

**OCTOBER 2004
VOLUME 46
NUMBER 10**

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: As a storm complex moved into Tennessee from northern Alabama, a strong F1 tornado touched down in southern Lawrence County on October 18, 2004. The tornado demolished a mobile home (pictured), overturned another, and damaged roofs on several homes. There were no fatalities or injuries with this tornado. (*Photo courtesy: Jerry Orchanian, WCM Nashville, TN*)

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STORM DATA

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National Climatic Data Center

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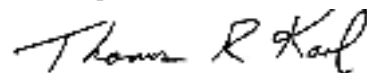
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The editor of STORM DATA solicits your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or severe weather events (past or present) for use in the "Outstanding Storms of the Month" section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

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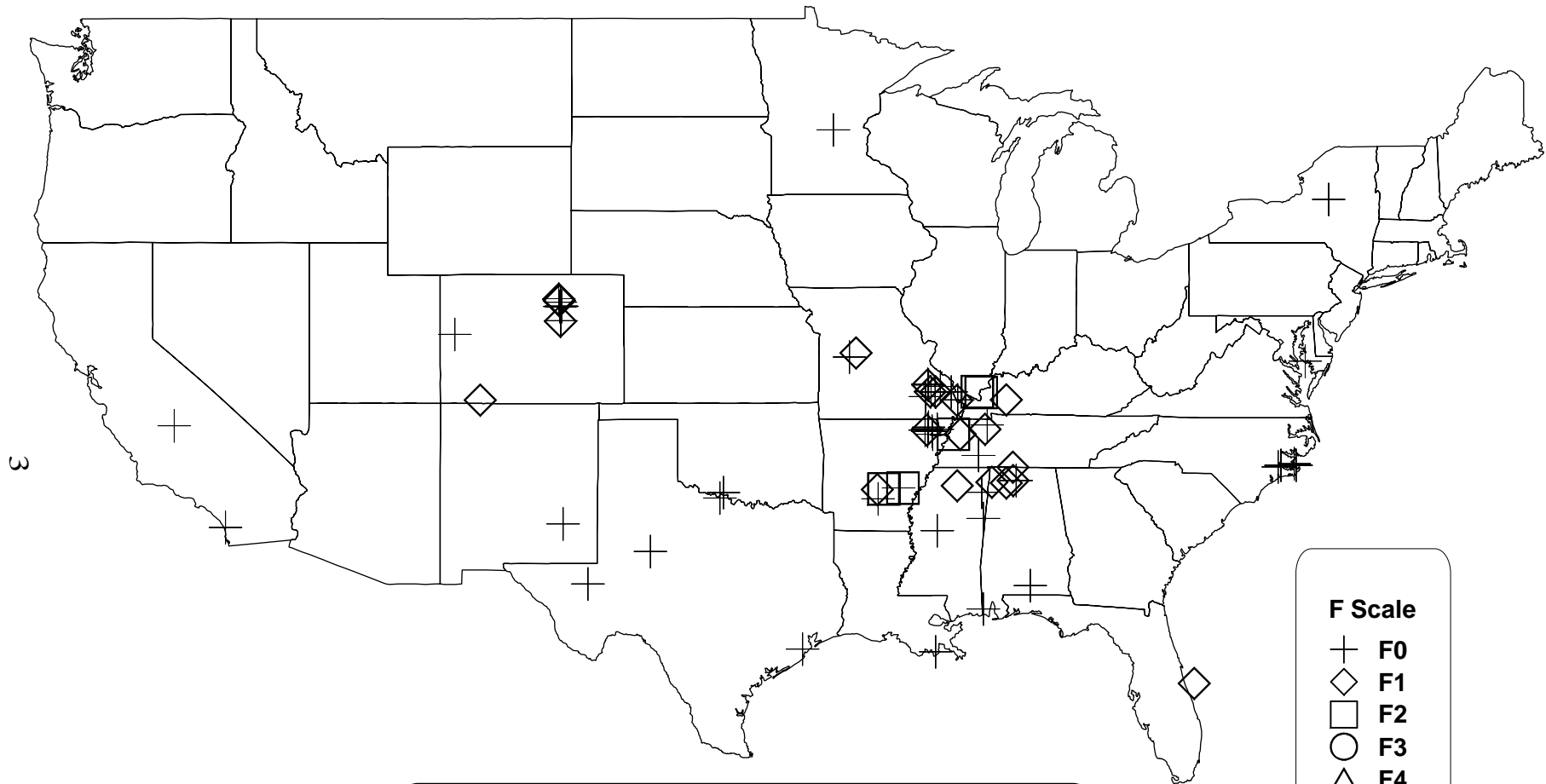
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Thomas R. Karl
Director,
National Climatic Data Center

October 2004 Confirmed Tornadoes



F Scale	F0	F1	F2	F3	F4	F5	Total
Number	52	21	5	0	0	0	79
Puerto Rico	1 F0						

F Scale

- + F0
- ◇ F1
- F2
- F3
- △ F4
- ⊠ F5

OUTSTANDING STORMS OF THE MONTH

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

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm
					Killed	Injured	Property	Crops
ALABAMA, Central								
ALZ044		Montgomery						
	01	0001CST			0	0		Excessive Heat
	31	2359CST						
	The average monthly temperature measured at Dannelly Field was 72.9 degrees. This reading was the fourth warmest October on record since measurements began in 1910.							
Lamar County								
7 W Millport	02	1618CST			0	0	2K	Thunderstorm Wind (G50)
	A few trees were blown down along SR 96 west of Millport.							
Blount County								
3 N Blountsville to 8 E Blountsville	19	0652CST 0701CST			0	0	8K	Thunderstorm Wind (G55)
	Several trees and power lines were blown down in northern Blount County near Blountsville.							
Blount County								
Countywide	19	0726CST 0748CST			0	0	4K	Thunderstorm Wind (G52)
	Several trees and a few power lines were blown down across southern Blount County.							
St. Clair County								
Springville	19	0815CST			0	0	3K	Thunderstorm Wind (G50)
	A few trees were blown down in and around the city of Springville. A funnel cloud was reported in the Springville area but a tornado touch down was not confirmed.							
Blount County								
West Portion	19	0830CST 0930CST			0	0	22K	Flash Flood
	Heavy rain in a short period of time flooded several roadways across the county. Doppler radar estimated 2 to 3 inches of rain across parts of Blount County. Parts of SR 160 and US 31 were flooded and temporarily impassable.							
Winston County								
West Portion	19	0830CST 0930CST			0	0	11K	Flash Flood
	Doppler radar estimated 3 to 5 inches of rain fell across parts of Winston County in only a few hours. A Cooperative Observer near the area reported 5.95 inches of rain in a short period of time. Several roadways were flooded and were temporarily impassable. SR 13 in western Winston County was flooded. Area creeks temporarily rose out of their banks.							
Marion County								
North Portion	19	0830CST 0930CST			0	0	11K	Flash Flood
	Doppler radar estimated 4 to 5 inches of rain fell across northern parts of Marion County in only a few hours. A Cooperative Observer near the area reported 5.95 inches of rain in a short period of time. Several roadways were flooded and were temporarily impassable. Area creeks were well out of their banks and flooding.							
St. Clair County								
Riverside	19	0902CST			0	0		Hail (0.88)
	Nickle size hail was reported along Logan Martin Lake near Riverside.							
Talladega County								
3 SW Lincoln to 2 SE Munford	19	0903CST 0938CST			0	0		Hail (0.88)
	Penny to nickle size hail was observed across northern Talladega County from near Lincoln to near Munford.							
Clay County								
4 NW Ashland	19	1039CST			0	0		Funnel Cloud
	A funnel cloud was reported in western Clay County west of Ashland and Pyriton. A tornado touch down was not confirmed and no damage was reported.							
Tallapoosa County								
5 NE Reeltown to 7 NE Reeltown	19	1217CST 1227CST			0	0	8K	Thunderstorm Wind (G50)

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
ALABAMA, Central							
Lee County 7 NW Loachapoka to 7 N Loachapoka	19	1227CST 1237CST			0 0	17K	Thunderstorm Wind (G50)
A few trees were blown down, uprooted or snapped off over extreme southern Tallapoosa County near CR 15. A funnel cloud was reported near Simmons Crossroads. Several trees were uprooted in extreme western Lee County near the Roxana community. One tree fell on a vehicle causing damage. A tornado touch down was not confirmed.							
Lee County 6 N Opelika to 7 NE Opelika	19	1217CST 1237CST			0 0	8K	Thunderstorm Wind (G50)
Lee County 6 NE Opelika	19	1232CST			0 0	2K	Hail (1.75)
Several trees were blown down or snapped off across northern Lee County north of Opelika. Golf ball size hail and a funnel cloud were reported near the Walmart Distribution Plant along Interstate 85 near Exit 66. A tornado touch down was not confirmed.							
Lee County 9 NE Salem	19	1247CST			0 0		Funnel Cloud
A funnel cloud was reported just east of Mechanicsville near Lake Harding on the Chattahoochee River.							
Lee County 4 E Salem to 10 E Salem	19	1256CST 1307CST			0 0	3K	Thunderstorm Wind (G50)
Lee County 10 E Salem	19	1307CST			0 0		Funnel Cloud
A few trees were blown down east of US 431 in eastern Lee County. A funnel cloud was reported as the storm neared the Chattahoochee River.							
Sumter County Bellamy	19	1344CST			0 0		Hail (0.75)
Penny size hail fell near Bellamy.							
Marengo County Demopolis Muni Arpt to 9 SE Demopolis	19	1404CST 1430CST			0 0		Hail (0.88)
Pea to nickle size hail fell across northern Marengo County. The hail started off around pea size near the Demopolis Municipal Airport and became larger across the southern sections of Demopolis through the Springhill Community.							
Sumter County 2 NE Livingston	19	1505CST			0 0		Hail (1.00)
Quarter size hail was reported near Livingston.							
Dallas County 8 S Orrville to 7 NE Minter	19	1536CST 1616CST			0 0		Hail (1.00)
Dallas County 8 S Orrville to 7 NE Minter	19	1536CST 1616CST			0 0	2K	Thunderstorm Wind (G50)
Penny to quarter size hail was reported across southern Dallas County. A few trees were also knocked down during the storm.							
Sumter County 2 N Cuba	19	1558CST			0 0		Hail (1.00)
Quarter size hail was observed along Interstate 20 near mile marker 1.							
Sumter County Cuba	19	1640CST			0 0		Hail (1.00)
Quarter size hail was reported around Cuba.							
Lowndes County Braggs to 5 W Ft Deposit	19	1640CST 1706CST			0 0	2K	Thunderstorm Wind (G50)
A few trees were blown down in southern Lowndes County generally between Braggs and Fort Deposit.							
Marengo County Myrtlewood	19	1644CST			0 0		Hail (0.75)
Penny size hail was observed in Myrtlewood and in Nanafalia.							

Storm Data and Unusual Weather Phenomena

October 2004

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

ALABAMA, Central

Pickens County

4 W Ethelsville to
4 SW Ethelsville

21

0006CST
0020CST

0

0

Hail (0.88)

Penny to nickle size hail fell across western Pickens County near the Pine Grove and Macedonia communities.

ALZ044

Montgomery

26

1400CST

0

0

Excessive Heat

The afternoon high temperature measured at Dannelly Field was 88 degrees. This temperature established a new record high temperature for this date. The previous record was 87 degrees set way back in 1940.

ALZ044

Montgomery

29

1400CST

0

0

Excessive Heat

The afternoon high temperature measured at Dannelly Field was 87 degrees. This temperature tied the established record high temperature. The record temperature last occurred in 1984.

ALABAMA, North

Colbert County

2 E Riverton to
4 NE Riverton

18

1545CST
1548CST

2

200

0

0

2K

Tornado (F1)

A tornado touched down and demolished two sheds and destroyed several trees in its path as it moved northeast toward the Natchez Trace. Maximum wind speeds with the tornado were at 100 miles an hour.

Lauderdale County

7 W Petersville to
2 NW Petersville

18

1548CST
1555CST

5

200

0

0

20K

Tornado (F1)

The tornado continued its path into Lauderdale county and heavily damaged two mobile homes, slightly injuring three people. A barn was also destroyed near where the mobile homes were damaged. Maximum wind speeds of the tornado where the most damage occurred was also at 100 mph.

Lauderdale County

Lexington to
2 N Lexington

18

1610CST
1613CST

2

50

0

0

5K

Tornado (F1)

Another tornado touched down at Lexington and destroyed several large trees and a couple of out buildings as it crossed over into Tennessee. Maximum wind speed of this tornado before it moved into Tennessee was at 80 mph.

Limestone County

2 WSW Lester to
Lester

18

1727CST
1730CST

2

35

0

0

Tornado (F0)

A F-0 tornado with maximum wind speeds at 60 mph touched down and destroyed a few trees and power lines.

Franklin County

Pogo

18

2137CST
2139CST

0

0

Hail (0.75)

Penny sized hail was reported.

Colbert County

Tuscumbia

19

0420CST
0600CST

0

0

Flash Flood

Several inches of water was covering Cave Street in Tuscumbia.

Lauderdale County

2 SW Florence

19

0421CST
0600CST

0

0

Flash Flood

Several inches of water was over area roads in the Muscle Shoals area.

Madison County

Toney

19

0519CST
0700CST

0

0

Flash Flood

Water was over the road along Pulaski Pike and Bo Howard road resulting in a car being washed into a ditch.

Jackson County

Scottsboro

19

0535CST
0730CST

0

0

Flash Flood

Several inches of water was over a few roads in the Scottsboro area.

Cullman County

Hanceville

19

0940CST
1100CST

0

0

Flash Flood

Several roads were under water

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
<u>ALABAMA, North</u>									
Cullman County									
West Pt	19	0940CST 1100CST			0	0			Flash Flood
Several roads were reported to be under water in western Cullman county.									
Cullman County									
Cullman	19	1045CST 1200CST			0	0			Flash Flood
Minor flash flooding was observed in Cullman with several roads with several inches of water reported to be over the road.									
Colbert County									
Tuscumbia	19	1130CST 1300CST			0	0			Flash Flood
Several inches of water was over a few streets in Tuscumbia.									
Lauderdale County									
Waterloo	19	1131CST 1300CST			0	0			Flash Flood
Several inches of water was over the road along County Road 15.									
Lawrence County									
Town Creek	19	1311CST 1313CST			0	0			Thunderstorm Wind (G50)
A few power lines were blown down by thunderstorm winds.									
Marshall County									
Guntersville	19	1425CST 1600CST			0	0			Flash Flood
Several inches of water was over County Road 205 and Highway 431 in Guntersville.									
<u>ALABAMA, Southeast</u>									
NONE REPORTED.									
<u>ALABAMA, Southwest</u>									
ALZ061>064									
Upper Mobile - Upper Baldwin - Lower Mobile - Lower Baldwin									
09		1500CST			0	0			Tropical Storm
10		0900CST							
Tropical Storm Matthew affected the area on the 9th and 10th. Parts of southwest Alabama were put under a Tropical Storm Warning at 300 pm CST on October 9. The Tropical Storm Warning was dropped at 900 am CST on October 10. The center of Matthew moved inland along the central Louisiana coast on the morning of October 10. The highest winds recorded in the area were at Dauphin Island with a wind gust of 47 mph. The lowest pressure was also recorded on Dauphin Island with a reading of 1006.6 mb. The highest rainfall totals recorded in about a two day period ending around 400 pm on October 10 was 2.74 inches in Grand Bay with Semmes recording 2.42 inches. Tides were one to three feet above normal. This resulted in minor to major beach erosion across the area. Because of the tremendous damage caused by Ivan to the coastal areas, Matthew caused more damage along the coast than would be expected from a tropical storm. Other than beach erosion, however, no major damage was reported as a result of Matthew.									
Mobile County									
4 NW Georgetown	19	0655CST 0700CST			0	0			Funnel Cloud
A funnel cloud was observed for several minutes near Earlville. The funnel never touched the ground.									
Escambia County									
Central Portion	19	1000CST 1030CST			0	0			Flash Flood
Heavy rains, of three to four inches in a short period of time, caused several streets in the Atmore and Brewton area to flood. Several of the streets had to be closed for about half an hour until the water had drained.									
Wilcox County									
Camden	19	1630CST 1631CST			0	0			Hail (0.75)
Choctaw County									
Pennington	19	1635CST 1637CST			0	0			Hail (0.75)
Monroe County									
Beatrice	19	1805CST 1807CST			0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

October 2004

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

ALABAMA, Southwest

Monroe County

5 E Tunnell Spgs 19 1855CST
1857CST 0 0 7K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees near Pine Orchard.

Conecuh County

Owassa 19 1900CST 0.5 30 0 0 10K **Tornado (F0)**
1902CST

A weak tornado blew down several trees near Owassa and I-65. The weak tornado stayed on the ground for about a half mile before going back into the clouds.

ALASKA, Northern

**AKZ201-207>211-
213-217-225**

Western Arctic Coast - Chukchi Sea Coast - Lower Kobuk & Noatak Valleys - Baldwin Pen. & Selawik Valley - Nrn & Intr. Seward Peninsula - Srn Seward Peninsula Coast - St Lawrence Is. Bering Strait - Upper Kobuk And Noatak Vlys - Denali

18 1116AST 0 0 **High Wind (G67)**
19 1500AST

AKZ214

Yukon Delta

18 1600AST 0 0 10K **Strong Wind**
1630AST

AKZ207-211>214

Chukchi Sea Coast - Srn Seward Peninsula Coast - Ern Norton Sound Nulato Hills - St Lawrence Is. Bering Strait - Yukon Delta

18 1900AST 0 0 19.9M **Storm Surge**
20 1500AST

AKZ219

Upper Koyukuk Valley

19 1500AST 0 0 **Heavy Snow**
1630AST

A low pressure center of 978 mb moved north over the central Aleutians on the evening of the 17th and deepened to 941 mb as it reached the Gulf of Anadyr the evening of the 18th, about 400 miles west of Nome. The great deepening of the storm was due to influx of moisture from an ex-typhoon east of Japan (though the ex-typhoon itself continued east across the north Pacific) and then the cold air around an upper level circulation of Far East Russia moving southeast into the low. On the 19th the storm began to slowly fill and decelerate, to 980 mb on the evening of the 20th 400 miles west of Kotzebue. The circulation around this storm covered western Alaska with 50 to 80 mph winds and was comparable or stronger than the November 1974 storm, though this current storm moved quicker over the Bering Sea and was located farther west than the 1974 storm. Nonetheless, a significant and damaging storm surge accompanied this storm in addition to high winds:

High Winds were reported at:

Zone 201: Cape Lisburne AWOS gusts to 61 knots (70 mph).

Zone 207: Shishmaref estimated 61 knots (70 mph). Kivalina AWOS highest gust was 51 knots (59 mph).

Zone 208: Red Dog Mine observed 67 knots (77 mph) but on the morning of the 19th the observer noted that the wind sensor readout displayed a maximum of 99 knots (114 mph). This latter value is unconfirmed. Noatak AWOS highest gust 51 knots (59 mph).

Zone 209: Kotzebue ASOS peak gusts 53 knots (61 mph).

Zone 210: Remote Automated Weather Station Hoodoo Hill peak gust 59 knots (68 mph); Also UAF Water and Environmental Research Center meteorological platforms at: Skookum Pass 61 knots (70 mph); and Kigluaik Mountains 51 knots (59 mph).

Zone 211: Golovin AWOS highest gust 52 knots (60 mph). Additionally Nome ASOS reported peak gust 51 knots (59 mph), and Unalakleet AWOS (zone 212) peak gust 45 knots (52 mph).

Zone 213: Tin City AWOS peak gusts 62 knots (71 mph); Savoonga AWOS peak gust 61 knots (70 mph); Gambell AWOS not reporting.

Zone 217: Shungnak, Easterly wind gusts estimated by school staff at 52 knots (60 mph).

Zone 225 - Healy weather observer: gusts to 55 knots (63 mph). Just west of the zone, Mystic Lake reported gust to 52 knots (60 mph) at 1830 LST. In zone 226, the US Army Mesonet site OP10A reported a gust to 51 knots (59 mph).

Strong winds were reported at:

Zone 214: Mountain Village two public buildings (City office and a clinic) had portions of their roof damaged. Emmonak and Saint Marys AWOS stations reported gusts to 44 knots (51 mph).

Coastal Flooding reported at:

Zone 207: Shishmaref, with surge height of 10-12 ft. Kivalina surge height unknown though estimated at 8 to 10 feet.

Zone 211: Nome and Golovin. Surge height was 10.45 ft at Nome, the November 1974 storm produced a 10 ft rise in ocean level.

Zone 212: Koyuk, Unalakleet, Stebbins, St. Michael.

