Cover: Numerous showers and thunderstorms occurred in the Raleigh, North Carolina area on July 14, 2004. Some of these storms brought heavy rains and gusty winds. Shortly after sunset, the storms dissipated. (Photo courtesy: Michael Urzen, NOAA/NCDC.)

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STORM DATA

(ISSN 0039-1972)

National Climatic Data Center

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STORM DATA is prepared, and distributed by the National Climatic Data Center (NCDC), National Environmental Satellite, Data and Information Service (NESDIS), National Oceanic and Atmospheric Administration (NOAA).

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 the National Climatic Data Center and the National Weather Service's (NWS) Storm Prediction Center.

STORM DATA contains all confirmed information on storms available to our staff at the time of publication. Late reports and corrections will be printed in each edition.

Except for limited editing to correct grammatical errors, the data in Storm Data are published as received.

Note: "None Reported" means that no severe weather occurred and "Not Received" means that no reports were received for this region at the time of printing.

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Rocket Center, WV 26726
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The editor of STORM DATA solicit your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or severe weather events (past or present) for use in the "Outstanding Storms of the Month" section of STORM DATA. We request our subscribers or other interested persons to mail such items to:

Storm Data
National Climatic Data Center
151 Patton Avenue
Asheville, NC 28801
e-mail: storm.data@noaa.gov

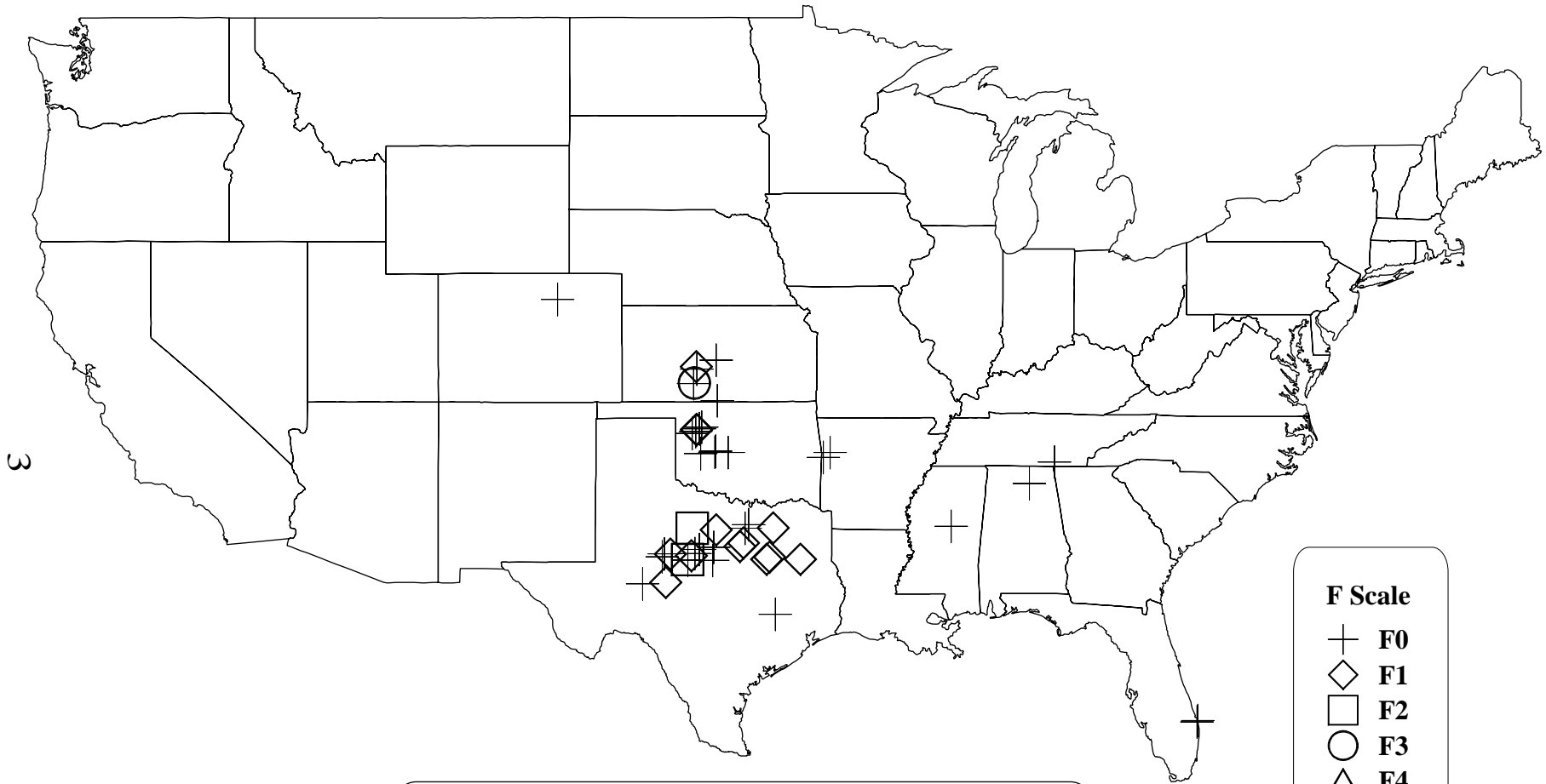
Any such items received by the editor will be for use in STORM DATA only. Any other use will be with the permission of the owner of said items. Materials will be returned if requested.