Zone 213: Wales with surge height estimated at 6 to 8 feet, Teller, and Diomed City.

Zone 214: Alakanuk, Kotlik, surge heights unknown.

Also:

Storm Data and Unusual Weather Phenomena

October 2004

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

ALASKA, Northern

Zone 209 Kotzebue: water rose to within 1.5 feet for front street. Because winds were creating off-shore-traveling waves, no erosion from wave action was observed.

Zone 210: Deering had some high water, but no damage.

Heavy Snow reported at:

Zone 218 - Coldfoot: State of Alaska D.O.T. Camp reported 6 inches of new snow at 3pm by the afternoon of the 19th. Total amount was less than 7 inches. Snow estimated to begin at 0100 AST.

Damages: The total estimate as of December 2004 is about 20 million dollars, however this may be conservative and also includes some costs to villages outside of Northern Alaska. Breakdowns per village were not accessible, though some individual amounts are noted. The city of Nome sustained the bulk of the damage amount.

Zone 207:

Shishmaref: Several families were temporarily evacuated. Power poles and lines damaged. A local bridge may have had the abutments weakened by the storm surge. School project wind generator damaged. Erosion of beach up to teacher housing and Voc-Ed unit. Cost to replace material eroded is \$250K, plus an estimated other costs of \$50K(labor). Road to the landfill was damaged.

Kivalina: Power Poles and lines damaged. Drainfield for washateria has been destroyed and washateria thus leaked raw sewage. The School Principal's housing unit (trailer) had soil eroded underneath about 5-6 feet from the ocean side.

Zone 209:

Kotzebue: Water rose to within 1 ½ feet of Front Street, up the concrete revetment. Wind waves were out of the east and thus wave energy was offshore, otherwise Front Street would have flooded. Radio Station KOTZ Tower supports were partially damaged. Several other structures around town sustained some minor wind damage, including NWS Upper Air Inflation Building which caused the cancellation of four sequential radiosonde launches (4am and 4pm) during the 19th and 20th.

Zone 210:

Deering: flooding of the road between the community and the airport.

Buckland: Approximately six Electric Poles leaning; estimate cost is \$22,000.00

White Mountain: No damages.

Zone 211:

Nome: 45 Individuals temporarily evacuated in Nome during the height of the storm surge. 13 residences were affected by the storm. % residences were evacuated directly due to the coastal flooding. While the other residences, located near Front Street, were evacuated due to a combination of loss of electrical power and due to leakage of propane gas from three (3) businesses, as the valves broke on their 1000 pound propane tanks. The storm surge cut the Nome-Council Road at Mile 22 resulting in the isolation of approximately ten (10) occupied residences in the Council area. In Nome, five homes reported minor damage and eight homes reported major damage. Multiple businesses in Nome also report damage. The State building was damaged by ocean flooding. The historic Cape Nome Road House, located at the site of Fort Davis on the Nome-Council Highway, sustained some storm-related damage. Power lines damaged at Nome. Water Treatment System had minor structural damage. Some roadways received major damage. Seawall protecting the harbor damaged, parts of a jetty east of Nome was washed away and most of the dock at the jetty was destroyed.

Golovin: Damages to the washateria, the drain field, new power plant and new clinic (all were in the process of new construction). The high ocean water lifted up several three old and unused fuel tanks along with two Connex trailers and floated them away. The school's septic system was rendered unusable - cost to repair \$2.3K

Zone 212:

St. Michaels: several families were temporarily evacuated. Seven short access roads to the beach were damaged, mainly to boat launches. Power poles and lines damaged. Utilidor damaged.

Koyuk: a privately owned warehouse is reported to have been destroyed. Public facilities: 1. Portion of village Front Avenue adjacent to Koyuk River destroyed. 2. New Fuel Line Header required emergency protective measure during storm. This facility was under construction at the time of the disaster. Native Organization: Two Youth Camp structures washed across the river and deposited on the other bank approximately 2000 feet away. The community telephone line was cut when digging to reach the underground water line shut-off valve. They were digging to prevent contamination to their community's water source. A Reindeer corral was damaged, and 35 sheets of plywood for the fence were washed away. Several snowmobiles damaged by waves and sand. A nearby public use cabin was damaged.

Unalakleet: Some road gabion baskets damaged; they were reported to have dropped ten feet. Power poles and lines damaged.

Shaktolik: Power poles and lines damaged. 2800 feet of fuel line damaged, which ran along the beach between the fuel tank farm and the school/public buildings; \$115K plus other costs of \$34K (labor). Damage to the fence and embankment for the school septic system. Water storage tank for the city incurred wind damage to metal sheathing and insulation. A public use cabin (on Iditarod Trail) about 10 miles from town was displaced and damaged by the storm.

Elim: Major damage to road to Moses Point for 4.3 miles. Road in town damaged. Community septic tank and the sewage outfall line exposed. Power poles and lines damaged.

Stebbins: No damage to structures but some erosion problems and road damages. Individuals may have lost some items. Some

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					Killed	Injured	Property	Crops	

ALASKA, Northern

people from Stebbins evacuated to St. Michael during the storm.

Zone 213:

Diomed: Power poles and lines damaged. Fuel line broken.

Savoonga: Power poles and lines damaged.

Brevig Mission: at a subsistence fish camp across the bay, a shack was damaged and several snowmobiles, parked on higher ground (not on the beach) were swamped with ocean water and covered with sand or small gravel, rendering them unusable.

Wales: Wind blew off a portion of a roof from an Alaska Village Electric Corporation (AVEC) facility, as well as from a private residence. A guardrail from another home was also lost. At the village clinic, the fuel line was ruptured when the metal support for the fuel line running from the tank to the building toppled over in the wind. This spilled about 300 gallons of fuel. One of the two wind generators of the village was damaged. Ocean water rose about 6 to 8 feet, and reached an outbuilding of the school, damaging the skirting along the bottom of the structure, but the structure otherwise was intact. Gravel and insulation over the school's septic tank and leach field damaged and removed by wave and wind action. Two snowmachines belonging to the school were damaged from the combined effects of water and wind-blown sand. Total School damages \$8.4K. At the Water plant sewage leach field gravel and insulation was eroded away and septic tank possibly affected. At the Community Center sewage leach field, gravel and insulation was eroded away. Septic tank possibly affected. Road damage at the south end of the village. There was soil erosion due to wind at the cemetery; Caskets are exposed. Wind damage to fence around the dump site by the airport.

Teller: At the School, the basement building was flooded, damaging materials stored there. Three Connex containers of new furniture were flooded, damaging the furniture. The sewage lagoon was flooded, which had to be pumped down. Estimated costs for repair/replacement \$8K. Two roads were damaged: Grantley Avenue and Whale Street.

Zone 214:

Mountain Village: Major damage to the roof of a city building. Clinic roof damaged. Total costs \$10,000.

Alakanuk, Emmonak: Power poles and lines damaged.

Kotlik: Ocean water rose two to three feet and floated Boardwalks off their supports. Water and waves damaged the school's skirting and eroded the gravel around the foundation. This in turn exposed insulation covering permafrost ground and water pipes and insulation to the school building itself.

Nunam Iqua: Boardwalks were damaged and water pipeline serving the village's water needs was damaged; holding tank was emptied by early December creating a water crisis due to lack of fresh water.

Scammon Bay: Several roads were damaged.

Zone 217:

Kiana: Power poles and lines damaged.

Shungnak: Minor roof damage to home; Living room window of a residence broken from airborne lumber debris. Trees blown over on exposed hill, metal chimneys on roofs toppled.

ALASKA, Southeast

AKZ027>028

Dixon Entrance To Cape Decision Coastal Area - Southern Inner Channels

04	2100AST	0	0	High Wind (G65)
18	2330AST			

High winds occurred in the Southern Panhandle on this date. Winds were from the southeast. No damage was reported.

AKZ018>019-022-026-028>029

Taiya Inlet And Klondike Highway - Haines Borough And Lynn Canal - Salisbury Sound To Cape Fairweather Coastal Area - Inner Channels From Kupreanof Island To Etolin Island - Southern Inner Channels - Misty Fjords

18	0430AST	0	0	Frost/Freeze
19	0550AST			

A hard freeze ended the growing season in these portions of Southeast Alaska.

AKZ020>021-023-025>028

Glacier Bay - Eastern Chichagof Island - Cape Decision To Salisbury Sound Coastal Area - Juneau Borough And Northern Admiralty Island - Inner Channels From Kupreanof Island To Etolin Island - Dixon Entrance To Cape Decision Coastal Area - Southern Inner Channels

28	1700AST	0	0	High Wind (G54)
29	0300AST			

960mb low moved just south of Prince William Sound. A front associated with this low swept up through Southeast Alaska and resulted in a widespread high wind event. No significant damage was reported.

ALASKA, Southern

AKZ101-145

Anchorage Muni To Bird Creek - Susitna Valley

01	0000AST	0	0	Flood
	1600AST			

A strong Bering Sea storm pushed extremely moist air into the south central region of Alaska beginning Wednesday, September 29th. Heavy rain and snow occurred over the previous weekend resulting in saturated soil throughout the region. Rainfall of moderate to heavy rates was reported by observation sites in the Susitna Valley south to the Anchorage bowl beginning late Wednesday, September 29th, through late Thursday, September 30th. Amounts of 2 to 3 inches were observed across this region

Storm Data and Unusual Weather Phenomena

October 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

with higher estimated amounts along the Chugach and Talkeetna Mountains. This resulted in the small streams in the Anchorage Bowl and in the central Susitna Valley, which were already elevated from the weekend storm, to rise above bank full stage and cause minor flooding.

AKZ191

Western Aleutians

**07 1230AST
1521AST**

0 0

High Wind (G67)

An intense low moved from the north Pacific into the western Aleutians during the afternoon of October 7th. The wind peaked at 77 mph on the afternoon of the 7th and diminished below warning criteria by the early evening.

AKZ155-161

Kuskokwim Delta - Bristol Bay

**10 1100AST
2315AST**

0 0

Blizzard

A strong low pressure system in the southern Bering Sea increased the pressure gradient over zones 155 and 161, which produced strong winds along the coastal areas. A weather front associated with the low pressure center also produced snowfall in these zones. Snow and blowing snow with peak wind gusts up to 58 mph reduced visibility to or below one quarter of a mile for several hours. Blizzard conditions occurred along the coast of Zone 161, specifically west of King Salmon. Blizzard conditions also occurred along the outer coast of Zone 155 including Nunivak Island.

AKZ155

Kuskokwim Delta

**18 1400AST
20 2000AST**

0 0

22K

Flood

An intense 948 MB low moved into the northern Bering sea overnight Monday October 18th. The resultant long fetch of storm to hurricane force wind produced a storm surge. This surge pushed into the Bering Sea coast along the Kuskokwim Delta Monday night and Tuesday. The surge coupled with high tides resulted in coastal flooding and beach erosion. A 10,000 gallon bulk fuel tank located on the bank of Baird Inlet, Newtok AK, was at risk of sliding into the water as a result of the erosion from the high tides and storm surge. The tank was emptied and secured. The AWOS located at Hopper Bay was damaged by the storm and has been rendered inoperable.

AKZ195

Pribilof Islands

**22 1500AST
1600AST**

0 0

High Wind (G74)

A moderate low moved from the southwest Bering Sea to the Bering Strait Friday evening, October 22nd. This resulted in strong gusty west wind that briefly peaked at 85 mph in the Pribilof Islands.

AKZ145

Susitna Valley

**25 1930AST
26 0730AST**

0 0

Heavy Snow

AKZ101

Anchorage Muni To Bird Creek

**26 1130AST
1230AST**

0 0

High Wind (G71)

A strong storm in the Bering Sea with an associated front through southwest Alaska resulted in strong southeast flow across the south central region of the state. The resultant strong pressure gradient in advance of the front produced brief strong southeast wind along Turnagain Arm. The wind peaked from the southeast at 82 mph at McHugh Creek RWIS. This strong southeast flow was also responsible for pushing ample moisture into the Alaska Range. Twenty four inches of snow fell in the 12 hours from 830 PM on the 25th to 830 AM on the 26th at Hayes River Lodge along the base of the Alaska Range.

AMERICAN SAMOA

NOT RECEIVED.

ARIZONA, Central and Northeast

AZZ007-037

Coconino Plateau - Yavapai County Valleys And Basins

**21 1630MST
2300MST**

0 0

Flood

Heavy rain fell over parts of Coconino and Yavapai Counties through the day. This caused heavy runoff and flooding. Boulders were washed onto Highway 96 near Santa Maria River Bridge. Flood water crossed over Highway 97 near Bagdad and along Highway 96 near Bridle creek. The Burro Creek stream gage in Yavapai County reported a sharp rise to 11 feet. Some homes in Ash Fork had water in them. Creeks and washes along Highways 93, 96, and 97 near Cypress Mine (Bagdad area) were bankfull. Bagdad received 2.70 inches of rain in a 24 hour period ending at 0500 on 10/22/04. Supai Law Enforcement Officials reported Havasu Creek was running over its banks upstream from Supai Village. The Supai campground was evacuated.

AZZ037

Yavapai County Valleys And Basins

**28 0400MST
1500MST**

0 0

Flood

Heavy rain caused flooding along Highway 97 from mileposts 163 and 165 south of the Bagdad area. The water was flowing one foot deep across the highway. A spotter in Bagdad reported 2.33 inches of rain between midnight and 5 AM.

Storm Data and Unusual Weather Phenomena

October 2004

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

ARIZONA, Northwest

Mohave County

Kingman

20

1030PST
1920PST

0

0

Flash Flood

Heavy rain caused flash flooding in parts of Kingman. A local spotter reported water to curb high in several locations in Kingman.

Mohave County

Kingman

25

1502PST
1700PST

0

0

Flash Flood

Several spotters reported that washes were flowing throughout town and that several streets were closed due to flash flooding.

ARIZONA, South

Pima County

8 NW Tucson

26

1340MST
1355MST

0

0

0

0

Hail (1.00)

A severe thunderstorm moved across the Tucson Metro area. 1.0 inch diameter hail was reported by several spotters across the Tucson area. 3/4 inch hail fell at the National Weather Service office located on the University of Arizona campus.

AZZ029-033>034

Southeast Pinal County - Tucson Metro/Marana/Green Valley - Santa Cruz County

29

0400MST
0900MST

0

0

0

0

Dense Fog

Widespread dense fog covered portions of Southeast Arizona, including the Tucson Metro Area. An NWS meteorologist on duty at the time reported that the visibility was down to 1/10 of a mile at the NWS Tucson office, located on the University of Arizona. Also several calls came in from spotters around the Tucson Metro area reporting areas of visibility as low as 20 feet. A cooperative observer from Picacho Peak State Park reported that visibility was down to 1/4 mile and at 5 a.m. the Nogales ASOS reported visibility down to 1/4 mile. The fog persisted until about 9 a.m.

ARIZONA, Southwest

AZZ028

Central Deserts

21

1030MST

0

0

Dust Storm

An usually strong cold front brought widespread precipitation to much of northern and central Arizona, and strong gusty winds with blowing dust to the lower Arizona deserts south of Phoenix. A three vehicle accident occurred on state road 347, 1 1/2 miles south of Riggs Road, in low visibility conditions caused by blowing dust. The dust storm ended in the afternoon as winds subsided.

AZZ022

Northwest Maricopa County

22

0700MST

0

0

Dense Fog

Visibility reported less than 100 feet in Wickenburg.

AZZ023-027>028

Greater Phoenix Area - Southwest Maricopa County - Central Deserts

29

0215MST
0755MST

0

0

Dense Fog

Palo Verde Nuclear Generating Station controller reported visibility of 1/16 mile. Gila Bend airport reported visibility of 1/16 mile. Department of Public Safety reported visibility of 1/4 mile in Casa Grande. Following a widespread rain event the day before, dense fog began to develop in the early morning hours over the low deserts of south central Arizona. The fog began to dissipate about 8 am MST.

ARKANSAS, Central and North Central

Garland County

Buckville

18

0430CST

0

0

Thunderstorm Wind (G50)

Thunderstorm winds downed some power lines.

Garland County

Jessieville

18

0530CST
0630CST

0

0

Flash Flood

Heavy rains caused flash flooding to occur in the Jessieville area. Several roads were flooded, causing school buses to detour around the flooded roads.

White County

Bald Knob

18

0641CST

0

0

Thunderstorm Wind (G50)

Several trees were blown down.

Pulaski County

Little Rock

18

0750CST
1100CST

0

0

Flash Flood

Pulaski County

Sherwood

18

0750CST
1100CST

0

0

Flash Flood

Heavy rains caused flash flooding to occur over portions of Pulaski County. Two to three inch amounts were common, with 2.60 inches measured at the North Little Rock Airport. Several roadways in Little Rock and Sherwood were blocked by high water for a short period of time.

Storm Data and Unusual Weather Phenomena

October 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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ARKANSAS, Central and North Central

Saline County

1.5 W Haskell to
.8 N Haskell

18

0759CST
0802CST

2

300

0

0

Tornado (F1)



In the picture: People were out assessing damage after an F1 tornado swept through Haskell (Saline County) on 10/18/2004.

An F1 tornado touched down briefly in Saline County, affecting primarily the city of Haskell. Extensive damage occurred along the path of the tornado as it tracked through town. Four homes were destroyed, five home suffered major damage and 41 sustained minor damage. Most of the minor damage consisted of damaged roofs and blown out windows. Numerous trees and power lines were also downed along the path of the tornado.

Saline County

Bryant

18

0800CST

0

0

Thunderstorm Wind (G50)

Thunderstorm winds downed a large tree and blew the roof of a nearby storage shed.

Storm Data and Unusual Weather Phenomena

October 2004

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

ARKANSAS, Central and North Central

Saline County

4 SW Sardis to
9 E Sardis

18 0820CST 13.2 800 0 11 Tornado (F2)



In the picture: One of several mobile homes destroyed by an F2 tornado just south of Sardis (Saline County) on 10/18/2004.

An F2 tornado touched down 4 miles southwest of Sardis and tracked to the east-northeast before moving into Pulaski County. Numerous trees and power lines were downed along the path of the tornado. A number of mobile homes sustained minor or major damage. Eleven people sustained minor injuries, many of which were inside their mobile homes when the tornado struck.

Saline County

Benton

18 0830CST 1100CST 0 0 Flash Flood

Saline County

Bryant

18 0830CST 1100CST 0 0 Flash Flood

Heavy rains resulted in flash flooding across portions of Saline County. Several roads and homes were flooded in Benton and Bryant.

Pulaski County

1.9 W Woodson to
8.3 E Wrightsville

18 0840CST 10.8 800 0 0 Tornado (F2)

The tornado moved out of Saline County and entered Pulaski County about 1.9 miles west of Woodson. The tornado tracked to the north of Woodson and continued to the northeast before lifting about 8.3 miles east of Wrightsville. Most of the structural damage occurred in the Woodson area where several houses and mobile homes sustained damage. Numerous trees and power lines were downed along the path of the tornado.

Lonoke County

1.8 N England to
2.2 SW Blakemore

18 0907CST 0914CST 3.3 50 0 0 Tornado (F0)

A weak tornado touched down briefly in Lonoke County. The damage along the track of the tornado consisted of downed tree limbs and small trees. Also, a metal barn and the roof of a house sustained some minor damage.

Lonoke County

2 SE Seaton Dump to
3.3 ESE Seaton Dump

18 0942CST 0945CST 1.8 300 0 0 Tornado (F2)

An F2 tornado touched down in Lonoke County southeast of Seaton Dump and moved to the east. Damage along the path of the tornado consisted of a carport blown 300 yards into an open farm field and the tin roof blown off a building. Numerous power poles were either snapped off or knocked down. The tornado eventually moved into Prairie County.

Storm Data and Unusual Weather Phenomena

October 2004

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

ARKANSAS, Central and North Central

Prairie County

6.1 WSW Fairmont to 4.7 ENE Ulm **18** **0945CST** **17.2** **600** **0** **0** **12.2M** **Tornado (F2)**



In the picture: Aircraft were thrown around like toys by an F2 tornado at the Stuttgart Airport (near Fairmount in Prairie County) on 10/18/2004.

The F2 tornado moved from Lonoke County into Prairie County about 6.1 miles west-southwest of the Fairmount Community. The tornado gained intensity as it tracked to the east-northeast and then to the east as it approached the Stuttgart Airport. The tornado continued to track to the east before lifting east-northeast of the town of Ulm. The maximum damage was observed at the airport where numerous planes were damaged or destroyed. Damage at the airport was estimated at just over 12 million dollars. Also, most of the hangars and other buildings on the airport property sustained damage. Elsewhere along the path of the tornado, many power poles were snapped off or blown down. Metal irrigation pipe was carried for a mile and deposited in the field. Numerous outbuildings and farm shops were destroyed or damaged. A combine was destroyed and another was badly damaged. A farm tractor was destroyed as well. In the town of Ulm, a number of trees had large limbs broken and there was minor damage to house roofs. Underpinning was also blown out from under several mobile homes. The tornado weakened considerably before reaching Ulm.

Cleburne County

Drasco **18** **1500CST** **0** **0** **Hail (1.00)**

Independence County

Desha **18** **1520CST** **0** **0** **Hail (0.75)**

Independence County

South Side **18** **1530CST** **0** **0** **Hail (0.88)**

Independence County

Bethesda **18** **1555CST** **0** **0** **Hail (0.75)**

Jackson County

2 NW Swifton **18** **1620CST** **0** **0** **Hail (0.75)**

Independence County

3 NE Pfeiffer **18** **1630CST** **0** **0** **Hail (0.75)**

Dallas County

4 SE Willow **18** **1700CST** **0** **0** **Hail (0.75)**

Dallas County

3 NE Princeton to 3.2 NE Princeton **18** **1834CST** **0.2** **25** **0** **0** **Tornado (F0)**

A weak tornado touched down very briefly to the northeast of Princeton. The only damage noted along the path of the tornado were a few trees pushed over in a heavily wooded area.

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Property Crops	Character of Storm
<u>ARKANSAS, Central and North Central</u>									
Jefferson County									
Wabbaseka	18	1840CST			0	0			Hail (0.88)
Arkansas County									
3 S Humphrey	18	1855CST			0	0			Hail (0.75)
Drew County									
Collins	19	0615CST			0	0			Hail (1.75)
Polk County									
Big Fork	27	1025CST 1200CST			0	0			Flash Flood
Polk County									
9 WSW Big Fork	27	1025CST 1200CST			0	0			Flash Flood
Polk County									
Hatfield	27	1025CST 1200CST			0	0			Flash Flood
Polk County									
Mena	27	1025CST 1200CST			0	0			Flash Flood
Heavy rains caused flash flooding to occur across portions of Polk County. Three to five inches of rain was common, with 5 inches measured at Big Fork. Numerous county roads were flooded with several bridges washed out as well.									
Montgomery County									
12 W Hopper	27	1030CST 1200CST			0	0			Flash Flood
Heavy rains caused the Little Missouri River to rise over a bridge, stranding campers at the Albert Pike Recreational Area.									
Perry County									
Williams Junction	30	0020CST			0	0			Thunderstorm Wind (G50)
Thunderstorm winds blew down some large tree limbs along Highway 9.									
Saline County									
Haskell	30	0030CST			0	0			Thunderstorm Wind (G50)
Thunderstorm winds downed some large tree limbs and power lines.									
Pulaski County									
8 W Roland	30	0030CST			0	0			Thunderstorm Wind (G50)
Pulaski County									
Maumelle	30	0050CST			0	0			Thunderstorm Wind (G60)
Pulaski County									
3 E Morgan	30	0050CST			0	0			Thunderstorm Wind (G50)

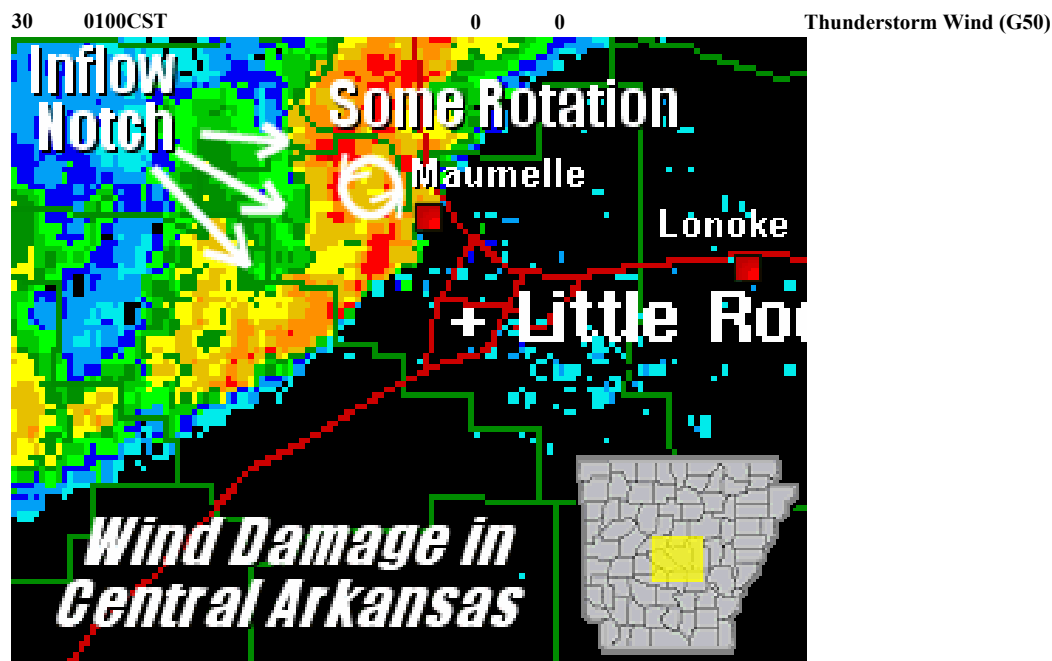
Storm Data and Unusual Weather Phenomena

October 2004

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

ARKANSAS, Central and North Central

Pulaski County
Natural Steps



In the picture: The WSR-88D (i.e. Doppler Weather Radar) showed a line of showers and thunderstorms ahead of a front during the early morning hours of 10/30/2004. Along the line, some bowing was noted in central Arkansas...with evidence of an inflow notch (i.e. strong to damaging winds behind the bowing). Winds of 60 to 70 mph were likely near the inflow notch, with some rotation just north of the notch. However, no tornadoes were spawned.

A line of thunderstorms moved across Pulaski County during the early morning hours on the 30th and produced wind damage at several locations. Most of the damage consisted of downed trees and power lines. A house sustained roof damage from falling trees in the community of Natural Steps. More extensive damage was noted in Maumelle where an apartment building had roof and gutter damage. A boat was also damaged when it was blown across the parking lot.

Lonoke County
5 S Cabot

30 0120CST 0 0 Thunderstorm Wind (G60)

Thunderstorm winds downed numerous trees, destroyed several storage sheds and a large metal building. Roof damage also occurred to a house and nearby garage.

Lonoke County
8 N Lonoke

30 0120CST 0 2 Thunderstorm Wind (G60)

Straight line thunderstorm winds overturned a mobile home, injuring two occupants. Only minor injuries were reported.

ARKANSAS, East

Lawrence County
Ravenden

18 0630CST 0 0 5K Thunderstorm Wind (G55)
0635CST

A shed located behind an auto body shop was destroyed.

Crittenden County
West Memphis

18 1045CST 0 0 0.10K Hail (1.00)
1050CST

Randolph County
Pocahontas

18 1455CST 0 0 0.01K Hail (0.75)
1500CST

Greene County
3 SW Delaplaine

18 1540CST 0 0 0.50K Hail (1.50)
1545CST

Randolph County
Pocahontas

18 1550CST 2 25 0 0 10K Tornado (F0)
1555CST

The tornado touched down in Pocahontas and moves east. Several businesses were damaged.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
<u>ARKANSAS, East</u>									
Greene County									
5 W Marmaduke	18	1600CST 1605CST			0	0	0.01K		Hail (0.75)
Randolph County									
6 E Pocahontas to 9 E Pocahontas	18	1605CST 1611CST	3	75	0	0	1K		Tornado (F1)
The tornado moved started east of Pocahontas and tracked east into Clay county. The tornado produced minor damage to several crop fields.									
Greene County									
Lafe to 4 N Marmaduke	18	1610CST 1616CST	8	25	0	0	1K		Tornado (F0)
The tornado touched down in northeast Greene county and traveled northeast. The tornado was filmed by a Jonesboro television station. The tornado produced little damage.									
Clay County									
5 W Brookings to 1 NE Peach Orchard	18	1611CST 1632CST	10	75	0	0	75K	1K	Tornado (F1)



This tornado tracked through portions of Randolph and Clay counties in east Arkansas on October 18th.

The tornado moved into Clay county from Randolph county and continued to move east. The tornado damaged a couple of cabins in Brookings and destroyed a small farm house near Peach Orchard. Two persons living in the farm house abandoned the house before the tornado struck. Several tombstones were blown down at a cemetery near Peach Orchard. Twelve utility poles were knocked down. Several trees were blown down and some soybean fields were damaged.

Randolph County

Biggers	18	1616CST 1620CST	0.5	25	0	0	1K		Tornado (F0)
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A tornado briefly touched down in Biggers producing minimal damage.

Clay County

2 N Datto	18	1625CST 1627CST	0.5	25	0	0	1K		Tornado (F0)
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A tornado briefly touched down north of Datto producing little damage.

Clay County

5 W Nimmons to 1 W Nimmons	18	1700CST 1710CST	4	25	0	0	1K		Tornado (F0)
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The tornado touched down just west of Nimmons and moved northeast. Some minor tree damage occurred with the tornado.

Greene County

Walcott	18	1722CST 1730CST			0	0	0.01K		Hail (0.75)
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Storm Data and Unusual Weather Phenomena

October 2004

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

ARKANSAS, East

Lawrence County
3 W College City to
1 N College City

18 1735CST 5 100 0 0 5K Tornado (F0)

The tornado touched down just west of College City and tracked northeast and moved into southeast Randolph county. The tornado was not on the ground the entire time. Some trees were blown down.

Randolph County
2 S Fender to
2 N O Kean

18 1745CST 6 100 0 0 5K Tornado (F0)

The tornado moved into Randolph county from Lawrence county and continued to move northeast and eventually into northwest Greene county. The tornado continued to skip along the path. Some trees were blown down.

Greene County
6 W Evening Star to
1 NE Stonewall

18 1757CST 12 100 0 0 5K Tornado (F0)

The tornado moved into Greene county from Randolph county and continued to move northeast. The tornado continued to lift up occasionally and then come back down. Some trees were knocked down.

Greene County
Paragould

18 1810CST 0.3 25 0 0 1K Tornado (F0)

A tornado briefly touched down twice in Paragould producing minimal damage.

Lawrence County
Imboden

18 1930CST 0 0 20K Thunderstorm Wind (G55)

Several homes and buildings were damaged. Several trees were blown down.

Randolph County
Pocahontas

18 1950CST 0 0 0.01K Hail (0.75)

1955CST

ARKANSAS, Northwest

Franklin County
Ozark

27 1227CST 0 0 Flash Flood

1400CST

Heavy thunderstorm rains caused the intersection of Highways 23 and 64 to be flooded. Shady Lane Road was also flooded.

ARKANSAS, Southeast

Chicot County
1 W Dermott to
1 E Dermott

19 0655CST 0 0 Thunderstorm Wind (G55)

0659CST

A few trees were blown down.

ARKANSAS, Southwest

NONE REPORTED.

ATLANTIC OCEAN

Tidal Potomac Key
Bridge To Indian Hd
Md

Rnld Reagan Natl Arpt 02 1820EST 0 0 Marine Tstm Wind

Chesapeake Bay New
Pt Comfort To Cp

Henry Va 13 1448EST 0 0 Marine Tstm Wind

New Point Comfort to
Cape Henry

Wind gust of 39 knots measured at ORF.

Tidal Potomac Key
Bridge To Indian Hd
Md

2 N Indian Head 16 1600EST 0 0 Marine Tstm Wind

Measured at Mason Neck.

Storm Data and Unusual Weather Phenomena

October 2004

		Time	Path	Path	Number of		Estimated		October 2004
		Local/	Length	Width	Persons		Damage		
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	

ATLANTIC OCEAN

Chesapeake Bay Pooles Is To Sandy Pt Md

10 W Riviera Beach to 16 1609EST 0 0 Marine Tstm Wind
Tolchester Beach 1636EST

Numerous reports of winds 34-40 KT between Pooles Island and Sandy Point.

Chesapeake Bay Sandy Pt To N Beach Md

Annapolis 16 1635EST 0 0 Marine Tstm Wind

Chesapeake Bay Sandy Pt To N Beach Md

5 SE Annapolis 16 1642EST 0 0 Marine Tstm Wind

Measured at Thomas Point Lighthouse.

Chesapeake Bay Sandy Pt To N Beach Md

4 S Stevensville 16 1647EST 0 0 Marine Tstm Wind

Kent Island

Chesapeake Bay Drum Pt To Smith Pt Va

11 E Patuxent River Na 16 1800EST 0 0 Marine Tstm Wind

Bishops Head

CALIFORNIA, Extreme Southeast

NONE REPORTED.

CALIFORNIA, North Central

NONE REPORTED.

CALIFORNIA, Northeast

CAZ073 Mono 17 0700PST 0 0 Heavy Snow

A total of 6 to 8 inches of snow fell overnight at Mammoth Mountain.

CAZ072 Greater Lake Tahoe Area 18 2238PST 0 0 Heavy Snow
19 2238PST

A total of 8 inches of snow fell at Kingvale in 24 hours.

CAZ073 Mono 19 0445PST 0 0 Heavy Snow
1645PST

A total of 10 inches of snow fell in 12 hours at June Lake.

CAZ073 Mono 19 0530PST 0 0 Heavy Snow
1730PST

A total of 15 inches of snow fell in 12 hours at Mammoth Lakes (elevation 8200 ft.).

CAZ073 Mono 19 2000PST 0 0 Heavy Snow
20 0600PST

From the evening of October 19th through the morning of the 20th a powerful early-season snowstorm deposited up to 3 feet of snow in the Sierra Nevada. In the valleys of northeast California and western Nevada 1 to 2 inches of rainfall was reported at many locations.

Storm total snowfall amounts:

Mammoth Mountain Ski Resort 28-36 inches

Mammoth Lakes Ranger Station 18 inches

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, Northeast

CAZ071

Lassen/Eastern Plumas/Eastern Sierra

19 2000PST

0 0

Heavy Snow

20 0600PST

From the evening of October 19th through the morning of the 20th a powerful early-season snowstorm deposited up to 3 feet of snow in the Sierra Nevada. In the valleys of northeast California and western Nevada 1 to 2 inches of rainfall was reported at many locations.

Storm total snowfall amounts:

Yuba Pass 16 inches

Sattley 5 inches

CAZ072

Greater Lake Tahoe Area

19 2000PST

0 0

Heavy Snow

20 0600PST

From the evening of October 19th through the morning of the 20th a powerful early-season snowstorm deposited up to 3 feet of snow in the Sierra Nevada. In the valleys of northeast California and western Nevada 1 to 2 inches of rainfall was reported at many locations.

Storm total snowfall amounts:

Boreal Ski Resort 36 inches

Squaw Valley Ski Resort (8200 ft.) 24-36 inches

(6200 ft.) 8-10 inches

Donner Summit 28.5 inches

Alpine Meadows Ski Resort 18 inches

Truckee 15 inches

3 S Tahoe City 12 inches

South Lake Tahoe 7 inches

CAZ073

Mono

26 0100PST

0 0

Heavy Snow

2300PST

A strong winter storm hit the central Sierra Nevada on Oct. 26th, depositing up to a foot of snow below 7,000 feet, and up to 2 feet of snow at higher elevations.

Storm total snowfall amounts:

Mammoth Lakes 8 inches

Mammoth Lakes (8200 ft.) 12-16 inches

CAZ072

Greater Lake Tahoe Area

26 0100PST

0 0

Heavy Snow

2300PST

A strong winter storm hit the central Sierra Nevada on Oct. 26th, depositing over a foot of snow in the Tahoe basin and up to 2 feet of snow in the higher elevations.

Storm total snowfall amounts:

South Lake Tahoe 8 inches

Independence Lake SNOTEL (8450 ft.) 11.5 inches

Tahoe City 12 inches

Truckee (6500 ft.) 12 inches

4 NW Truckee 14 inches

Tahoe City (U.S. Coast Guard station) 16 inches

3 S Tahoe City 16 inches

South Lake Tahoe (6260 ft.) 16 inches

Northstar ski resort (6800 ft.) 9-12 inches

(8600 ft.) 14-18 inches

Squaw Valley ski resort (6200 ft.) 8-10 inches

(8200 ft.) 18-24 inches

CAZ071

Lassen/Eastern Plumas/Eastern Sierra

26 0100PST

0 0

Heavy Snow

2300PST

A strong winter storm hit the northern Sierra Nevada on Oct. 26th, depositing up to a foot of snow in the higher elevations.

Storm total snowfall amounts:

Sattley 4 inches

Fredonyer Pass 5 inches

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, Northeast

CAZ071		Yuba Pass		9 inches					
		2 N Independence Lake		10 inches					
		Lassen/Eastern Plumas/Eastern Sierra							
	27	1300PST			0	0			Heavy Snow
		1600PST							

A total of 7 inches of snow fell in 3 hours at the Independence Lake SNOTEL site.

CAZ071		Lassen/Eastern Plumas/Eastern Sierra							
	28	0100PST			0	0			Heavy Snow
		0600PST							

A total of 6 to 8 inches of snowfall was reported by the Lassen County Sheriff in Bieber.

CAZ071		Lassen/Eastern Plumas/Eastern Sierra							
	28	0100PST			0	0			Heavy Snow
		0600PST							

A total of 6 inches of snow fell at Fort Bidwell.

CAZ071		Lassen/Eastern Plumas/Eastern Sierra							
	28	0100PST			0	0			Heavy Snow
		0600PST							

A total of 10 inches of snow fell at Eagle Lake.

CALIFORNIA, Northwest

NONE REPORTED.

CALIFORNIA, South Central

Merced County	5 E Merced to 9 SE Merced	17	1301PST		0	0			Funnel Cloud
			1310PST						

Spotter reports indicated a funnel cloud east to southeast of Merced during the early afternoon of the 17th.

CAZ096		S Sierra Mtns							
	17	1345PST			0	0			Winter Storm
	18	1100PST							

CAZ097		Tulare Cty Mtns							
	17	1345PST			0	0			Winter Weather/Mix
	18	1100PST							

A significant early snowfall occurred in the Southern Sierra Nevada Mountains of Central California in mid-October. Precipitation amounts included 16 inches of new snow at Agnew Pass; 14" at Upper Burnt Corral; 13" at Green Mountain; 11" at Blackcap Basin; and, 7" at Farewell Gap (Tulare County Mountains).

Fresno County	(Fat) Air Terminal	19	0457PST		0	0			Heavy Rain
			1711PST						

CAZ096>097		S Sierra Mtns - Tulare Cty Mtns							
	19	1624PST			2	0			Winter Storm
	20	1500PST							

F40OU, M40OU

CAZ095		Kern Cty Mtns							
	19	2244PST			0	0			Winter Weather/Mix
		2300PST							

Following the early-season Winter Storm that began on the 17th, extensively more snow fell on the 19th and 20th in the higher elevations of Central California. High winds accompanied this system throughout much of the state. This early winter storm caught numerous climbers and hikers throughout the Southern Sierra Nevada in the open. Two climbers in Yosemite National Park froze to death as they were climbing the El Capitan Face. Snow amounts for the period from the 19th through 21st in the South Sierra Nevada included 45" at Blackcap Basin; 40" at Gin Flat; 39" at Chilkroot Meadow, Tamarack Meadow, and Agnew Pass; and, 38" at Mitchell Pass and West Woodchuck Meadow. In the Tulare County Mountains 25" of snow was reported at Big Meadows with 22" at Farewell Gap. Accompanying the winter storm in the Southern Sierra Nevada were gusty wind throughout Interior Central California. In the Kern Mountains south winds were sustained at 15 MPH but had gusts to 50 MPH at the Bear Valley RAWS site west of Tehachapi, CA. On the Central San Joaquin Valley floor Fresno recorded a daily rain total of 0.75" shattering the old record of 0.21" on the date set in 1936.

CAZ089>091-093		W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - S Sierra Foothills							
	19	1031PST			0	0	4K		Strong Wind
		2000PST							

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, South Central

CAZ098 Indian Wells Vly
19 1413PST 0 0 High Wind (G51)
1500PST

With the mid-month series of winter storms were relatively strong pre-frontal wind conditions in areas of Interior Central California. On the Central and Southern San Joaquin Valley Floor southeast wind reports included 47 MPH at Los Banos RAWs; 41 MPH at San Luis Reservoir; 36 KTS at Merced; 31 KTS at Madera; and 36 MPH at Kettleman Hills. In the Sierra Foothills, Catheys Valley had gusts up to 46 MPH. In the Kern County Deserts, the Indian Wells Canyon RAWs had gusts reach 59 MPH from the south in the afternoon of the 19th.