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 28801-2733.



Thomas R. Karl
Director,
National Climatic Data Center

March 2004 Confirmed Tornadoes



3

F Scale

- + F0
- ◇ F1
- F2
- F3
- △ F4
- ⊠ F5

F Scale	F0	F1	F2	F3	F4	F5	Total
Number	32	13	2	1	0	0	48

OUTSTANDING STORMS OF THE MONTH

**THERE IS NO
“OUTSTANDING STORM OF THE MONTH”
FOR THE MONTH OF MARCH 2004.**

Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>ALABAMA, Central</u>									
Marion County 5 N Bexar	05	2015CST			0	0	3K	0	Thunderstorm Wind (G60)
									Trees were blown down around the Schottsville community
Sumter County Bellamy	05	2050CST 2110CST			1	0	0	0	Heavy Rain
									Heavy rain and winds of 25 to 30 miles an hour moved across the Bellamy area. One tree fell down due to the saturated ground and high wind around 8:53 PM CST. The tree landed on a 50 year old man. Rescue workers attempted to free the man, but after a few hours, the man died from his injuries. M50UT
Marion County Hamilton to Brilliant	05	2125CST 2130CST			0	0	8K	0	Thunderstorm Wind (G60)
									Several trees were blown down from Hamilton to Guin to Brilliant.
Walker County Countywide	05	2210CST 2220CST			0	0	4K	0	Thunderstorm Wind (G60)
									A few trees blown down across the county. Cities that reported a few trees down included Boldo, Cordova, and Jasper.
Marion County Hackleburg	30	1228CST			0	0	0	0	Hail (0.88)
									Nickel size hail was reported in Hackelburg.
Winston County Countywide	30	1244CST 1333CST			0	0	0	0	Hail (0.88)
									A thunderstorm moved across Winston County and produced hail along its path. The observed hail was dime to nickel size. Some areas that reported hail included Haleyville, Addison, Upshaw, and Double Springs.
<u>ALABAMA, North</u>									
Colbert County 3 NW Littleville	05	1938CST 2300CST			0	0			Flash Flood
									Several inches of water was reported with flooding occurring on several county roads throughout the county.
Franklin County 10 W Russellville	05	1945CST 2300CST			0	0			Flash Flood
									Several inches of water was over the road at lost creek river near cedar creek reservoir.
Lauderdale County Florence	05	1950CST 2300CST			0	0			Flash Flood
									An underpass was flooded with several inches of water was reported near McFarland Park.
Limestone County Ardmore	05	2045CST 2300CST			0	0			Flash Flood
									The underpass at highway 53 and Tennessee highway 7 on the state line was reported to be under water with several inches of water over the road.
Limestone County 4 NE Athens	05	2127CST 2130CST			0	0			Hail (0.75)
									Penny size hail was reported by emergency management.
Limestone County 6.5 ESE Athens to 7 ESE Athens	05	2128CST 2131CST	2	75	0	0			Tornado (F0)
									A short lived tornado touched down and moved east-northeast to near east Limestone school. A few trees were twisted and uprooted in its path. Maximum wind speeds of the tornado was around 70 miles an hour.
Limestone County 8 ESE Athens to 10 E Athens	05	2133CST 2137CST	1.5	75	0	0			Tornado (F0)
									Another short lived tornado touched down near the Limestone Correctional Facility. Damage was principally confined to the roof and one wall of a wooden outbuilding at the Limestone Correctional Institute, a few isolated downed pine trees, and damage to some shingles and eave facings.

Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
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ALABAMA, North

Madison County 2 W Huntsville to Huntsville	05	2225CST			0	0			Thunderstorm Wind (G70)
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Trained spotter estimated wind gust to around 70 mph at the Research park in Huntsville

Morgan County Decatur	05	2233CST			0	0			Flash Flood
	06	0100CST							

Trained spotter reported several streets in Decatur with several inches of water over the roads.

Madison County Madison	05	2252CST			0	0			Flash Flood
	06	0100CST							

Off duty NWS employee reported that Balch Road and Highway 72 were both six to eight inches under water.

Jackson County Scottsboro	05	2300CST			0	0			Flash Flood
	06	0200CST							

A few roads in the Scottsboro area had at least six to eight inches of water over the roads.

Cullman County Cullman	05	2305CST			0	0			Flash Flood
	06	0100CST							

Emergency management reported that several inches of water was covering roads in Cullman.

Marshall County Arab	05	2305CST			0	0			Flash Flood
	06	0100CST							

Several inches of water was reported to be over the roads in Arab according to Emergency Management.

Marshall County Guntersville	05	2305CST			0	0			Flash Flood
	06	0100CST							

Six to eight inches of water was reported over roads in Guntersville by Emergency Management.

Dekalb County Ft Payne	06	0020CST 0200CST			0	0			Flash Flood
----------------------------------	----	--------------------	--	--	---	---	--	--	--------------------

A few roads in the Ft. Payne area had flooding occurring with several inches of water over the roads.

Cullman County 16 NW Cullman	30	1330CST 1333CST			0	0			Hail (0.75)
--	----	--------------------	--	--	---	---	--	--	--------------------

Penny sized hail reported by the Battleground fire department.

Marshall County Union Grove	30	1430CST 1435CST			0	0			Hail (0.75)
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Penny sized hail reported at the Cherokee golf course.

ALABAMA, Southeast

NOT RECEIVED.

ALABAMA, Southwest

ALZ061-063 Upper Mobile - Lower Mobile	01	0000CST			0	0			Drought
	31	0000CST							

The Mobile area had the driest March on record since records began in 1841. Mobile's total rainfall for March was 0.42 inch. The previous driest March was 0.59 inch in 1967.

ALASKA, Northern

AKZ201-201 Western Arctic Coast	01	0652AST			0	0			Blizzard
	03	1954AST							

Strong high pressure over the Arctic Ocean of 1054 millibars on the 1st slowly weakened through the 3rd but remained in place and extended southeast into Canada's Northwest Territories. This created a strong pressure gradient which resulted in two periods of blizzard conditions at Point Lay.