Tulare County
5 SE Dinuba 20 1305PST 0.5 15 0 0 Tornado (F0)
1310PST

A rope shaped tornado was relatively stationary even as the parent cell moved northeast. The tornado was short-lived as reported by a spotter and did not have an extensive ground track. No damage was seen in the rural area at the time nor noted by a subsequent NWS survey.

Fresno County
2.7 E Reedley 20 1340PST 0 0 Funnel Cloud
1343PST

This funnel was reported looking south toward the location of the "Dinuba Tornado" but was on a line behind the convection line that supported the tornado and 30 minutes later.

Kern County
5 WNW Bakersfield to 20 1349PST 0 0 Funnel Cloud
5 N Arvin 1406PST

Several spotter reports seem to indicate a funnel cloud passed over Bakersfield from the WNW early in the afternoon of the 20th.

CAZ089>092 W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - Se S.J. Valley
25 0530PST 0 0 Dense Fog
0900PST

After significant rain events at mid-month sufficient moisture on the Central and South San Joaquin Valley floor led to dense fog formation near sunrise on the morning of the 25th.

Fresno County
(Fat) Air Terminal 26 0827PST 0 0 Heavy Rain
1737PST

Kern County
(Bfl) Meadows Field Ap 26 1122PST 0 0 Heavy Rain
1900PST

CAZ092-095 Se S.J. Valley - Kern Cty Mtns
26 1532PST 0 0 10K Flood
27 0241PST

Associated with the heavy snows at higher elevations, locally heavy rain in the San Joaquin Valley portion of Tulare County and the lower elevations of the Kern County Mountains brought localized flooding to those areas. Kern County Mountain rainfall amounts included 1.33" rain at Granite Station; 1.20" at Glennville; and, 1.20" of rain and 2" of snow at Frazier Park. Other rain totals in the area included Visalia 0.85", Lemoore 1.30", and Rosamond 0.96"(Kern County Desert). This month ended with several records reflecting the relatively early start of the cold season. For Bakersfield...a new record for rainfall was set on the 26th when 0.96" of rain fell shattering the old record of 0.37" for the date set in 1982. For Fresno...a new record rainfall on the 26th occurred with 1.05" eclipsing the previous daily record of 0.77" set in 1991. October 2004 ended up being the 4th wettest on record for Fresno and Bakersfield on the San Joaquin Valley Floor with 2.45" and 1.54", respectively.

CAZ095>097 Kern Cty Mtns - S Sierra Mtns - Tulare Cty Mtns
26 1000PST 0 0 Winter Storm
27 0235PST

The last part of the month again had a significant enough frontal passage to bring winter storms to the higher elevations of Interior Central California. Snow amounts included 29 inches at Kibby Ridge and Tunnel Guard Station; 24" at Mammoth Mountain; 23" at Upper Burnt Corral; and 18" at Farewell Gap in the Southern Sierra. In the Kern Mountains 8" of new snow fell at Alpine Forest.

CALIFORNIA, Southeast

CAZ026 Owens Valley
19 2100PST 0 0 Heavy Snow
20 0855PST

A trained spotter in Aspendell, CA reported 14 inches of snow overnight.

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004	
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Injured	Estimated Damage	Property	Crops	Character of Storm
CALIFORNIA, Southeast										
CAZ026	Owens Valley	25	0830PST		0	0				Heavy Snow
		1540PST								
A spotter in Aspendell reported 7 inches of new snow in just over 6 hours. An automated weather site in South Lake estimated 14 inches of new snow in 8 hours.										
CALIFORNIA, Southwest										
CAZ043	San Diego County Coasts	16	0000PST		0	0				Drought
San Diego Lindbergh Field set a record for the most consecutive number of days without measurable rain at 182 days. This beat the old record of 181 days set the previous year. The streak started on April 18, 2004, and ended on October 17, with the onset of the wettest October ever on record at Lindbergh Field.										
San Diego County	Oceanside	17	0608PST	0.2	25	0	0	20K		Tornado (F0)
		0610PST								
A cutoff low that sat off the coast for a week eventually made its way back to Southern California, and brought the first measureable rain to the coast in over 182 days. Rainfall amounts were generally from 0.10 at the far southwestern beaches, up to 0.50 inland, and over 1.00 in the mountains. A waterspout came ashore in Oceanside and caused minor damage to structures, blew over some trees, and broke a few windows. The roof of an elementary school was partially torn off by the strong winds. The whole event was brief and the tornado dissapated when it reached Pacific Coast Highway. Another funnel cloud was spotted that afternoon south of Carlsbad near Moon Beach.										
San Bernardino	County									
Wrightwood	20	0221PST			0	0	320K			Flash Flood
		0700PST								
A flash flood washed out a bridge on Highway 2 at Sheep Creek. The bridge was completely burried under mud and rocks as a torrent of muddy water rushed over the bridge. The gap between the bottom of the bridge and the creek bed, which is normally around 15 feet, completely filled with mud and debris. Crews rushed to remove 600 cubic yards of mud from beneath the bridge as another strong winter storm would hit the week after.										
San Bernardino	County									
20 NNW San Bernardir	20	0228PST			1	0	100K			Flash Flood
		0700PST								
Heavy rains over the San Bernardino Mountains caused a torrent of mud and water to run down Lytle Creek. More than three feet of mud was deposited on Glen Helen Rd and Lytle Creek. One car was swept away and burried in the mud. No one was in the car at the time. A week later on October 26, the body of a 49 year-old man was found tangled in mud and trees near the Lytle Creek ranger station. It appears likely that this man was swept away in the flood waters from the October 20 storm. M400T										
San Bernardino	County									
Devore	20	0230PST			0	0	50K			Flash Flood
		0700PST								
A large mud and rock slide inundated Greenwood Avenue, leaving behind a huge mess which included trees, large rocks, and mud. Some vehicles were burried in a couple feet of mud, and area homes sustained damage from the flow.										
Orange County	Tustin	20	0400PST		0	0	15K			Flash Flood
		0500PST								
Five vehicles were submerged when highway 55 flooded at 4th street.										
San Bernardino	County									
Chino	20	0415PST			0	0	5K			Flash Flood
		0445PST								
A 50-year-old man had to be rescued from his truck near El Prado Golf Course when it was submerged up to its hood in flood waters.										
Riverside County	Mira Loma to	20	0530PST		0	0	500K			Flash Flood
	2 SW Mira Loma	1100PST								
Swift moving runoff washed out a large section of Lucretia Ave. near 66th Street in Mira Loma. Homes along Lucreita Ave. were damaged by the flood, which was 5 feet deep in spots. Further south, about 100 horses had to be rescued as the Santa Ana River inundated the River Trails Riding Stable in Norco with deep water. Some horses were neck-deep in floodwaters before they could be led to safety.										

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
CALIFORNIA, Southwest							
San Bernardino County							
Fontana	20	0530PST 0825PST			0 0	1M	Flash Flood
Widespread flooding occurred in the vicinity of Interstate 10 and Etiwanda Ave. Vehicles caught in the flood waters reportedly floated away and minor flooding damaged homes along Etiwanda Ave. Nearby, the San Seivaine flood-control channel overflowed and washed out some railroad tracks, resulting in the derailment of three cars of a Union Pacific freight train. The derailment and flooding forced the shutdown of two gas pipelines that supply jet fuel from Southern California to Phoenix and Las Vegas.							
San Bernardino County							
Redlands	20	0530PST 0630PST			0 0	700K	Flash Flood
Water overflowed the banks of the Mill Creek Zanja flood channel, causing an estimated \$700,000 in damage to the flood channel and surrounding areas near Sylvan Park and the University of Redlands.							
San Bernardino County							
Forest Falls	20	0900PST 1000PST			0 0	25K	Flash Flood
Valley of the Falls Dr was made impassable by mud and rocks that were deposited by flood waters which washed over a large stretch of the road early on the 20th.							
San Diego County							
1 W Escondido	20	0950PST 1136PST			0 0	5K	Flash Flood
Creeks in the Harmony Grove area overflowed from heavy runoff, sending a river of water two to three feet deep rushing over Harmony Grove Rd. near Country Club Dr. Other roads in the area also had to be closed due to swift moving runoff and flooding.							
San Diego County							
San Marcos	20	1030PST 1130PST			0 0	1K	Flash Flood
Heavy rain sent three to four feet of water rushing over Craven Rd. in San Marcos. The second in a series of October storms brought with it heavy rain, thunderstorms, flash flooding, and funnel clouds. Very heavy rain upwards of 9 inches in the mountains caused serious flash flooding and debris flows in parts of the San Bernardino Mountains. Hundreds of car accidents were reported and several mountain roads were made impassible from mud and rockslides. Roadway flooding was commonplace all across southwest California. The combination of heavy rain and moderate winds caused many trees around the area to come crashing down, causing sporadic power outages. Heavy rain and fog was blamed for a 41 vehicle pileup on Interstate 15 north of HWY 138 at 1237pm. Several funnel clouds were spotted offshore from San Clemente.							
Orange County							
1 W San Clemente	20	1618PST			0 0	0	Funnel Cloud
Several funnel clouds were spotted offshore from San Clemente.							
San Bernardino County							
2 N Rialto	27	0105PST 0110PST			0 0	5K	Flash Flood
Water and mud rushed across Lytle Creek Road just north of Glen Helen Parkway.							
CAZ055>056							
San Bernardino County Mountains - Riverside County Mountains	27	0130PST 1500PST			0 0	5K	Heavy Snow
Numerous spotters and members of the public reported 2 feet of snow in Big Bear. Most of the 2 feet fell within a 12 hour period. Roads were made impassable and the weight of the snow snapped tree limbs and knocked out power to the area. Some local ski resorts benefitted with their earliest opening ever.							
San Diego County							
4 NNE Vista	27	0345PST 0350PST			0 0	0	Flash Flood
Heavy rains at Gopher Canyon left 1 1/2 feet of water across roadways.							
Riverside County							
4 NNE Lake Elsinore	27	0532PST 0535PST			0 0	0	Flash Flood
Heavy rain caused water and mud to run across Temescal Canyon Road at Horsethief Canyon Road.							
San Diego County							
3 SE Ramona	27	0540PST 0800PST			0 0	0	Flash Flood
Heavy rain caused Klondike Creek to overflow across a 25-30 ft section of Wildcat Canyon Road near San Diego Country Estates.							

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, Southwest

Riverside County

3 SW Perris

27

0709PST
0715PST

0

0

5K

Flash Flood

Swift moving water washed out a small portion of Highway 74 near Mapes Road.

Riverside County

Sun City

27

0730PST
0830PST

0

0

15K

Flash Flood

Seven people had to be rescued from their vehicles when they became trapped in a flooded intersection in Sun City. The flood waters were four feet deep at the time of the rescue.

Riverside County

3 N Lake Elsinore

27

0821PST
0825PST

0

0

5K

Flash Flood

Heavy rains and runoff caused a large sink hole to form in the slow lane of south bound Interstate 15.

San Diego County

12 SSW Borrego Spgs

27

0840PST
0848PST

0

0

15K

Flash Flood

12 vehicles became trapped in mud when heavy rains caused a mud flow to run across Overland Stage Road at Scissors Crossing.

San Diego County

3 SW Warner Spgs

27

0921PST
0927PST

0

0

10K

Flash Flood

Heavy rain washed out 2 sections of S2 near highway 79 at mile markers 2 and 3. Mud and rocks also came down across the road.

San Diego County

San Diego

27

1300PST
1305PST

0

0

0

Flash Flood

The San Diego River was near flood stage when it swept a homeless man away near Ward Road in Mission Valley. He was rescued by two men in the vicinity who happened to hear him call for help.

CAZ056

Riverside County Mountains

27

1407PST

0

0

5K

Landslide

A rock slide two to three feet deep covered highway 243 at mile marker 25.

San Bernardino

County

Devore

27

1500PST
1700PST

0

0

25K

Flash Flood

Heavy rains in the foothills and mountains washed a large quantity of water and mud across all lanes of interstate 215 near the 15 merge. The interstate had to be closed for several hours while crews cleaned up the mess.

Riverside County

2 E Perris

27

1521PST
1700PST

0

0

20K

Flash Flood

Heavy rains caused the San Jacinto River to flood and several vehicles became stuck in flood waters along Dunlap and San Jacinto Avenues.

The last in a series of strong, early season storms brought record heavy rain to the coast and valleys, and dumped two feet of snow at the mountain resorts. This storm sent October rainfall totals to record levels in most locations, and brought a quick end to what could have been another disastrous fire season. San Diego Lindbergh Field ended October with 4.98 inches of rain, making it the wettest October since records began in 1850. Many ski resorts in the San Bernardino Mountains were open by Halloween...something that hadn't happened in over 30 years. The storm caused widespread urban flooding and sent mud and rocks sliding down hillsides and canyons all across the area. Strong thunderstorms also raked across Orange and San Diego counties, bringing even more heavy rain, small hail, and gusty winds. Rainfall amounts generally ranged from 2.00 to 4.00 inches or more from the coast to the mountains, and between 0.50 to 1.00 inch in the deserts. As a result, October rainfall totals ended between 1000% and 2000% above normal in the coast, valley, and desert locations, and between 500% to 900% above normal in the mountains.

CALIFORNIA, Upper

CAZ081-081

Central Siskiyou County

19

0330PST
0430PST

0

0

High Wind (G61)

Recorded at North Weed.

A High Wind Warning was issued for the Shasta Valley (CAZ081) at 2130 PDT on 10/18/04 and expired at 1250 PDT on 10/19/04. The above observations verified the warning. In addition, the Weed RAWS recorded a gust to 57 mph at 0145 PDT on 10/19/04, which failed to meet high wind criteria by a mere 1 mph.

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, Upper

CAZ085-085-085 Modoc County
28 0653PST
0800PST
0 0 Heavy Snow

7 inches of snow in 24 hours ending at 0645 PDT.

Heavy snow developed overnight in the warning area...but reports did not arrive until the following morning. Upon receipt of the first reports, a Winter Storm Warning was issued for California zone CAZ085 at 0741 PDT and cancelled at 1430 PDT. The warning verified, but with zero lead time.

CALIFORNIA, West South Central

Santa Barbara County

9 NW Santa Barbara 19 1615PST
1700PST 0 0 Flash Flood

Santa Barbara County

1 WNW Gaviota 19 1630PST
1715PST 0 0 Flash Flood

Los Angeles County

8 NNW Altadena 19 2301PST
20 0100PST 0 0 Flash Flood

Los Angeles County

2 N Newhall 20 0000PST
0100PST 0 0 Flash Flood

Los Angeles County

5 SE Newhall 20 0015PST
0130PST 1 0 Flash Flood

M19OU

A powerful early-season storm brought heavy rain and flash flooding to Central and Southern California. The storm dumped 1 to 4 inches of rainfall across coast and valley locations and between 6 and 12 inches of rain in the mountains. In Santa Barbara county, flash flooding and mudslides were reported along Highway 154 near the intersection of Summit Road and at the entrance to Gaviota State Park. In Los Angeles county, flash flooding and mudslides were reported at the junction of Angeles Forest Highway and Upper Big Tujunga Canyon Road. In the same area...a guard at the Wildlife Waystation drowned when his car was swept away when he crossed a flooded wash. In Santa Clarita, flash flooding affected a trailer park, stranding over 100 residents in their homes.

CAZ053>054 Ventura County Mountains - Los Angeles County Mountains Excluding The Santa Monica Range

26 1400PST 0 0 Winter Storm
27 1500PST

Santa Barbara County

5 W Santa Barbara 27 1100PST 0 0 Funnel Cloud

Ventura County

Pt Mugu Nas 27 1306PST 0 0 Funnel Cloud

A early-season storm brought rain, snow and funnel clouds to Central and Southern California. The storm dumped 1 to 3 inches of rain over coastal and valley areas with up to 5 inches in the mountains. With snow levels dropping to around 5000 feet, heavy snow between 8 and 16 inches of snow in the mountains. The heavy snow combined with winds gusting to 60 mph to produce hazardous winter storm conditions. Across Ventura and Santa Barbara counties...two funnel clouds were reported.

CALIFORNIA, Western

San Mateo County

East Palo Alto 19 0300PST
0305PST 0 0 50K Thunderstorm Wind (G60)

A thunderstorm produced a 60 mph wind gust that snapped two large trees, with one falling on a house.

CAZ008

Santa Clara County

19 0700PST 0 0 High Wind (G73)
0705PST

A powerful winter storm produced a 73 mph wind gust at the Los Gatos Raws site in Santa Clara County.

Napa County

15 SE Yountville 26 1945PST
1950PST 0 0 Hail (0.75)

A thunderstorm produced severe hail in Napa County.

Storm Data and Unusual Weather Phenomena

October 2004

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

CALIFORNIA, Western

Santa Cruz County

7 NW Boulder Creek	27	1335PST 1342PST			0	0			Hail (0.75)
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A thunderstorm produced severe hail in Santa Cruz County.

CARIBBEAN SEA AND TROPICAL ATLANTIC

Atl Nearshore Waters

Rio Guajataca Pr

Ewd Thru Usvi

Culebra	02	1116AST 1131AST			0	0			Waterspout
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Several waterspouts were reported 8 miles southwest of Culebra moving southwest.

Altamaha Sd To

Fernandina Beach Fl

Out 20Nm

Cumberland Stafford	03	1800EST			0	0			Marine Tstm Wind
---------------------	----	---------	--	--	---	---	--	--	------------------

A mariner reported 50 mph wind gusts in a very strong storm wind gust that actually drug there 35 ft sailboat that was anchored. The wind drove the boat toward a dock, and the couple on board started their engine to prevent their boat from crashing into the dock. No significant damage or injuries were reported.

Surf City To Cp Fear

Nc Out 20Nm

Cape Fear	19	0332EST			0	0	2K		Waterspout
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A waterspout on a pier near Bald Head Island sheared cleats that were holding a large boat. The waterspout tore canvas on boats and tossed large trash cans.

Savannah Ga To

Altamaha Sd Ga 20

To 60Nm

60 ESE Tybee Island	19	2330EST			0	0			Marine Tstm Wind
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Deerfield Beach To

Ocean Reef Fl 20 To

60Nm

30 E Miami Beach	25	0730EST			0	0			Waterspout
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The pilot of a small plane saw a waterspout in the Atlantic.

COLORADO, Central and Northeast

Adams County

5 ESE Brighton	04	1455MST 1515MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Adams County

Barr Lake	04	1502MST 1520MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Adams County

5 SSE Brighton	04	1513MST 1530MST	0.1	50	0	0			Tornado (F1)
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A small tornado touched down and caused extensive damage to a recreational vehicle. A barn was also severely damaged. The roof of the barn was thrown 100 feet while the remaining structure was torn from its foundation. Four llamas in the barn were injured when it collapsed.

Adams County

2 N Brighton	04	1525MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Adams County

6 NE Brighton	04	1528MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Weld County

5 SW Hudson	04	1528MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Weld County

2 S Windsor	04	1540MST	0.1	50	0	0	0	0	Tornado (F0)
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A small tornado touched down but did no damage.

Storm Data and Unusual Weather Phenomena

October 2004

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

COLORADO, Central and Northeast

Weld County 3 NE Platteville	04	1542MST	0.1	50	0	0	0	0	Tornado (F0)
									A small tornado touched down but did no damage.
Weld County Johnstown	04	1544MST	0.1	50	0	0			Tornado (F1)
									A small tornado touched down a turned some empty fertilizer tanks on their sides at a fertilizer plant. Three storage sheds were also destroyed. The twister also damaged a trailer.
Weld County Milliken	04	1544MST	0.1	50	0	0			Tornado (F1)
									A small tornado touched down and caused minor wind damage to nearby homes.
Weld County 5 S Windsor	04	1548MST	0.1	50	0	0			Tornado (F1)
									A small tornado touched down a damaged a tractor trailer. In all, up to 9 non-supercell tornadoes developed along a boundary that stretched from around Denver International Airport to near Barr Lake, in central Adams County, then extended into south central Weld County.
COZ036-038>039									Jefferson & W Douglas Counties Above 6000 Feet / Gilpin / Clear Creek / Ne Park Counties Below 9000 Feet - Larimer County Below 6000 Feet / Nw Weld County - Boulder & Jefferson Counties Below 6000 Feet / W Broomfield County
	29	1148MST 1500MST			0	0			High Wind (G73)
COZ042-051									Ne Weld County - Phillips County
	29	1442MST 1500MST			0	0	0		High Wind (G57)
COZ036-041									Jefferson & W Douglas Counties Above 6000 Feet / Gilpin / Clear Creek / Ne Park Counties Below 9000 Feet - Elbert / C & E Douglas Counties Above 6000 Feet
	31	1900MST 2359MST			0	0	0	0	Winter Storm
									Heavy snow fell across the foothills of Jefferson and Douglas Counties, and along Monument Ridge south of Denver. Storm totals included: 14.5 inches at Aspen Park, 13 inches, 5 miles west of Larkspur, 10 inches at Roxborough State Park and 8 miles south of Sedalia, 8 inches, 5 miles east of Bergen Park, with 7 inches at Highlands Ranch.

COLORADO, East Central

NONE REPORTED.

COLORADO, South Central and Southeast

Custer County 7 N Westcliffe	04	1435MST 1440MST			0	0			Hail (0.75)
Custer County Rosita	04	1525MST 1530MST			0	0			Hail (0.75)
Custer County 5 S Rosita	04	1540MST 1545MST			0	0			Hail (0.88)
Custer County 11 W San Isabel	04	1700MST 1705MST			0	0			Hail (0.88)
COZ068									Eastern San Juan Mountains Above 10000 Ft
	21	2230MST			0	0			Heavy Snow
	22	1000MST							
									Approximately 10 inches of snow was noted around the summit of Wolf Creek Pass.
COZ068									Eastern San Juan Mountains Above 10000 Ft
	28	2000MST			0	0			Heavy Snow
	29	0200MST							
									Around 8 inches of snow fell around the summit of Wolf Creek Pass.

Storm Data and Unusual Weather Phenomena

October 2004

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					Killed	Injured	Property	Crops	

COLORADO, West

**COZ001>014-
017>023**

Lower Yampa River Basin - Central Yampa River Basin - Roan And Tavaputs Plateaus - Elkhead And Park Mountains - Upper Yampa River Basin - Grand Valley - Debeque To Silt Corridor - Central Colorado River Basin - Grand And Battlement Mesas - Gore And Elk Mountains/Central Mountain Valleys - Central Gunnison And Uncompahgre River Basin - West Elk And Sawatch Mountains - Flattop Mountains - Upper Gunnison River Valley - Uncompahgre Plateau And Dallas Divide - Northwestern San Juan Mountains - Southwestern San Juan Mountains - Paradox Valley / Lower Dolores River Basin - Four Corners / Upper Dolores River Basin - Animas River Basin - San Juan River Basin

01	0000MST	0	0	Drought
31	2359MST			

Several storm systems affected western Colorado during the month. A number of these storms brought moderate to heavy precipitation to some areas, but this offered little relief due to the extensive nature of the drought. A small area of abnormally dry conditions continued across southwest Colorado, while moderate to extreme drought persisted elsewhere. Please see the November 2004 Storm Data Publication for a continuation on this drought situation.

**La Plata County
11 S Durango to
9 S Durango**

05	1134MST			0	0	Funnel Cloud
	1138MST					

**La Plata County
7.5 S Durango to
5.5 SSE Durango**

05	1144MST	2.5	25	0	0	25K	2K	Tornado (F1)
	1148MST							

The parent cloud of the tornado initially produced a funnel cloud which dissipated several minutes before a second funnel cloud formed which then became a tornado. The tornado traveled north-northeast, mostly across agricultural fields, initially touching down just south of County Road 302 and then lifting up about a half mile south of County Road 220, just east of Highway 550. The lingering funnel cloud then tracked northeast for about another five miles without touching down. Property that was damaged included fences, a sturdy utility trailer that was hurled about 200 feet, a 12 foot by 24 foot metal shed that was destroyed, and a large warehouse that received a glancing blow. Windows and a large door for truck access were blown out of the warehouse. Additionally, a pile of lumber near the warehouse was picked up and tossed over 600 feet away, while bales of hay from a hay barn were also blown out. Crop damage was minimal since the tornado only trekked across pastureland, hay fields, and alfalfa fields. The tornado was seen by hundreds of eyewitnesses, many with cameras who shot pictures of the tornado and funnel clouds.

**La Plata County
5.5 SSE Durango to
5.5 ESE Durango**

05	1148MST			0	0	Funnel Cloud
	1156MST					

This is the funnel cloud which continued after the tornado lifted up. As with the tornado, this funnel cloud was seen by hundreds of eyewitnesses and photographed by many.

COZ002

Central Yampa River Basin

12	0100MST	0	0	Frost/Freeze
	0800MST			

Minimum temperatures from 25 to 32 degrees occurred across the majority of the central Yampa River Basin.

**COZ001-007>008-
011-020**

Lower Yampa River Basin - Debeque To Silt Corridor - Central Colorado River Basin - Central Gunnison And Uncompahgre River Basin - Paradox Valley / Lower Dolores River Basin

14	0200MST	0	0	Frost/Freeze
	0700MST			

Many areas of the central and northern valleys of western Colorado experienced a killing frost or freeze as minimum temperatures from 25 to 32 degrees occurred.

**Mesa County
2.5 ENE Mack to
10 N Fruita**

17	1410MST	7.5	15	0	0	Tornado (F0)
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This tornado remained over open country and was seen by a number of individuals, including an off duty NWS employee.

COZ004-009-013

Elkhead And Park Mountains - Grand And Battlement Mesas - Flattop Mountains

19	0000MST	0	0	Winter Weather/Mix
	1800MST			

A vigorous early season storm produced 5 to 12 inches of snow across the northern mountains and a portion of the central mountains of western Colorado. The heaviest snow occurred above 9000 feet and winds caused blowing and drifting of snow.

COZ009

Grand And Battlement Mesas

21	0000MST	0	0	Winter Storm
22	1400MST			

A Pacific storm produced around a foot of snow above the 8000 foot level.

COZ003-017

Roan And Tavaputs Plateaus - Uncompahgre Plateau And Dallas Divide

21	1200MST	0	0	Winter Weather/Mix
22	0600MST			

A vigorous Pacific storm system produced strong winds gusting to around 45 mph, as well as 3 to 5 inches of snow.

Storm Data and Unusual Weather Phenomena

October 2004

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

COLORADO, West

COZ012

West Elk And Sawatch Mountains

23 1100MST 0 1 Avalanche
1102MST

The victim triggered the avalanche while traversing a gully near the south fork of Cement Creek during a backcountry ski outing. This area is known as the Colorado Basin or Velocity Basin area. The victim heard a whomph and then he took a long, scary ride over rocks as he was swept down the slope. The victim was partially buried under 3 feet of snow, sustained spinal trauma and required hospital care.

Montrose County

4 S Montrose to 2 S Montrose

25 2052MST 0 0 Funnel Cloud
2203MST

COZ004-009-013- 018>019

Elkhead And Park Mountains - Grand And Battlement Mesas - Flattop Mountains - Northwestern San Juan Mountains - Southwestern San Juan Mountains

27 0600MST 0 0 Winter Storm
29 1800MST

A storm system produced heavy snowfall across much of the mountain areas of western Colorado. Snow amounts generally were in the 6 to 16 inch range across the northern mountains, with 1 to 2 feet occurring further south across the Grand Mesa and the San Juan Mountains.

COZ003>005-012-017

Roan And Tavaputs Plateaus - Elkhead And Park Mountains - Upper Yampa River Basin - West Elk And Sawatch Mountains - Uncompahgre Plateau And Dallas Divide

27 1000MST 0 0 Winter Weather/Mix
29 1200MST

A storm system produced widespread snowfall of 5 to 13 inches across most mountains and some high elevation valleys of western Colorado. Strong winds resulted in numerous brief interruptions of power across the upper Yampa River Basin, while a couple of areas were without power for a few hours.

COZ002-008

Central Yampa River Basin - Central Colorado River Basin

27 1000MST 0 0 Winter Weather/Mix
29 1200MST

An early season storm system produced widespread snowfall of 1 to 4 inches across some of the high valleys of west-central and northwest Colorado. The storm caused flight delays and cancellations at the Yampa Valley Regional Airport in Hayden.

COZ004-009>010- 012>013-017>018

Elkhead And Park Mountains - Grand And Battlement Mesas - Gore And Elk Mountains/Central Mountain Valleys - West Elk And Sawatch Mountains - Flattop Mountains - Uncompahgre Plateau And Dallas Divide - Northwestern San Juan Mountains

31 0400MST 0 0 Winter Weather/Mix
2359MST

A storm system produced widespread snowfall of 5 to 11 inches across the mountains of western Colorado, with local amounts of 14 to 21 inches.

COZ005

Upper Yampa River Basin

31 0400MST 0 0 Winter Weather/Mix
2359MST

A storm system produced widespread snowfall of 5 to 6 inches across the Upper Yampa River Basin.

CONNECTICUT, Northeast

NONE REPORTED.

CONNECTICUT, Northwest

CTZ001-013

Northern Litchfield - Southern Litchfield

06 0300EST 0 0 Frost/Freeze
0700EST

A Canadian airmass descended southward, ushering in the first killing frost and freeze of the season, officially ending the growing season in extreme western Connecticut.

CONNECTICUT, Southern

NONE REPORTED.

DELAWARE

DEZ002>003

Kent - Inland Sussex

15 0900EST 0 0 0 Astronomical High Tide
1100EST

The combination of a southerly flow preceding a cold front and spring tides associated with the new moon caused pockets of minor tidal flooding at the times of the daytime high tide on the 15th along Delaware Bay. At Reedy Island, Delaware the high tide reached 7.39 feet above mean lower low water. Minor tidal flooding starts at 7.2 feet above mean lower low water.

Storm Data and Unusual Weather Phenomena

October 2004

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

DELAWARE

DEZ004

Delaware Beaches

21 0000EST

25 2359EST

0

0

0

Heavy Surf/High Surf

DEZ002>003

Kent - Inland Sussex

24 1700EST

2100EST

0

0

0

Astronomical High Tide

The combination of a nearly stationary high pressure system over nearby Canada and low pressure systems over the western Atlantic produced six consecutive days of rough surf along the Delaware shore from October 20th through the 25th. Waves as large as six to eight feet were reported breaking on the shore. This produced beach erosion. The heavy wave action exposed a concrete tower base at North Inlet Beach. At Rehoboth Beach, the strong current damaged steel pilings put into place for expansion of the Rehoboth Beach stormwater outflow system. The pressure of moving sand and ocean waves caused a number of steel pilings to twist and bend. The damaged pilings were left on the beach at Boardwalk and Grenoble Place.

Some minor tidal flooding also occurred during the evening high tide on the 24th in Delaware Bay. The high tide at Reedy Island reached 7.36 feet above mean lower low water. Minor tidal flooding begins at 7.20 feet above mean lower low water.

DISTRICT OF COLUMBIA

NONE REPORTED.

FLORIDA, East Central

Volusia County

Ormond Beach

07 1500EST

1

0

0

0

Rip Current

A 24 year old man visiting from Germany drowned in a rip current at Ormond Beach.
M271W

Volusia County

Ormond Beach

10 0930EST

1

0

0

0

Rip Current

A 55 year old man drowned in a rip current at Ormond Beach after rescuing his 10 year old son.
M551W

Orange County

Orlando Executive Ar

15 1007EST

0

0

30K

Thunderstorm Wind (G53)

A thunderstorm wind gust to 53 knots (61 MPH) was reported at Orlando Executive Airport. One airplane was overturned and two others were damaged.

Orange County

Orlando

15 1035EST

0

0

5K

Thunderstorm Wind (G70)

A thunderstorm wind gust overturned a vehicle in a driveway in the Lake Underhill area of Orlando.

Volusia County

Maytown

19 1941EST

0

0

Hail (1.00)

Large hail reportedly damaged cars in Maytown.

Brevard County

Port Canaveral

20 1700EST

1705EST

0.7

40

0

0

150K

0

Tornado (F1)

A waterspout/tornado moved on shore just south of the Cape Canaveral Coast Guard Station and moved east along the north shore of Port Canaveral to just east of the Trident Pier inlet. The F1 tornado overturned several vehicles including a bus and damaged the roof of a building. Several twenty five foot boats were overturned and a construction office trailer was destroyed.

FLORIDA, Extreme Southern

NONE REPORTED.

FLORIDA, Northeastern

Duval County

1 NNW Wesconnett

03 1800EST

0

0

Hail (0.75)

Bradford County

Lawtey

04 1900EST

2000EST

0

0

Flash Flood

At 2000 EDT, the Bradford County EM reported 3 roads were closed off due to flooding near CR 225W. Several homes were isolated, and the rising water was possibly due to overflow from a nearby retention pond. At 2005 EDT, the Bradford County sheriff reported sides streets were impassable and closed due to the flooding. Initially, county EM officials reported a possible levee failure caused the rising waters, then it was later determined that runoff from previous rainfall was infiltrating the area.

Duval County

Neptune Beach

09 1100EST

12 1100EST

0

0

Rip Current

Storm Data and Unusual Weather Phenomena

October 2004

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					Killed	Injured	Property	Crops	

FLORIDA, Northeastern

A surfer aided in the rescue of 2 adults after they were swept out to sea in a rip current. Both adults consumed a lot of salt water and were fatigued, but were determined to be in good health after the event.

Flagler County Flagler Beach

22 1730EST 0 0 Rip Current

A boat and tackle shop at the Flagler Beach pier reported that 4 people were rescued from rip currents.

FLORIDA, Northwest

Walton County Mossy Head

19 1400EST 0 0 5K Thunderstorm Wind (G50)

Minor damage to a barn roof reported by the Walton County EMA.

Jackson County 3.5 E Malone

19 2130EST 0 0 5K Thunderstorm Wind (G50)

A few trees and power lines down. A roof was damaged by a fallen tree. Reported by the Jackson County Sheriff.

FLORIDA, Southern

Broward County Pompano Beach

20 1600EST
1700EST 0 0 Heavy Rain

Two to three inches of rain in less than three hours caused street flooding.

Broward County Pompano Beach

20 1620EST 0 0 Hail (1.75)

Golf-ball size hail fell in Pompano Beach.

Broward County Coconut Creek

20 1626EST 0 0 Hail (0.88)

Nickel-size hail was seen on the north Campus of Broward Community College by a SKYWARN spotter.

Broward County Lauderdale Lakes

20 1630EST 0 0 Hail (0.88)

A SKYWARN spotter saw nickel-size hail.

Broward County Oakland Park

20 1630EST 0 0 Hail (0.88)

Nickel-size hail was seen near the intersection of Andrews Avenue and Oakland Park Boulevard.

Broward County Tamarac

20 1630EST 0 0 Hail (1.00)

Quarter-size hail was seen near the intersection of Commercial Boulevard and Rock Island Road by a SKYWARN spotter.

Broward County Ft Lauderdale

20 1635EST 0 0 Funnel Cloud

A SKYWARN spotter saw a funnel cloud over Fort Lauderdale.

Broward County Oakland Park

20 1637EST 0 0 Hail (1.25)

Quarter-size hail was reported near the intersection of Prospect Road and Powerline Road.

Broward County Pompano Beach

20 1640EST 0 0 Hail (0.88)

Broward County Pompano Beach Airpar

20 1640EST 0 0 Thunderstorm Wind (G50)

A SKYWARN spotter saw nickel-size hail and several trees blown down.

Broward County Lauderdale Lakes

20 1645EST 0 0 Hail (1.25)

Broward County Lauderdale Lakes

20 1645EST 0 0 Thunderstorm Wind (G65)

A SKYWARN spotter saw quarter-size hail and estimated thunderstorm wind gusts between 60 and 70 knots.

Broward County Ft Lauderdale

20 1710EST 0 0 1K Hail (1.75)

A SKYWARN spotter saw golf-ball size hail which had broken a window.

Broward County Hollywood

20 1712EST 0 0 Hail (0.75)

A SKYWARN spotter saw three-quarter inch hail near the intersection of I-95 and Sheridan Street.

Miami - Dade County Sweet Water to Homestead

20 1930EST
2030EST 0 0 Heavy Rain

Three to four inches of rain fell in three hours causing street flooding from Sweetwater to Kendall to Homestead.

Storm Data and Unusual Weather Phenomena

October 2004

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

FLORIDA, Southern

Broward County

Ft Lauderdale **23** **1415EST** **0** **0** **Funnel Cloud**

A SKYWARN spotter and an off-duty NWS employee saw a funnel cloud over Fort Lauderdale.

FLORIDA, West Central

FLZ042-048-051-055>056 **Citrus - Hernando - Hillsborough - Manatee - Hardee**

01 **0000EST** **0** **0** **Flood**
31 **2359EST**

Widespread heavy rain from the hurricanes in September combined with saturated ground and swollen rivers continued to cause river flooding across west central Florida.

In Citrus County, the Withlacoochee River at Holder (flood stage 8 feet) reached an all time high of 10.86 feet on September 30th and remained above flood stage throughout the month of October. The Withlacoochee River at Dunnellon (flood stage 29 feet) reach 30.41 feet on the September 27th and also remained above flood stage throughout October.

In Hernando County, the Withlacoochee River at Trilby (flood stage 12 feet) reached 16.55 feet on September 29th and the Withlacoochee River at Croom (flood stage 8 feet) reach 11.90 feet on October 4th. Both sites fell below flood stage on October 24th.

In Hillsborough County, the Alafia River at Lithia (flood stage 13 feet) reached 19.19 feet on September 28th and fell below flood stage on October 3rd. The Little Manatee River at Wimauma (flood stage 11 feet) reach 14.60 feet on the September 28th and fell below flood stage on October 1.

In Hardee County the Peace River at Zolfo Springs (flood stage 16 feet) reached 21.19 feet on September 29th and fell below flood stage on October 12th.

Damage estimates were included in the hurricane report because it was not possible to extract the flood damage information from the available data.

Lee County

2.8 NE Cape Coral **21** **1030EST** **0** **0** **150K** **Lightning**

A home was struck by lightning, which caused a fire that spread throughout the attic and eventually consumed much of the house. There were no injuries.

FLORIDA, West Panhandle

Escambia County

3 W Century **19** **0950CST** **0** **0** **40K** **Thunderstorm Wind (G55)**
0951CST

High winds from a thunderstorm caused minor damage to eight homes west of Century. Most of the damage was to roofs and out buildings.

Escambia County

3 W Century **19** **1125CST** **0** **0** **Funnel Cloud**
1127CST

Local Emergency Management personnel, while looking at wind damage that had occurred earlier in the day, observed a funnel cloud for several minutes. The funnel cloud never touched down and went back into the cloud.

Okaloosa County

Baker **19** **1210CST** **0** **0** **Funnel Cloud**
1213CST

A funnel cloud was observed near Baker. The funnel cloud never touched down and went back into the cloud.

Okaloosa County

Crestview **19** **1230CST** **0** **0** **Funnel Cloud**
1233CST

Three funnel clouds were observed for several minutes near Crestview. The funnel clouds never touched down and went back into the clouds.

Okaloosa County

Baker **19** **1235CST** **0** **0** **15K** **Thunderstorm Wind (G50)**
1237CST

High winds from a line of thunderstorms blew down several trees near Baker. The high winds also caused roof damage to a manufactured home.

Storm Data and Unusual Weather Phenomena

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					Killed	Injured	Property	Crops	

GEORGIA, East Central

Burke County St Clair	03	1510EST			0	0		0	Thunderstorm Wind (G55)
EOC reported trees down in the St. Clair area from a microburst.									
Burke County 1 S Waynesboro	03	1535EST			0	0	0	0	Hail (0.75)
EOC reported 3/4 inch hail just south of Waynesboro.									

GEORGIA, Lower

Clinch County Homerville	03	1430EST			0	0			Heavy Rain
Water was rising over the road along Highway 177 at mile marker #6.									
Camden County 12 ENE Woodbine	03	1700EST			0	0			Hail (0.75)
Camden County St Marys	03	1745EST			0	0			Funnel Cloud
Fire Rescue reported a funnel cloud that almost touched down along Point Peter Road.									
Camden County 2 E Harriets Bluff	03	1750EST			0	0			Thunderstorm Wind (G52)
Cumberland Island National Park Service reported estimated winds of 60 mph and pea size hail.									

GEORGIA, North and Central

Glascocock County 6 NE Gibson	03	1420EST			0	0	25K		Thunderstorm Wind (G61)
The Glascocock County Emergency Management Director reported that a possible microburst downed numerous trees and power lines between Hobbs Road and County Line Road in the extreme northeast part of the county. Two mobile homes were damaged. One of the mobile homes had its roof blown off and another had its porch blown on top of the home. One commercial industry in the area also suffered some roof damage. One witness in the area reported seeing a 4 x 8 foot utility trailer spun around by the strong winds. Another resident estimated the winds at 70 mph and also reported pea-sized hail.									
Jefferson County Wrens to Mathews	03	1430EST 1440EST			0	0	30K		Thunderstorm Wind (G61)
The Jefferson County Emergency Management Director reported that numerous trees and power lines were down from Wrens to Mathews. Parts of U.S. Highway 1 and Georgia Highways 80, 88, and 17 were blocked by downed trees and power lines. Several locations also suffered structural damage. The roof was blown off an auto parts store. A Huddle House restaurant lost its canopy and several windows from the strong wind gusts. A mobile home was destroyed when a large oak tree split it in half and another site-built home was damaged when a large tree fell on it.									