AKZ203 Central Beaufort Sea Coast	07	0750AST 1353AST			0	0			Extreme Cold/Wind Chill
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Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property Damage	Crops	
ALASKA, Northern									
		With an existing cold airmass in place across the North Slope, a weak disturbance moved through bringing west winds strong enough to produce dangerous wind chills, as reported at: Deadhorse ASOS: -75 F Kuparuk: -72 F Nuiqsut ASOS: -73 F							
AKZ226		Ne. Slopes Of The Ern Ak Rng							
		09	1045AST		0	0			High Wind (G60)
			2200AST						
		A frontal system moving north toward the Alaska Range produced strong winds, as reported by the following U. S. Army Mesonet sites: Texas Condo: gusts to 60 knots (66 mph); OP10A: gusts to 52 knots (60 mph); Texas Range: gusts to 55 knots (63 mph).							
AKZ213		St Lawrence Is. Bering Strait							
		16	1755AST		0	0			Blizzard
			1955AST						
		With weak low pressure over Norton Sound slowly filling and high pressure over the Bering Sea and Chukotsk Peninsula, a brief period of blizzard conditions likely occurred at Tin City when the pressure gradient was oriented favorably.							
AKZ201		Western Arctic Coast							
		19	1355AST		0	0			High Wind (G60)
		21	0851AST						
AKZ201-203>204-207		Western Arctic Coast - Central Beaufort Sea Coast - Eastern Beaufort Sea Coast - Chukchi Sea Coast							
		19	1516AST		0	0			Blizzard
		20	1906AST						
		A strong warm front moved east across the Chukchi Sea and the Arctic Coast on the 19th through the 20th, creating blizzard conditions across many places in the North Slope Borough, far northwest Alaska, and strong winds at Cape Lisburne, where the AWOS recorded a peak gust to 60 knots (69 mph). Blizzard conditions were reported or likely occurred at: Zone 201: Cape Lisburne, Wainwright Zone 203: Deadhorse, Nuiqsut Zone 204: Barter Island Zone 207; Point Hope, Kivalina							
AKZ201		Western Arctic Coast							
		23	1049AST		0	0			Blizzard
			2052AST						
		As high pressure built over the North Slope, a small low pressure center formed over the western Brooks Range, causing strong winds to occur at Point Lay, likely resulting in blizzard conditions.							
AKZ203>204		Central Beaufort Sea Coast - Eastern Beaufort Sea Coast							
		24	1953AST		0	0			Extreme Cold/Wind Chill
		25	0553AST						
AKZ203>204		Central Beaufort Sea Coast - Eastern Beaufort Sea Coast							
		25	0818AST		0	0			Blizzard
			1855AST						
		Strong high pressure produced a cold airmass over the North Slope, and west winds began to slowly increase as a low pressure center in the high Arctic dropped south toward Barter Island. At first this combination produced low wind chills at certain locations, then blizzard conditions as the winds increased more. Extreme Wind Chills were reported at : Zone 203 - Deadhorse: -72 F Zone 204: Barter Island: -68 F Blizzard conditions were likely at: Zone 203 - Deadhorse Zone 204 - Barter Island							
AKZ213		St Lawrence Is. Bering Strait							
		27	2232AST		0	0			Blizzard
		29	0053AST						
AKZ207-210		Chukchi Sea Coast - Nrn & Intr. Seward Peninsula							
		28	0142AST		0	0			Extreme Cold/Wind Chill
		29	0817AST						
		A moderately strong northerly gradient formed over northwest Alaska under a cold airmass, likely creating blizzard conditions at Tin City, as well as extreme wind chills at: Zone 210: Hoodoo Hill Remote Automated Weather Station : -64 F Zone 207: Kivalina ASOS: -67 F							

Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
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ALASKA, Southeast

AKZ019

Haines Borough And Lynn Canal

06 0700AST

0 0

Heavy Snow

07 0700AST

Our cooperative observers at Haines Customs (40 NW on the Haines Highway) reported 14 inches of snow during this 24 hour period.

AKZ027>028

Dixon Entrance To Cape Decision Coastal Area - Southern Inner Channels

06 1630AST

0 0

1K

High Wind (G75)

1930AST

A 972 mb low tracked into eastern Gulf on this date. The associated front generated high southeast winds along our southern outer coast. Peak wind gusts included Hydaburg at 75 mph and Ketchikan at 60 mph.

AKZ017-022>023-027>028

Cape Fairweather To Cape Suckling Coastal Area - Salisbury Sound To Cape Fairweather Coastal Area - Cape Decision To Salisbury Sound Coastal Area - Dixon Entrance To Cape Decision Coastal Area - Southern Inner Channels

28 0300AST

0 0

2K

High Wind (G61)

1600AST

A 988 mb low dropped south from Prince William Sound into the southern Gulf of Alaska during this time. High west-northwest winds developed behind this system along the Northeast Gulf Coast. High south-southeast winds occurred out ahead of it along the central outer coast and in the Southern Panhandle. Peak wind gusts included: 60 mph in Yakutat, 69 mph at Cape Spencer, 70 mph at the Sitka airport, 67 mph in Hydaburg, and 61 mph at the Ketchikan airport.

ALASKA, Southern

AKZ195

Pribilof Islands

08 1453AST

0 0

Blizzard

1853AST

An intense storm over the central and western Aleutians and the associated front produced a combination of high wind and snow across the eastern Bering Sea. Blizzard conditions resulted across the Pribilof Islands during the afternoon of March 8th. The wind peaked at 61 mph at Saint George and at 58 mph at Saint Paul.