GEORGIA, Northeast

NONE REPORTED.

GEORGIA, Southeast

NONE REPORTED.

GEORGIA, Southwest

NONE REPORTED.

GULF OF MEXICO

Cameron La To High Is Tx Out 20Nm 7 SE Mouth Of Sabine	04	1530CST			0	0			Marine Tstm Wind
Offshore oil rig recorded 43 knot wind gust.									
Atchafalaya R To Cameron La To 20 60Nm 35 SE Cameron	04	1620CST			0	0			Marine Tstm Wind
Offshore oil rig recorded 42 knot wind gust.									
Atchafalaya R To Cameron La 20 To 60Nm 21 SE Cameron	04	1635CST			0	0			Marine Tstm Wind

Storm Data and Unusual Weather Phenomena

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					Killed	Injured	Property	Crops	

GULF OF MEXICO

Offshore oil rig recorded 52 knot wind gust.

Lake Ponchartrain

And Lake Maurepas

Mid Lke Pontchartrain	04	2030CST			0	0			Marine Tstm Wind
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Galveston Bay

Morgans Point	04	2054CST			0	0			Marine Tstm Wind
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Measured at PORTS site.

Sw Pass Of The Ms R

To Atchafalaya R La

Out 20Nm

Grand Isle	08	0651CST			0	0			Marine Tstm Wind
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Pascagoula Ms To Sw

Pass Of Ms R Out

20Nm

22 SSE Biloxi	09	0955CST			0	0			Marine Tstm Wind
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Pascagoula Ms To Sw

Pass Of Ms R Out

20Nm

22 SSE Biloxi	09	1152CST			0	0			Marine Tstm Wind
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Pascagoula Ms To Sw

Pass Of Ms R Out

20Nm

2 W Pascagoula	09	1225CST			0	0			Waterspout
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A waterspout was observed by the Jackson County Sheriffs Office near Gautier.

Pensacola Fl To

Pascagoula Ms 20 To

60Nm

35 S Perdido Key to	10	1105CST			0	0			Marine Tstm Wind
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40 S Perdido Key		1108CST							
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Pensacola Fl To

Pascagoula Ms 20 To

60Nm

35 S Gulf Shores to	10	1145CST			0	0			Marine Tstm Wind
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45 S Gulf Shores		1148CST							
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Pensacola Fl To

Pascagoula Ms Out

20Nm

5 S Dauphin Island	10	1320CST			0	0			Marine Tstm Wind
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		1323CST							
--	--	---------	--	--	--	--	--	--	--

W End Of The 7 Mile

Bridge To Key W Out

20Nm

5 S Key West	12	0651EST			0	0			Waterspout
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0656EST

Waterspout observed by NWS personnel 5 miles south of Key West.

Sw Pass Of The Ms R

To Atchafalaya R La

Out 20Nm

20 S Venice	14	1228CST			0	0			Marine Tstm Wind
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Gulf Side Of The

Lower Keys Out

20Nm

Key West	15	0615EST			0	0			Marine Tstm Wind
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Wind gust to 48 mph (42 knots) measured at an automated weather station at Coast Guard Group Key West.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
GULF OF MEXICO									
W End Of The 7 Mile Bridge To Key W Out 20Nm									
10 WSW Big Pine Key	15	0637EST			0	0			Marine Tstm Wind
Trained weather spotter recorded a wind gust to 43 mph (37 knots) at the south end of Cudjoe Bay on Cudjoe Key.									
Craig Key To The W End Of The 7 Mile Bridge Out 20Nm									
6 SSW Marathon	15	0718EST			0	0			Marine Tstm Wind
Wind gust measured at 36 knots (41 mph) at Sombrero Key C-MAN station, at a height of 158 feet above mean sea level.									
Florida Bay									
5 ENE Duck Key	15	0733EST			0	0			Marine Tstm Wind
Wind gust to 37 knots (43 mph) measured at Long Key C-MAN station.									
Ocean Reef To Craig Key Fl Out 20Nm									
6 WSW Islamorada	17	1445EST 1505EST			0	0			Waterspout
Waterspout was observed by a trained weather spotter 1 mile southeast of Lower Matecumbe Key.									
Craig Key To The W End Of The 7 Mile Bridge Out 20Nm									
2 S Marathon	20	1540EST 1600EST			0	0			Waterspout
A large waterspout was reported by several trained weather spotters 2 miles south of Marathon. The waterspout lasted approximately 20 minutes.									
W End Of The 7 Mile Bridge To Key W Out 20Nm									
4 SE Key West	20	1609EST			0	0			Waterspout
A waterspout was observed by NWS personnel 1 mile south of Boca Chica Key.									
HAWAII									
Honolulu County									
Ewa to Schofield Barracks	11	1948HST 2206HST			0	0			Heavy Rain
Heavy showers caused ponding of roadways, and small stream and drainage ditch flooding in central and southwestern parts of the island of Oahu. No serious injuries or property damage were reported.									
Hawaii County									
Pahoa to Volcano	11 12	2030HST 0200HST			0	0			Heavy Rain
Heavy showers and thunderstorms produced small stream and drainage ditch flooding, and ponding of roadways in the Puna District on the windward side of the Big Island of Hawaii. There were no reports of serious property damage or injuries.									
Honolulu County									
Kailua to Wahiawa	12	1435HST 1545HST			0	0			Heavy Rain
Heavy rain and showers brought small stream and drainage ditch flooding, and ponding of roadways to windward and central sections of Oahu. No serious injuries or property damage were reported.									
Hawaii County									
Kawaihae to Kamuela	12 13	2255HST 0345HST			0	0			Heavy Rain
Heavy showers produced ponding of roadways, and small stream and drainage ditch flooding in leeward Kohala on the Big Island of Hawaii. There were no reports of serious property damage or injuries.									
HIZ001>002- 007>008-012>013- 017-019>020									
	13 14	0600HST 2000HST			0	0			Heavy Surf/High Surf
A storm low near the Aleutians generated surf of 10 to 15 feet along the north-facing shores of Niihau, Kauai, Oahu, Molokai, and Maui. However, there were no reports of serious property damage or injuries.									

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Property Crops	Character of Storm
<u>HAWAII</u>									
Maui County Nahiku to Kaupo	13	0703HST 1003HST			0	0			Heavy Rain
Heavy rain and showers caused small stream and drainage ditch flooding, and ponding of roadways in eastern parts of the island of Maui. No serious injuries or property damage were reported.									
Maui County Lanai City	13	1222HST 1434HST			0	0			Heavy Rain
Heavy showers caused small stream and drainage ditch flooding, and ponding of roadways in and around Lanai City on the island of Lanai. There were no reports of serious property damage or injuries.									
Honolulu County Wahiawa	13	1315HST 1330HST			0	0			Funnel Cloud
A local resident reported spotting a funnel cloud over the town of Wahiawa on the island of Oahu. The funnel dissipated quickly and caused no serious problems for air traffic or individuals on the ground.									
Hawaii County 3 W Kamuela to Hawi	13	1945HST 2245HST			0	0			Heavy Rain
Heavy showers caused ponding of roadways, and small stream and drainage ditch flooding in leeward Kohala on the Big Island of Hawaii. No serious injuries or property damage were reported.									
Kauai County 2 SW Wailua	15	1130HST 1325HST			0	0			Flash Flood
Heavy showers over the Garden Isle of Kauai caused a flash flood threshold to be surpassed on a gage along the Wailua River. Kayakers paddling along the river became stranded near the Fern Grotto. However, they were later rescued. No serious property damage or injuries were reported.									
Hawaii County Hilo to Glenwood	19 20	1930HST 0127HST			0	0			Heavy Rain
Heavy showers produced small stream and drainage ditch flooding, and ponding of roadways in coastal and lower upslope areas of the South Hilo and Puna districts on the Big Island of Hawaii. No serious injuries or property damage were reported.									
Kauai County Hanalei to Hanapepe	24 25	2127HST 0030HST			0	0			Heavy Rain
Heavy rain and showers produced ponding of roadways, and small stream and drainage ditch flooding in the eastern half of the island of Kauai. There were no reports of serious injuries or property damage.									
Honolulu County Countywide	25	1314HST 2012HST			0	0			Heavy Rain
Heavy showers and thunderstorms caused small stream and drainage ditch flooding, and ponding of roadways across the island of Oahu. There were no reports of serious property damage or injuries.									
Kauai County Kilauea to Lihue	25	1628HST 1909HST			0	0			Heavy Rain
Heavy showers and rain produced small stream and drainage ditch flooding, and ponding of roadways in northeast and east sections of the Garden Isle of Kauai. However, no serious property damage or injuries were reported.									
Honolulu County Mililani Town	25	1700HST 1710HST			0	0			Funnel Cloud
A local resident sighted a funnel cloud over Mililani in central Oahu. The funnel dissipated quickly, and had posed no threat to air traffic or individuals on the ground.									
Hawaii County Kawaihae to Honaunau	25 26	2201HST 0058HST			0	0			Heavy Rain
Heavy rain and showers produced small stream and drainage ditch flooding, and ponding of roadways in coastal and lower upslope areas of leeward Kohala and Kona on the Big Island of Hawaii. No serious injuries or property damage were reported.									
Honolulu County 1 SSE Kailua	26	1215HST 1230HST			0	0			Funnel Cloud
The same individual who had sighted a waterspout off Lanikai Beach in windward Oahu also spotted a funnel cloud over the beach at about the same time. The funnel dissipated within a short time and never threatened air traffic or people on the ground.									

Storm Data and Unusual Weather Phenomena

October 2004

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

HAWAII

Kauai County **3 W Hanalei to** **Wailua**

26 1600HST 1900HST 0 0 Heavy Rain

Heavy showers caused small stream and drainage ditch flooding, and ponding of roadways in north and northeast parts of Kauai. There were no reports of serious property damage or injuries.

Honolulu County **Kahuku to** **Kaneohe**

26 1945HST 27 0252HST 0 0 Flash Flood

A heavy rain event produced flash flooding over the windward slopes of the Koolau Mountains on Oahu. The areas hardest hit included the Kahuku High School campus and the Waikane and Waiahole areas. Three vehicles became stranded while attempting to cross an overflowing Waikane Stream. All vehicles were successfully recovered with no serious injuries to the vehicles' occupants. Inundation of the Kahuku High School campus damaged portions of the school's athletic complex. No damage estimates were available.

Kauai County **Hanalei to** **Wailua**

27 0647HST 1130HST 0 0 Flash Flood

Heavy rain and showers caused flash flooding that forced the closure of the Hanalei Bridge, just south of Princeville, in the northern part of Kauai. Minor flooding occurred in other areas of north and northeast Kauai. However, no serious injuries or property damage were reported.

HIZ001>003-005>006-013>014-016-018>021-023>025 **Niihau - Kauai Windward - Kauai Leeward - Oahu South Shore - Waianae Coast - Molokai Leeward - Lanai Makai - Kahoolawe - Maui Leeward West - Maui Central Valley - Windward Haleakala - Leeward Haleakala - Kona - South Big Island - Big Island North And East**

28 0700HST 30 1200HST 0 0 Heavy Surf/High Surf

A deep low in the southern hemisphere produced surf of 5 to 10 feet along the south-facing shores of all the Hawaiian Islands. There were no reports of serious injuries or property damage.

Honolulu County **Kailua to** **Kalihi**

30 1945HST 2200HST 0 0 80M Flash Flood

Very heavy showers and thunderstorms generated flash flooding in southeast parts of the island of Oahu. The focus of the heaviest rain occurred over the southern portion of the Koolau Range, resulting in the Manoa Stream overflowing its banks and causing significant flooding in the Manoa Valley, including the University of Hawaii campus. Damages to businesses; to private homes and property; and to buildings and their contents at the university are estimated to be \$80 million, though they could go as high as \$100 million. On the other hand, no serious injuries were reported.

Maui County **Hana**

31 0148HST 0411HST 0 0 Heavy Rain

Heavy showers caused ponding of roadways, and small stream and drainage ditch flooding in the extreme eastern parts of the Valley Isle of Maui, in and around the community of Hana. There were no reports of serious injuries or property damage.

HIZ002-024>025

Kauai Windward - South Big Island - Big Island North And East
31 0800HST 2359HST 0 0 Heavy Surf/High Surf

A trade wind swell generated surf of 5 to 10 feet along the east-facing shores of Kauai and the Big Island of Hawaii. There were no reports of serious injuries or property damage.

Honolulu County **Ewa to** **Wahiawa**

31 1411HST 1619HST 0 0 Heavy Rain

Heavy showers and thunderstorms produced ponding on roadways, and small stream and drainage ditch flooding in central and southwest sections of Oahu. No serious property damage or injuries were reported.

HAWAII WATERS

Oahu Windward **Waters** **1 SE Kailua**

26 1200HST 1220HST 0 0 Waterspout

An individual in Kailua on the island of Oahu spotted a waterspout off Lanikai Beach. After a time, the waterspout disappeared from view and apparently dissipated. There were no reports of serious property damage or injuries.

Oahu Leeward **Waters** **1 S Honolulu**

31 1500HST 1515HST 0 0 Waterspout

Storm Data and Unusual Weather Phenomena

October 2004

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

HAWAII WATERS

An individual at Ala Moana Beach on the island of Oahu spotted a waterspout about a mile south of Honolulu. The waterspout dissipated in less than 20 minutes and caused no serious injuries or property damage.

IDAHO, Extreme Southeast

NONE REPORTED.

IDAHO, North

IDZ006

Southern Clearwater Mountains

31	0700MST	0	0	Heavy Snow
	2300MST			

Heavy snow fell throughout the southern Clearwater Mountains. Total snowfall accumulations ranged from 8 inches at Dixie to 12 inches at Red River Ranger Station.

IDAHO, Northwest

IDZ004

Central Panhandle Mountains

22	1300PST	0	0	Heavy Snow
	1700PST			

A winter storm moved across Shoshone County and brought 5 to 7 inches of snow to the higher terrain during the afternoon hours.

IDAHO, Southeast

IDZ019

Upper Snake Highlands

23	0700MST	0	0	Heavy Snow
24	0900MST			

Snow amounts of 10 to 20 inches accompanied a cold front in the Upper Snake River Highlands. Amounts of 10 to 20 inches fell above 6,200 feet.

IDAHO, Southwest

NONE REPORTED.

ILLINOIS, Central

Logan County

1 NW Atlanta

29	1645CST	0	0	Hail (1.75)
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Logan County

1 NW Atlanta

29	1645CST	0	0	Thunderstorm Wind (G52)
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Thunderstorm winds blew down a large tree onto a garage causing moderate roof damage. Also, the winds destroyed a tool shed and blew a few shingles off of the roof of a house.

McLean County

3 SW Bloomington

29	1707CST	0	0	Hail (0.75)
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Scott County

Winchester

29	1710CST	0	0	Thunderstorm Wind (G50)
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A large tree was blown down on a power line.

Marshall County

Lacon to

Henry

29	1844CST	0	0	Thunderstorm Wind (G52)
	1852CST			

Numerous trees were blown down. One tree fell onto an unoccupied car. Also, in Henry a power pole was snapped off.

Schuyler County

Brooklyn to

Rushville

29	2144CST	0	0	Thunderstorm Wind (G52)
	2155CST			

Numerous trees and power lines down.

Cass County

2 E Beardstown to

Virginia

29	2214CST	0	0	Thunderstorm Wind (G50)
	2225CST			

Few trees and power lines down.

Mason County

Forest City

29	2225CST	0	0	Thunderstorm Wind (G50)
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Large tree blown down.

Morgan County

Lynnville to

5 N Jacksonville

29	2230CST	0	0	Thunderstorm Wind (G50)
	2240CST			

Few trees and power lines down.

Scott County

5 N Alsey

29	2230CST	0	0	Thunderstorm Wind (G54)
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Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
ILLINOIS, Central									
Tazewell County 7 W South Pekin to Delavan	29	2235CST 2255CST			0	0			Thunderstorm Wind (G55)
An addition to a house that was under construction had half of its roof blown off west of South Pekin.									
Knox County Galesburg	29	2245CST			0	0			Thunderstorm Wind (G50)
Numerous large tree limbs down.									
Menard County Greenview to 8 E Petersburg	29	2254CST 2300CST			0	0			Thunderstorm Wind (G55)
Power lines down in Greenview.									
McLean County Danvers	29	2330CST			0	0			Thunderstorm Wind (G50)
Large tree blown down.									
Sangamon County Springfield	29	2330CST			0	0			Thunderstorm Wind (G50)
A couple of windows blown out of a house on the south side of Springfield.									
ILLINOIS, Northeast									
ILZ003>006-008- 010>014-019>023- 032>033-039	Winnebago - Boone - McHenry - Lake - Ogle - Lee - De Kalb - Kane - Du Page - Cook - La Salle - Kendall - Grundy - Will - Kankakee - Livingston - Iroquois - Ford								
	05	0300CST 0900CST			0	0			Frost/Freeze
An early freeze occurred over northern Illinois and northern Indiana. Morning lows were in the middle 20s to around 30. The coldest temperatures were 24 in Aurora, 25 in Rochelle, and 26 at McHenry and Streamwood.									
La Salle County Cedar Pt	29	1907CST 1912CST			0	0			Hail (1.00)
Nickel to quarter sized hail reported near Cedar Point.									
La Salle County La Salle	29	1910CST			0	0			Thunderstorm Wind (G50)
A tree was blown onto a road in LaSalle.									
La Salle County Peru	29	1911CST 1916CST			0	0			Hail (0.88)
De Kalb County Cortland	29	1945CST			0	0			Thunderstorm Wind (G50)
Large tree limbs, power lines and a television tower were reported down.									
De Kalb County Countywide	29	2000CST 2015CST			0	0			Thunderstorm Wind (G50)
Tree limbs and power lines were reported down at several locations across the north half of De Kalb County. Trees and power lines were down at Walnut and High Street in Sycamore. Power lines were down at Northern Illinois University, and on Gurler Road south of DeKalb. Power lines were also down on Prichard Road and Route 38, ten miles east of DeKalb, and at Brickville and Whipple Roads, northwest of Sycamore. Twenty light poles were down.									
Kane County Maple Park	29	2000CST			0	0	400K		Thunderstorm Wind (G83)
Emergency management reported that trees were knocked down and blocking several roads. Also, power lines were reported down. Thunderstorm winds damaged barns, silos, and grain elevators at several farms. An observer measure a 96 mph wind gust. A collapsed barn killed a sheep and a horse. Corn was flattened by the wind.									
De Kalb County De Kalb	29	2010CST 2015CST			0	0	10K		Hail (1.00)
Quarter sized hail produced damage to parked vehicles.									
McHenry County Crystal Lake	29	2015CST			0	0			Thunderstorm Wind (G50)
Large tree limbs were reported down by law enforcement officers. Police reported trees on Bull Valley, Ridge and Johnsborg Roads.									

Storm Data and Unusual Weather Phenomena

October 2004

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

ILLINOIS, Northeast

Lake County

Lake Villa 29 2036CST 0 0 Thunderstorm Wind (G53)
62 mph/53 kt wind gust measured by NWS COOP observer with unofficial equipment.

Ogle County

Lindenwood 29 2330CST 0 0 Thunderstorm Wind (G55)

A roof was partially blown off a pole barn on Lindenwood Rd. in rural Ogle County, near Lindenwood. During the late afternoon and early evening, a supercell thunderstorm developed in a warm, unstable airmass ahead of a cold front, over central Illinois. By around 7:00 PM CST, this storm moved into La Salle County. The storm continued to track northeast through La Salle, De Kalb, Kane, McHenry and Lake Counties. Along the course of it's path, this storm produced hail up to one inch in diameter and wind gusts up 96 mph. By around 9:30 PM CST, lines of thunderstorms that had been moving through Iowa finally crossed the Mississippi River into western Illinois. These storms maintained their intensity until they reached Ogle County, producing wind damage.

ILLINOIS, Northwest

ILZ034-034>035-035 Hancock - McDonough

23 2200CST 0 0 Flood
28 1742CST

Two moderate to heavy rain events occurred during the last third of the month-each produced 0.6 to as much as 2 inches of rain. This locally heavy rain led to minor flooding along parts of the La Moine River in West Central Illinois. The minor flooding that resulted affected only agricultural land.

Putnam County

5.5 SSW Florid 29 1848CST 0 0 5K Thunderstorm Wind (G61)
1852CST

Location is near the junction of Illinois 18 and 26, along King's Curve, or 1.2 miles ESE of Henry, Illinois near the Putnam/Marshall County line. Numerous trees were downed in a downburst, some rotted but other fully solid. Several cars ran off into the roadside ditches in an attempt to avoid the trees across the road.