AKZ145

Susitna Valley

08 2200AST

0 0

Heavy Snow

10 1830AST

AKZ101-125

Anchorage Muni To Bird Creek - Wrn P.W. Snd & Kenai Mtns

09 0925AST

0 0

High Wind (G66)

2230AST

AKZ101-125-161

Anchorage Muni To Bird Creek - Wrn P.W. Snd & Kenai Mtns - Bristol Bay

09 0953AST

0 0

Blizzard

10 2230AST

An active front moved into the Bering Sea coast on the morning of March 9th. This produced blizzard conditions in the northern portions of the Bristol Bay zone beginning Tuesday morning. This front also result in amplifying the pressure gradient over south central Alaska resulting in strong east to southeast wind through Portage pass and along Turnagain Arm and the Anchorage Hillside. This strong east to southeast flow was responsible for pushing moisture into the Alaska Range that resulted in heavy snowfall beginning late Monday night and continuing through Tuesday evening. Two feet of snow fell overnight Tuesday into Wednesday morning. Additional snowfall reports ranged from 6 inches to 10 inches in addition to the two feet reported at Shell Lake.

AKZ111-131-135

Matanuska Valley - Nern P.W. Snd - Sern P.W. Snd

18 0000AST

0 0

High Wind (G78)

19 1600AST

Strong high pressure in the Bering Sea along with a developing low in the Gulf of Alaska increased the pressure gradient over much of the area during the period creating high winds over the North Gulf Coast.

Wasilla reached a peak wind of 63 kts (72 mph) around 11 am Friday March 19th with estimated wind gusts to 75 mph across the Matanuska Valley late Thursday evening into the middle of the day Friday.

Valdez Airport peaked at 40-45 mph during the event. The City of Valdez peaked at 59 mph during the event. Wind gusts of 80 mph were estimated in Zone 131 anytime from the middle of the morning Thursday March 18th until sometime Friday afternoon March 19th.

Gradient winds estimated between 75 and 90 mph occurred in the Copper River Delta from the middle of the day Thursday March 18th into the morning hours on Saturday March 20th.

Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	

ALASKA, Southern

AKZ131-145

Nern P.W. Snd - Susitna Valley

18 1700AST

19 1100AST

0 0

Blizzard

High wind warning upgraded to a blizzard warning for Thompson Pass based on a DOT report from Thompson Pass which reported near zero visibility through the Pass.

A blizzard warning was issued for the Susitna Valley primarily along the Alaska Range for Broad Pass and eventually changed to a high wind warning Friday. Chulitna reported a peak wind of 70 mph at 9 pm on Thursday March 18th. Several calls were made to spotters and residents west of the Parks Highway on Thursday morning. Loose and fluffy snow pack contributed to blizzard conditions ... mainly west of the Parks Highway from the middle of the day on Thursday March 18th into the morning hours of Friday March 19th. By Friday the snow pack was either scoured down to bare ground or hard snow pack. High winds remained a problem after that so the blizzard warning was changed to a high wind warning.

AKZ145

Susitna Valley

19 1100AST

1600AST

0 0

High Wind (G65)

AKZ145

Susitna Valley

30 1600AST

2200AST

0 0

Blizzard

A strong pressure gradient wind funneling through Broad Pass resulted in blizzard conditions during the late afternoon and evening hours. Between 4 and 7 pm visibility was reduced to 1/8 of a mile at times with north winds peaking to 46 mph numerous times during the event. No damage was reported.

AMERICAN SAMOA

NOT RECEIVED.

ARIZONA, Central and Northeast

AZZ014>015-017

Little Colorado River Valley In Apache County - Western Mogollon Rim - White Mountains

04 1300MST

05 0800MST

0 12

Heavy Snow

A winter storm brought widespread snowfall to northern Arizona during the late afternoon and overnight. Most locations received only a few inches of new snow and some locations received considerably heavier amounts. Some of the new snowfall amounts were: Flagstaff 12 inches, Springerville 8 inches, Greer 13 inches, and Pinetop 8 inches. Sunrise Ski Park in the White Mountains reported between 26 and 36 inches of new snow above 9000 feet in 24 hours. Department of Public Safety responded to 27 wrecks in the Flagstaff area. Ten of those involved minor injuries. A Coconino County Sheriff's deputy rolled his patrol car twice and received minor injuries. Flagstaff City Police responded to an injury collision and two non-injury collisions.