Putnam County

**.8 S Standard to
1 N Standard** 29 1902CST 0 0 20K Thunderstorm Wind (G80)
1905CST

The same storm that produced a downburst 10 minutes earlier produced another around the town of Standard, Illinois. Numerous trees and powerlines were downed with a brand new 20x16 shed destroyed. The debris from the shed was scattered up to 400 yards away. The sheriff stated that the strongest winds only lasted 20 to 30 seconds.

Jo Daviess County

1.9 SE Galena 29 2108CST 0 0 1K Thunderstorm Wind (G52)
2110CST

The squall line produced a downburst that leveled a tree along Pilot Knob Road south of Galena, blocking traffic.

Stephenson County

Lena 29 2146CST 0 0 3K Thunderstorm Wind (G52)
2157CST

Downburst leveled several trees 2.5 to 3 feet in diameter along with power lines. The trees were solid but had been weakened by severe storms back in August.

Stephenson County

Freeport 29 2202CST 0 0 3K Thunderstorm Wind (G52)
2203CST

Downburst leveled several trees 2.5 to 3 feet in diameter along with power lines. The trees were solid but had been weakened by severe storms back in August.

A squall line developed in a semi-moist atmosphere ahead of a cold front in Iowa. Sections of the squall line bowed out as it passed through Eastern Iowa and far Northwest Illinois. Isolated storms developed ahead of the squall line in Illinois producing localized damage due to downbursts across Putnam County. Due to the time of day, the atmosphere was not unstable enough to allow the production of widespread severe winds. Numerous private wind recording instruments reported measured winds of 42 to 49 knots (48 to 56 mph) with the passage of the squall line.

ILLINOIS, South

Johnson County

.8 S Goreville 18 1207CST 0 0 Hail (0.75)

Pope County

2 W New Liberty 18 1300CST 0 0 35K Thunderstorm Wind (G61)

An unoccupied single-wide trailer was blown 30 feet off its foundation and destroyed. The new trailer was not yet tied down. An outbuilding used as a workshop was shifted off its foundation, and a garage door was blown in. Two nearby residences received minor damage, such as roofing material blown off. Trees were blown down in a swath along Unionville Road.

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
ILLINOIS, South									
Jackson County									
Carbondale	18	1804CST 1910CST			0	0	3K		Flash Flood
Major street flooding occurred in downtown Carbondale. The most serious flooding was on the Southern Illinois University campus, where a car was submerged in floodwaters.									
Williamson County									
Marion	18	1830CST 1915CST			0	0			Heavy Rain
A few inches of water covered a road in front of the Wal-Mart store.									
Franklin County									
Benton to 1 S Sesser	18	1855CST 2145CST			0	0	10K		Flash Flood
Street flooding occurred in Benton, which was particularly bad on East Main Street. Floodwaters entered the sheriff's department building and jail. About a mile south of Sesser on Route 148, a car was submerged in floodwaters.									
Saline County									
4 W Carriers Mills	18	1915CST 2025CST			0	0			Flash Flood
A supercell thunderstorm moved east-southeast across southern Jackson, southern Williamson, and southern Saline Counties. Torrential downpours resulted in isolated flash flooding.									
Jackson County									
7 S Carbondale	18	1807CST			0	0			Thunderstorm Wind (G52)
Numerous trees were blown down.									
Williamson County									
Marion	18	1807CST			0	0			Hail (1.75)
Union County									
1.8 ENE Wayside to 2.3 ENE Wayside	18	1816CST 1819CST	0.5	50	0	0	4K		Tornado (F1)
The tornado touched down in the extreme northeast corner of Union County, only about one-half mile from the Johnson County line. A metal machine shed was destroyed. The television antenna on a nearby home was blown down. Branches were blown down, and a few trees were snapped. The estimated winds were around 75 MPH. The tornado moved into northwestern Johnson County.									
Johnson County									
4.5 NW Goreville to 3.3 NNW Goreville	18	1819CST 1825CST	2.5	50	0	1	10K		Tornado (F1)
From Union County, the tornado crossed into extreme northwest Johnson County, only about a half mile south of the Williamson County line. The tornado then moved northeast into Williamson County where Interstate 57 crosses the county line. A semi was overturned on Interstate 57 less than a mile south of the Interstate 24 interchange. The driver was injured. Peak winds along this portion of the tornado path were around 75 MPH.									
Williamson County									
1 WSW Pulleys Mill to Pulleys Mill	18	1825CST 1828CST	1.5	75	0	0	25K		Tornado (F1)
The tornado entered Williamson County from Johnson County where Interstate 57 crosses the county line. The tornado passed less than a half mile south of the junction of Interstates 24 and 57. The tornado was only on the ground for about a mile in Williamson County before turning back southeast into Johnson County near Route 37. In the community of Pulleys Mill, dozens of large trees were topped or uprooted, one home received partial roof damage, and a garage roof was peeled. Utility poles and lines were downed. Peak winds along this segment of the tornado were estimated near 80 MPH.									
Johnson County									
3 N Goreville to 4 ENE Goreville	18	1828CST 1835CST	4.3	250	0	2	500K		Tornado (F2)
The tornado turned east-southeast from Williamson County back into Johnson County. The bulk of the damage and injuries occurred in a neighborhood on the southern half of the Lake of Egypt. The two injured persons were mobile home residents whose homes were demolished. One of the mobile homes was swept clean off its foundation. The demolished home was deposited 50 to 100 yards away. The 32-year-old male occupant of the mobile home, who was ejected from the home, received numerous bruises and cuts. A female resident of another mobile home was injured. In total, three mobile homes were destroyed, and dozens of mobile homes, barns, and sheds were damaged. Rescue efforts were hampered by a large amount of tree debris on roads. Peak winds in the Lake of Egypt neighborhood were estimated near 120 MPH. The tornado lifted as it reached the southeast side of the Lake of Egypt. The parent thunderstorm produced another tornado in northern Johnson County only a few miles beyond where this tornado lifted.									

Storm Data and Unusual Weather Phenomena

October 2004

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

ILLINOIS, South

Johnson County

**3 N Tunnel Hill to
3 E Ozark**

18 1843CST 8 100 0 0 50K Tornado (F1)

This tornado touched down less than ten minutes after an earlier tornado in northern Johnson County lifted. Both tornadoes were produced by the same supercell thunderstorm. The tornado tracked entirely across Shawnee National Forest land, causing extensive tree damage. Near the touchdown point, a mobile home was destroyed, and another mobile home was damaged. In the community of Ozark, the general store received extensive roof damage. Branches were blown down in the community, and large trees were down 1 to 2 miles east of Ozark. The tornado strengthened to F-2 intensity after crossing into Pope County.

Pope County

**1.5 SW Abbott to
2 N Eddyville**

18 1855CST 6 300 0 0 150K Tornado (F2)

This tornado entered Pope County from Johnson County in a remote area of the Shawnee National Forest. Most of the track was through heavily forested areas, causing extensive tree destruction. The tornado reached its peak intensity about a mile northeast of Bell Smith Springs, a scenic river gorge about 4 miles northwest of Eddyville. Peak winds were estimated near 120 MPH. Near the end of the damage path, just as the tornado was reaching Illinois Route 145, a mobile home was damaged.

A supercell thunderstorm organized over southern Jackson County, then spawned a tornado as it moved east along the Union/Williamson County line. This supercell continued east-southeast across northern Johnson and northern Pope Counties, producing two significant tornadoes and large hail. Although the storm exhibited strong rotation as it continued east through Hardin County and across the Ohio River into Kentucky, no additional tornadoes were reported there.

Alexander County

Miller City

26 1640CST 0 0 Funnel Cloud

Massac County

4 NE Unionville

26 1810CST 0 0 Funnel Cloud

The funnel clouds over southern Illinois were associated with a supercell thunderstorm that began in southeast Missouri and moved east along a warm front. The storm showed signs of strong rotation as it moved east across Alexander, Pulaski, and Massac Counties.

Wayne County

Fairfield

26 1830CST 0 0 Heavy Rain

Water was reported running across several streets in the city. Ditches were overflowing.

Wabash County

Mt Carmel

26 1915CST 0 0 Heavy Rain

Several streets were flooded in the city. Cars stalled due to the flooding.

Perry County

Pinckneyville

26 2210CST 0 0 Heavy Rain

Street flooding occurred in the city. No serious problems or damage was reported.

ILLINOIS, Southwest

Macoupin County

2 S Bend

18 1335CST 0 0 Hail (0.88)

Local emergency management officials reported nickel size hail.

Montgomery County

Litchfield

18 1355CST 0 0 Hail (0.75)

Montgomery County

3 N Litchfield

18 1358CST 0 0 Hail (1.00)

Montgomery County

4 N Litchfield

18 1405CST 0 0 Hail (1.75)

Storm spotters reported hail up to golfball size in and north of Litchfield.

Macoupin County

7 W Bunker Hill

18 1700CST 0 0 Hail (0.75)

A storm spotter reported 3/4 inch hail west of Bunker Hill.

Montgomery County

Walshville

18 1710CST 0 0 Hail (0.75)

A storm spotter reported 3/4 inch hail covering the ground.

Montgomery County

Hillsboro

18 1720CST 0 0 Hail (1.00)

Montgomery County

Hillsboro

18 1721CST 0 0 Hail (1.75)

Storm Data and Unusual Weather Phenomena

October 2004

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

ILLINOIS, Southwest

Storm spotters reported hail up to golfball size in Hillsboro.

Montgomery County
3 NW Litchfield 18 1733CST 0 0 Hail (0.75)

Montgomery County
5 N Litchfield 18 1734CST 0 0 Hail (0.75)

Montgomery County
Litchfield 18 1734CST 0 0 Hail (1.75)

Storm spotters and local law enforcement reported hail up to golfball size in the Litchfield area.

Calhoun County
8 N Hardin 29 1645CST 0 0 Thunderstorm Wind (G60)

The County Sheriff reported trees and power lines down on Highway 100. A major power line was downed resulting in a large part of the County losing power.

Pike County
Pleasant Hill 29 1655CST 0 0 Thunderstorm Wind (G60)

Pike County
3 S Pleasant Hill 29 1655CST 0 0 30K Thunderstorm Wind (G60)

Thunderstorm wind gusts caused damage in the Pleasant Hill area. Trees and power lines were downed and one home on Vin Friz road suffered minor roof and soffit damage. A nearby storage building was destroyed leaving tin sheeting in a tree. South of Pleasant Hill, a home lost half of its roof and a trampoline was blown 100 yards away.

Calhoun County
1 N Hardin 29 1700CST 0 0 Thunderstorm Wind (G60)

The County Sheriff reported numerous trees down along Route 96.

Greene County
1 W Carrollton 29 1710CST 0 0 Thunderstorm Wind (G55)

The County sheriff reported large tree branches down at Lone Oak Golf Course.

INDIANA, Central

Brown County
2 S Nashville 18 1815EST 0 0 0 0 Thunderstorm Wind (G50)

Trees were blown down near Brown County State Park.

Sullivan County
3 S Farmersburg 18 2100EST 0 0 0 0 Flash Flood
2200EST

Water covered Division Road at County Road 975 North.

Showers and thunderstorms produced heavy rain over mainly southern portions of central Indiana on the afternoon and evening of 18 October 2004.

INDIANA, Northeast

INZ003 La Porte
30 1700EST 0 1 4K High Wind (G60)

Winds across portions of northern Indiana were sustained in the 25 to 35 mph range with some areas reporting gusts between 45 to as high as 69 mph. Reports of small branches down and a few downed power lines were received. The 69 mph wind gust was recorded at the Michigan City Coast Guard observation site. A Michigan City man was injured after pushing his 7 year old grandson out of the way of a falling tree. The 51 year old was unable to move out of the way after this and was subsequently struck by the falling tree in the back. His back was broken in three places. No other injuries were reported. Other recorded wind gusts across northern Indiana were: South Bend 55 mph, North Webster NWS 52 mph, Fort Wayne 51 mph and Goshen 49 mph.

INZ004>005-016-018 St. Joseph - Elkhart - Kosciusko - Allen
30 1714EST 0 0 9K Strong Wind
1725EST

Winds across portions of northern Indiana were sustained in the 25 to 35 mph range with some areas reporting gusts between 45 to as high as 69 mph. Reports of small branches and a few power lines were received. The 69 mph wind gust was recorded at the Michigan City Coast Guard observation site. A Michigan City man was injured after pushing his 7 year old grandson out of the way of a falling tree. The 51 year old was unable to move out of the way after this and was subsequently struck by the falling tree in the back. His back was broken in three places. No other injuries were reported. Other recorded wind gusts across northern Indiana were: South Bend 55 mph, North Webster NWS 52 mph, Fort Wayne 51 mph and Goshen 49 mph.

INDIANA, Northwest

INZ001>002-010>011- Lake - Porter - Newton - Jasper - Benton
019

05 0300CST 0 0 Frost/Freeze
0900CST

An early freeze occurred over northern Indiana. Morning low temperatures were in the middle 20s to around 30.

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INDIANA, Northwest

INZ002

Porter

30 1018CST

0 0

High Wind (G50)

Following the severe weather event of October 29, a strong cold front moved through northern Illinois and Indiana during the morning hours of October 30. This cold front extended from a deep low pressure system over the western Great Lakes. A strong pressure gradient caused strong winds over northern Indiana. There was a peak gust to 58 mph at Valparaiso. At least 6100 people lost power in Lake and Porter Counties from falling tree limbs and wires.

INDIANA, South Central

Harrison County

Corydon

18 1805EST

0 0

Hail (0.88)

INZ079

Jefferson

19 0400EST
0445EST

0 0

Flood

The Muscatatuck River at Deputy crested at 20.2 feet around 430 AM EST on October 19. Flood stage at Deputy is 20 feet. Minor flooding occurs at this level. County roads are under water in northeastern parts of Jefferson County, IN.

INDIANA, Southeast

INZ073>075-080-080

Ripley - Dearborn - Ohio - Switzerland

18 1823EST
2300EST

0 0

Flood

A low pressure system tracked through the Ohio Valley, bringing heavy rain to southeast Indiana. Rainfall amounts of three to five inches occurred across the area. This caused numerous roads to flood, and several creeks to rise out of their banks.

INDIANA, Southwest

Vanderburgh County

Evansville

18 0930CST
1100CST

0 0

Heavy Rain

Some of the usual high-water trouble spots, including the Virginia Street railroad underpass, were flooded. Traffic was detoured briefly. The official rainfall at the Evansville Airport was 1.76 inches. Higher amounts of up to 2.5 inches were indicated north and northwest of the airport.

IOWA, Central

Carroll County

Carroll

07 0927CST

0 0

2K

5K

Hail (0.88)

Thunderstorms lifted northeast across western Iowa during the morning of the 7th. The airmass was now all that unstable with lifted indices around +2, however elevated convection was able to take place. Surface dew points were around 60 F. an freezing levels were around 10,000 feet. Several storms produced some small hail, with one storm producing nickel size hail in the Carroll Area.

Story County

Nevada

29 1641CST

0 0

2K

1K

Hail (0.88)

Story County

Zearing

29 1652CST

0 0

2K

1K

Hail (0.88)

Jasper County

1 N Reasnor

29 1720CST

0 0

10K

Thunderstorm Wind (G50)

Poweshiek County

5 S Grinnell

29 1739CST

0 0

2K

1K

Hail (0.88)

Poweshiek County

5 S Grinnell

29 1739CST

0 0

2K

Thunderstorm Wind (G52)

Polk County

Windsor Hgts

29 1740CST

0 0

2K

Thunderstorm Wind (G52)

Polk County

Ankeny

29 1804CST

0 0

1K

Thunderstorm Wind (G50)

Bremer County

Plainfield

29 1835CST

0 0

10K

Thunderstorm Wind (G57)

Butler County

5 E Greene

29 1838CST

0 0

Hail (0.75)

Butler County

3 E Greene

29 1840CST

0 0

5K

1K

Hail (1.25)

Butler County

3 E Greene

29 1840CST

0 0

5K

Thunderstorm Wind (G61)

A very strong upper level trough of low pressure developed over the western U.S. during the mid part of the week. Strong south

Storm Data and Unusual Weather Phenomena

October 2004

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					Killed	Injured	Property	Crops	

IOWA, Central

winds in the low levels drew considerable moisture north into the central U.S. Dew points reached the upper 60s to low 70s during the early morning of the 29th. Surface low pressure lifted northeast into the Dakotas during the afternoon and evening hours. A dry line extended south from the slow and pushed into western Iowa during the afternoon hours. The atmosphere was quite unstable for late October with lifted indices around -3 C. and CAPE values in the 1000 to 2000 J/kg range over much of the state. The freezing level was around 13,300 feet, which limited the amount of hail from the storms. Thunderstorms formed initially along the dry line during the mid to late afternoon hours. A secondary line formed ahead of the main line by late afternoon and itself produced severe weather.

The primary line lifted northeast at over 50 MPH across the state during the early evening hours. Several of the storms did produce some hail of three quarter to one inch in diameter. Hail of one and one quarter inch in diameter fell in Butler County. During the afternoon, a strong jet segment lifted northeast into the central U.S. with 100 kt winds reported in the jet streak. The principle mode of severe weather was high winds. There were several reports of 60 to 65 MPH winds. Nearly all of the storms produced gusty winds of at least 40 to 50 MPH.

IAZ004-015-023-033>034-044>047-057>059-070>072-081>082-092>093
Emmet - Palo Alto - Pocahontas - Sac - Calhoun - Crawford - Carroll - Greene - Boone - Audubon - Guthrie - Dallas - Cass - Adair - Madison - Adams - Union - Taylor - Ringgold

30	0300CST	0	0	190K	High Wind (G60)
	1100CST				

As intense low pressure lifted northeast across Minnesota and Wisconsin, strong west to northwest winds swept into Iowa. Winds of 30 to 45 MPH were sustained over western Iowa for several hours, with some higher gusts. A 69 MPH wind bust was recorded at 0334 CST at Creston in Union County, with a 58 MPH wind recorded at Fontanelle in Adair County around 0413 CST. Damage was spotty and minor. Since a fair amount of the leaves had fallen from the trees, this tended to limit damage.

IOWA, East Central and Southeast

Benton County
3 S Shellsburg

22	0848CST	0	0	3K	3K	Hail (1.00)
	0853CST					

Iowa County
Ladora

22	1123CST	0	0			Hail (0.75)
	1128CST					

Iowa County
3 S Ladora

22	1125CST	0	0	3K	3K	Hail (1.00)
	1130CST					

Iowa County
Marengo

22	1138CST	0	0			Hail (0.75)
	1142CST					

Cherry sized hail reported by Co-op

Linn County
Cedar Rapids

22	1200CST	0	0			Heavy Rain
	1230CST					

Street flooding

Linn County
Marion

22	1220CST	0	0	2K		Lightning
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Newspaper reported minor damage

Linn County
Marion

22	1244CST	0	0	8K		Hail (1.75)
	1248CST					

1.50 to 1.75 inch hail reported by Co-op

A strong low level jet allowed thunderstorms to develop in a semi-moist atmosphere across Eastern Iowa and north of the 850 mb warm front. The storms were prolific non-severe hail producers. Heavy rain also occurred with numerous sites reporting an inch or more of rain in 30 to 45 minutes.

Benton County
Van Horne

29	1837CST	0	0	3K		Hail (1.00)
	1841CST					

Washington County
Washington

29	1938CST	0	0	1K		Thunderstorm Wind (G51)
	1947CST					

Measured at Sheriff Department. KAWG AWOS about 2 miles southeast recorded a gust of 49 knots from 1940-1950 CST.

Storm Data and Unusual Weather Phenomena

October 2004

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IOWA, East Central and Southeast

Johnson County

1 S Iowa City 29 1954CST
1957CST 0 0 4K **Thunderstorm Wind (G52)**

Trees and power lines down on Sand Road. KIOV ASOS to the west and north of this location recorded a 40 knot (46 mph) wind gust at 1956 CST. KDVN 88D velocity data indicated the strongest winds passed to the south and east of KIOV.

Johnson County

1.9 ESE Iowa City 29 1957CST
2000CST 0 0 2K **Thunderstorm Wind (G52)**

Trees down along American Legion Road near the intersection of 400th Street.

Johnson County

1 SSW Oasis 29 2001CST
2008CST 0 0 50K **Thunderstorm Wind (G52)**

80 percent of the corn on the Clyde Antone Farm was leveled.

Johnson County

2.9 E Morse 29 2005CST
2010CST 0 0 4K **Thunderstorm Wind (G52)**

Trees and power lines down on 250th Street.