AZZ016-018

Eastern Mogollon Rim - Northern Gila County

29 0730MST

31 2359MST

0 0

Wildfire

The Webber Fire was sighted at 7:30 AM on March 29 about 5 miles east of Pine (12 miles north of Payson). The fire was about 20 acres when it was spotted then it quickly spread up the steep sides of the Mogollon Rim. The fire moved into Coconino County (the edge of the Rim) by noon on March 29th. Fire investigators determined that the fire was person-caused. More than 280 people were assigned to the Webber Fire. The fire had grown to over 2,700 acres by the end of the day on March 31. 100% containment was reached on April 2 at around noon.

ARIZONA, Northwest

NONE REPORTED.

ARIZONA, South

AZZ032

Tohono Oodham Nation

03 0200MST

04 0800MST

0 0 0 0

Heavy Snow

Kitt Peak observatory reported 23 inches of snowfall during this event.

AZZ033

Tucson Metro/Marana/Green Valley

03 2300MST

05 0400MST

0 0 0 0

Heavy Snow

Mt. Lemmon reported 22 inches of snow during this event. The Palisades ranger station reported 18 inches of snowfall. The Tucson International Airport recorded 0.60 inches of rain.

AZZ019

Northern Greenlee

04 0300MST

05 0900MST

0 0 0 0

Heavy Snow

Hannagan Meadow lodge reported 20 inches of snow from this event.

Storm Data and Unusual Weather Phenomena

March 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
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ARIZONA, South

AZZ030

Upper Gila River Valley

04 0300MST

05 0900MST

0 0 0 0 Heavy Snow

Mt. Graham reported 26 inches of snowfall for this event.

An upper level low initially centered off the coast of Oregon took a southward track down the coast and eventually dug into Northern Mexico. Once the system finally kicked through Northern Sonora and Chihuahua, areas north of Tucson began to see significant precipitation. The western and central deserts saw the precipitation the earliest; while the low was still digging southward. When all was said and done southeast Arizona did receive significant precipitation. The valleys ranged from 0.25 to over an inch of rain. While the high elevations received 7 to 23 inches storm total snowfall.

ARIZONA, Southwest

Maricopa County

**Peoria to
Mesa**

**04 1700MST
2300MST**

0 0 Heavy Rain

Heavy rain accompanied thunderstorms moving eastward across the metropolitan area. Some of the heavier amounts included 2.95 inches in Fountain Hills, and 1.97 inches in Mesa. Firefighters in Surprise performed shallow-water rescues and the Phoenix Fire Department responded to over 130 calls during the storm. Phoenix Sky Harbor airport reported 1.16 inches, along with some flight delays.

Maricopa County

Phoenix

04 1822MST

0 0 Hail (0.75)

Hail report from 48th St and Baseline.

ARKANSAS, Central and North Central

Scott County

Waldron

04 1810CST

0 0 Thunderstorm Wind (G50)

Power lines were blown down.

Polk County

4 SW Big Fork

04 1820CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds downed some large trees.

Pike County

Highland

04 1821CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds blew down some large tree limbs and removed tin from the roofs of 2 chicken houses.

Pike County

3 W Murfreesboro

04 1822CST

0 0 Hail (0.75)

Pike County

3 W Murfreesboro

04 1822CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds destroyed a storage shed, caused a barn to collapse and knocked down a few trees.

Pike County

**3 N Murfreesboro to
7 N Murfreesboro**

04 1825CST

0 0 Hail (1.00)

Logan County

Paris

04 1835CST

0 0 Thunderstorm Wind (G50)

Several homes in the area sustained minor roof damage.

Johnson County

Coal Hill

04 1835CST

0 0 Thunderstorm Wind (G50)

Johnson County

Ozone

04 1850CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds blew down some power lines.

Pike County

3 W Antoine

04 1835CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds downed a large tree.

Montgomery County

3 S Caddo Gap

04 1835CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds downed several trees and damaged a poultry house that was under construction.

Montgomery County

4 S Caddo Gap

04 1835CST

0 0 Thunderstorm Wind (G50)

Thunderstorm winds destroyed a tractor shed and blew the debris into a nearby field.

Clark County

Amity

04 1845CST

0 0 Thunderstorm Wind (G50)