Henry County Countywide

29 2009CST
2035CST 0 0 450K **Thunderstorm Wind (G78)**

Main axis of damage is a less than a mile wide path running from 1.3 miles NNW of Rome (near the intersection of White Oak Rd and 208th Street) to 3.2 miles E of Winfield on 120th Street. Between 4 miles Northwest of Mount Pleasant to 2 miles NNE of Mount Pleasant, the damage path widened to 4 miles. Numerous trees and powerlines were downed with severe damage to an ANR pipeline pumping station located northwest of Mount Pleasant. Three homes suffered significant damage...including one which was blown off its foundation while another lost its roof. Numerous outbuildings and sheds were destroyed with grain wagons overturned. The Winfield cemetery (located southeast of town) had its entire 240 foot perimeter fence knocked down with several gravestones damaged. KDVN 88D velocity data suggests severe winds in Jefferson and Louisa Counties from this bow echo, but survey results indicate no damage indicative of severe winds.

Cedar County

8 W Tipton 29 2010CST
2014CST 0 0 1K **Thunderstorm Wind (G52)**

Tree down blocking traffic.

Henry County

Mt Pleasant Muni Arp 29 2030CST
2038CST 0 0 1K **Thunderstorm Wind (G50)**

KMPZ AWOS

Des Moines County

Mediapolis 29 2048CST
2123CST 0 0 **Heavy Rain**

1.1 inches in 35 minutes.

Des Moines County

Mediapolis 29 2048CST
2056CST 0 0 1K **Thunderstorm Wind (G57)**

8 inch diameter solid pine tree downed.

Clinton County

Charlotte 29 2058CST
2104CST 0 0 4K **Thunderstorm Wind (G52)**

Trees and powerlines down.

A squall line developed in a semi-moist atmosphere ahead of a cold front in Iowa. Sections of the squall line bowed out as it passed through Eastern Iowa and far Northwest Illinois. Isolated storms developed ahead of the squall line in Illinois producing localized damage due to downbursts across Putnam County. Due to the time of day, the atmosphere was not unstable enough to allow the production of widespread severe winds. Numerous private wind recording instruments reported measured winds of 42 to 49 knots (48 to 56 mph) with the passage of the squall line.

IOWA, Northeast

NONE REPORTED.

IOWA, Northwest

NONE REPORTED.

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IOWA, Southwest

NONE REPORTED.

KANSAS, East

NONE REPORTED.

KANSAS, Extreme Southeast

Crawford County

2 S Beulah	29	1800CST			0	0			Thunderstorm Wind (G50)
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Tree damage was observed from severe thunderstorm wind gusts.

KANSAS, North Central

NONE REPORTED.

KANSAS, Northeast

NONE REPORTED.

KANSAS, Northwest

NONE REPORTED.

KANSAS, Southeast

Reno County

3 NE Langdon	03	2052CST			0	0			Hail (1.00)
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Barton County

Ellinwood	03	2150CST			0	0			Hail (0.75)
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KANSAS, Southwest

Pawnee County

1 W Larned	03	1815CST			0	0			Hail (1.00)
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Pawnee County

Larned	03	1817CST			0	0			Hail (1.00)
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Pawnee County

1 N Larned	03	1818CST			0	0			Hail (1.00)
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Stafford County

3 E Hudson	03	1825CST			0	0			Hail (0.88)
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Pawnee County

3 S Larned	03	1912CST			0	0			Hail (0.88)
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Pawnee County

3 SSE Garfield	03	1949CST			0	0			Hail (1.00)
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Stafford County

3 NW Stafford	03	1955CST			0	0			Hail (0.75)
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Edwards County

6 NE Kinsley	03	2038CST			0	0			Hail (0.75)
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Edwards County

6 NE Kinsley	03	2039CST			0	0			Hail (1.00)
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Stafford County

12 S St John	03	2106CST			0	0			Hail (0.75)
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Pratt County

11 NNW Pratt	03	2128CST			0	0			Hail (0.88)
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Ford County

9 SE Dodge City	03	2200CST 2300CST			0	0			Flash Flood
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Nearly three inches of rain fell in a short period causing runoff to flow across a county road.

Ford County

4 S Dodge City	03	2230CST			0	0			Hail (0.75)
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Ford County

1 WNW Howell	03	2305CST			0	0			Hail (0.75)
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KANSAS, Southwest

Clark County
6 E Minneola 04 0030CST 0 0 Hail (0.88)

KENTUCKY, Central

Jefferson County
Louisville 18 1840EST 0 0 Hail (0.75)

Spencer County
Taylorsville 18 1915EST 0 0 Hail (0.88)

KYZ042 Bourbon
19 0100EST 0 0 Flood
20 0930EST

Stoner Creek at Paris crested at 20.2 feet around 240 PM EST on October 19. Flood stage at Paris is 18 feet. Minor flooding occurs at this level. Water enters the yards of some homes downstream from the water plant. Parts of the city park are flooded.

KENTUCKY, Eastern

Laurel County
London 18 2338EST 0 0 0 0 Thunderstorm Wind (G60)

Laurel County
London 18 2344EST 0 0 2K 0 Thunderstorm Wind (G60)

Laurel County
London 18 2344EST 0 0 0 0 Thunderstorm Wind (G58)

A thunderstorm wind gust of 60 miles per hour was reported at London near the intersection of Highway 192 and Interstate 75. A thunderstorm wind gust of 58 miles per hour was also measured by the London ASOS at the London Corbin Airport. Dozens of trees and numerous power lines were reported down along Highway 229, near Levi Jackson Wilderness area. Some slight structural damage was reported to buildings near the state park.

Laurel County
1 SE London 18 2347EST 0 0 0 0 Hail (0.75)

Knox County
Woollum 19 0005EST 0 0 0 0 Thunderstorm Wind (G58)

Knox County
3 SW Barbourville 19 0015EST 0 0 0 0 Thunderstorm Wind (G58)

Trees down on Highway 11 North near the Clay County line, and on Highway 11 South three miles southwest of Barbourville.

Johnson County
Paintsville 20 2342EST 0 0 0 0 Flash Flood
21 0330EST

Over two inches of rain fell in an hour causing flood waters to surround a car on Hidden Valley Road.

Johnson County
Thealka 21 0006EST 0 0 2K 0 Flash Flood
0330EST

Over two inches of rain fell in an hour causing flood waters to surround a trailer on Route 581. Flood waters covered Route 581 near Thealka.

KENTUCKY, Northeast

NONE REPORTED.

KENTUCKY, Northern

KYZ089-089>090-090>093-095-095>096 Carroll - Gallatin - Boone - Kenton - Campbell - Grant - Pendleton

18 1804EST 0 0 Flood
2300EST

A low pressure system tracked through the Ohio Valley, producing heavy rain across northern Kentucky. Three to five inches fell across the area, with numerous roads flooded and impassable. Several homes sustained flooding in the basement in the southern Cincinnati metro area, across Boone and Kenton counties.

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KENTUCKY, Southwest

Caldwell County

5 NE Princeton to
5.3 NE Princeton

15 1600CST 0.3 100 0 0 50K Tornado (F1)

A residence on Fairview Church Road sustained major damage when it was struck by a large tree. There was severe roof damage, and much of the home's interior was damaged. Part of the ceiling collapsed, and the foundation was cracked. Other large trees landed across the driveway and demolished a fence. At a neighboring house, the wind bent a TV antenna and downed multiple trees. A swing set at another neighboring house was crushed by a large tree limb. Maximum winds in the tornado were estimated near 80 MPH.

Ballard County

Kevil

18 0845CST 0 0 Thunderstorm Wind (G50)

An off-duty meteorologist estimated a wind gust near 60 MPH. A tree was blown down across a road just northwest of Kevil.

Mccracken County

Paducah

18 1225CST 0 0 Heavy Rain

Minor street flooding occurred in Paducah. A railroad underpass on U.S. Highway 45 was partially blocked for a short period of time. Several streets were under several inches of water.

Hopkins County

Earlington

18 1350CST 0 0 Heavy Rain

Six inches of water was over U.S. Highway 41.

Mccracken County

Lone Oak to
Paducah

18 1227CST 0 0 Hail (0.75)

Mccracken County

Paducah

18 1229CST 0 0 5K Thunderstorm Wind (G50)

A Paducah television station estimated wind gusts from 55 to 60 MPH. Power lines and a few large tree limbs were blown down in the city. A large tree limb fell on a dump truck, causing minor damage to the truck. Power lines fell on a car.

Calloway County

3 NW Hazel to
3.1 NNW Hazel

18 1914CST 0.2 50 0 0 5K Tornado (F0)

Some trees and power lines were downed by this weak, short-lived tornado.

Calloway County

2 E Hazel

18 2019CST 0 0 Hail (0.88)

Livingston County

Ledbetter

18 2056CST 0 0 Thunderstorm Wind (G56)

A few trees were blown down by winds estimated near 65 MPH.

Livingston County

Smithland

26 1828CST 0 0 Funnel Cloud

This funnel cloud was associated with a supercell thunderstorm that began over southeast Missouri, then moved east along a warm front. The storm moved fairly close to the Ohio River, passing just north of Paducah before reaching Livingston County. This storm had a history of strong rotation during most of its life.

LAKE ERIE

Avon Point To

Willowick Oh

Avon Point to
Willowick

29 1138EST 0 0 Marine Tstm Wind

Conneaut Oh To

Ripley Ny

Ripley Ny

29 1138EST 0 0 Marine Tstm Wind

Geneva On The Lake

Oh To Conneaut Oh

Geneva-On-The-Lake to
Conneaut

29 1138EST 0 0 Marine Tstm Wind

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
<u>LAKE ERIE</u>									
Le Avon Pt To Willowick Oh Byd 5Nm Offshore To Intl Border									
Avon Point to Willowick	29	1138EST 1300EST			0	0			Marine Tstm Wind
Le Conneaut Oh To Ripley Ny Byd 5Nm Offshore To Intl Border									
Conneaut to Ripley Ny	29	1138EST 1300EST			0	0			Marine Tstm Wind
Le Geneva On The Lake To Conneaut Oh Byd 5Nm Offshore To Intl Border									
Geneva-On-The-Lake to Conneaut	29	1138EST 1300EST			0	0			Marine Tstm Wind
Le Vermilion To Avon Pt Oh Byd 5Nm Offshore To Intl Border									
Vermilion to Avon Point	29	1138EST 1300EST			0	0			Marine Tstm Wind
Le Willowick To Geneva On The Lake Oh Byd 5Nm Offshore To Intl Border									
Willowick to Geneva-On-The-Lake	29	1138EST 1300EST			0	0			Marine Tstm Wind
The Islands To Vermilion Oh									
The Islands to Vermilion	29	1138EST 1300EST			0	0			Marine Tstm Wind
Vermilion To Avon Point Oh									
Vermilion to Avon Point	29	1138EST 1300EST			0	0			Marine Tstm Wind
Willowick To Geneva On The Lake Oh									
Willowick to Geneva-On-The-Lake	29	1138EST 1300EST			0	0			Marine Tstm Wind
A line of strong thunderstorms raced east across Lake Erie and produced estimated wind gusts in excess of 35 knots.									
<u>LAKE MICHIGAN</u>									
Lm 5Nm W Of Mackinac Bridge To Manistee Mi Nwd Beyond 5Nm Offshore To Mid Line Of Lake									
7 WNW Charlevoix	02	2137EST			0	0			Marine Tstm Wind
Norwood Mi To 5Nm W Of Mackinac Bridge									
1 W Charlevoix	02	2137EST			0	0			Marine Tstm Wind

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										October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm	
LAKE MICHIGAN										
Bay Of Green Bay S Of Ln Marinette To Fish Creek Wi Green Bay Light	23	1415CST			0	0			Marine Tstm Wind	
A front made its way through Wisconsin and the nearshore waters of Lake Michigan as a strong low pressure system moved across the northwest part of the state. Thunderstorms developed in a moist airmass ahead of the front. These storms produced 38 knot winds on the southern Bay of Green Bay.										
Wind Pt Lt Wi To Winthrop Hbr Il Kenosha	29	2055CST			0	0			Marine Tstm Wind	
A thunderstorm pulsed to severe limits as it moved offshore from Kenosha. A nearshore automated observation site measured gusts to 58 knots (67 mph). This severe storm was related to scattered severe storms that had moved through south-central and southeast Wisconsin during the evening hours of October 29th.										
Bay Of Green Bay S Of Ln Marinette To Fish Creek Wi Green Bay Light	30	0004CST			0	0			Marine Tstm Wind	
A line of thunderstorms developed in unstable air ahead of a strong cold front that moved through Wisconsin and the nearshore waters of Lake Michigan. This line of storms produced 36 knot winds on the southern Bay of Green Bay.										
Grand Haven To Whitehall Mi Muskegon Harbor	30	0220EST 0235EST			0	0			Marine Tstm Wind	
Holland To Grand Haven Mi Grand Haven Harbor	30	0220EST 0235EST			0	0			Marine Tstm Wind	
Lm Holland To Whitehall Mi 5Nm Offshore To Mid Line Of Lake Muskegon Harbor	30	0220EST 0235EST			0	0			Marine Tstm Wind	
Lm Whitehall To Manistee Mi 5Nm Offshore To Mid Line Of Lake Pentwater Harbor	30	0220EST 0235EST			0	0			Marine Tstm Wind	
Pentwater To Manistee Mi Ludington Harbor	30	0230EST 0300EST			0	0			Marine Tstm Wind	
Whitehall To Pentwater Mi Pentwater Harbor	30	0230EST			0	0			Marine Tstm Wind	
Lm New Buffalo To Holland Mi 5Nm Offshore To Mid Line Of Lake Saugatuck Harbor	30	0340EST 0400EST			0	0			Marine Tstm Wind	
New Buffalo To St Joseph Mi New Buffalo Harbor to St. Joseph Harbor	30	0340EST 0400EST			0	0			Marine Tstm Wind	

Storm Data and Unusual Weather Phenomena

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		Time	Path	Path	Number of		Estimated		October 2004
		Local/	Length	Width	Persons		Damage		
Location	Date	Standard	(Miles)	(Yards)	Killed	Injured	Property	Crops	

LAKE MICHIGAN

South Haven To Holland Mi

South Haven Harbor	30	0340EST 0400EST			0	0			Marine Tstm Wind
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St Joseph To South Haven Mi

South Haven Harbor	30	0340EST 0400EST			0	0			Marine Tstm Wind
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A line of strong thunderstorms affected the nearshore waters of Lake Michigan from New Buffalo to Manistee. A peak wind gust to 36 knots was recorded at the GLERL site in Muskegon along the Lake Michigan shoreline. A gust to 35 knots was recorded at the airport in Holland, and a gust to 36 knots was recorded at the GLERL site on the pier of South Haven.

LAKE SUPERIOR

St Marys River & Pt Iroquois To Ern Potagannissing Bay

1 W Sault Ste Marie	02	2000EST			0	0			Marine Tstm Wind
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Whitefish Bay & Whitefish Pt To Pt Iroquois Mi

1 NW Point Iroquois	02	2000EST			0	0			Marine Tstm Wind
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St Marys River & Pt Iroquois To Ern Potagannissing Bay

Munuscong Lake	03	2048EST			0	0			Marine Tstm Wind
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LOUISIANA, Northeast

LAZ026

Concordia

01	0800CST	0	0	200K	Drought
08	2300CST				

Seven weeks of dry weather from early September to early October caused approximately 20,000 acres of soybeans to be destroyed. Several inches of rain fell between October 8th and 10th, however the damage was already done as the soybean crop had already lost its beans in order to stay alive during the dry period.

LOUISIANA, Northwest

NONE REPORTED.

LOUISIANA, Southeast

Livingston Parish

Denham Spgs	04	1623CST			0	0	200K	Lightning
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Lightning ignited a fire that destroyed a house and its contents.

Jefferson Parish

Jefferson	08	1047CST			0	0	1K	Thunderstorm Wind (G50)
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A few trees were blown down along Jefferson Highway.

Lafourche Parish

Golden Meadow	09	0348CST 0350CST	0.1	20	0	0	5K	Tornado (F0)
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Lafourche Parish

Golden Meadow to Cut Off	09 10	1500CST 0900CST			0	0	50K	Flash Flood
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LAZ038-040-050-058- 060>062-066>070

Tangipahoa - St. Tammany - Livingston - St. John The Baptist - St. Charles - Upper Jefferson - Orleans - Lower Terrebonne - Lower Lafourche - Lower Jefferson - Lower Plaquemines - Lower St. Bernard

09	1500CST	0	0	100K	Storm Surge
10	1800CST				

LAZ038-040-050- 058>070

Tangipahoa - St. Tammany - Livingston - St. John The Baptist - Upper Lafourche - St. Charles - Upper Jefferson - Orleans - Upper Plaquemines - Upper St. Bernard - Upper Terrebonne - Lower Terrebonne - Lower Lafourche - Lower Jefferson - Lower Plaquemines - Lower St. Bernard

09	1500CST	0	0	50K	Tropical Storm
10	1800CST				

Storm Data and Unusual Weather Phenomena

October 2004

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

LOUISIANA, Southeast

Terrebonne Parish

Montegut to Dulac	09 10	1500CST 0900CST			0	0	50K		Flash Flood
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Tropical Storm Matthew developed from a tropical depression in the southwest Gulf of Mexico on October 8 and initially moved to the east northeast across the western and central Gulf of Mexico before gradually turning to the northeast and north. Matthew made landfall as minimal tropical storm along the south central Louisiana coast near Cocodrie on October 10 and weakened to a tropical depression shortly after moving inland. Matthew continued north and moved across southeast Louisiana and southwest Mississippi as a tropical depression on the 10th before dissipating over extreme southeast Arkansas on October 11.

Tropical storm force winds associated with Matthew were mainly confined to the coastal areas of Terrebonne, Lafourche, Jefferson, and Plaquemines Parishes and around Lake Pontchartrain in the form of gusts. The highest sustained wind recorded in southeast Louisiana was at the NOAA automated weather station at the Southwest Pass of the Mississippi River with sustained winds of 42 knots (48 mph) with gusts to 48 knots (55 mph). The weather instruments at this location are located approximately 100 ft above sea level. The lowest pressure recorded was 999.7 mb at Tambour Bay on October 10th 0400 CST.

Most of the damage associated from Matthew was the result of a combination of heavy rain and coastal flooding. Rainfall amounts generally ranged from 5 to 10 inches with a few locations in Terrebonne, Lafourche and St. John the Baptist Parishes reporting amounts up to 13 to 16 inches. The storm surge was 2 to 4 feet above normal, but locally higher in some locations. The highest storm surge recorded was at Frenier on Lake Pontchartrain with a reading of 5.85 ft NGVD. The greatest damage occurred in Terrebonne Parish where at estimated 20 homes sustained damage from heavy rain and storm surge in an area from Chauvin to Dulac, Montegut, and Pointe Aux Chene. In Lafourche several homes were flooded outside the flood gates from storm surge while within the flood gates several homes in Golden Meadow, Galliano, and Cutoff were flooded due to heavy rain. Law enforcement reported a brief tornado touchdown near Golden Meadow at 0349 CST on October 10th that tore half of the roof off of a trailer. Coastal flooding was observed around the shores of Lake Pontchartrain and Lake Maurepas and in most coastal areas outside of hurricane protection levees. Many roads were closed due to storm tide flooding in Lower Terrebonne, Lafourche, St. Bernard, and extreme eastern Orleans Parishes. Several roads in Slidell and Mandeville in St. Tammany Parish and around Laplace in St. John the Baptist Parish were also flooded.

Based on observed damage, damages described by media and emergency management, and using a comparison of similar tropical storm events, total storm damage was estimated around 255 thousand dollars with approximately \$50 thousand in damage from wind, \$100 thousand in damage from storm surge, \$100 thousand in damage from flooding as a result of heavy rain, and \$5 thousand in damage from a brief tornado touchdown.

Plaquemines Parish

5 NNW Pt A La Hache	21	1608CST 1618CST			0	0			Funnel Cloud
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A funnel cloud was observed by an observer at the U.S. Naval Air Station in Belle Chasse.

LOUISIANA, Southwest

Vernon Parish

Evans	04	1354CST			0	0	2K		Thunderstorm Wind (G50)
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Tree fell on power lines.

Beauregard Parish

1 W Merryville	04	1404CST			0	0			Hail (0.75)
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Calcasieu Parish

Vinton	04	1440CST			0	0	2K		Thunderstorm Wind (G50)
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Power lines were blown down on Foreman and Wright Road.

Acadia Parish

Morse	04	1534CST			0	0			Hail (0.75)
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St. Landry Parish

Eunice	04	1539CST			0	0			Hail (0.75)
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Vermilion Parish

Abbeville	04	1632CST			0	0	2K		Thunderstorm Wind (G50)
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Trees and power lines were blown down on Highway 82.

Iberia Parish

1 W New Iberia	04	1706CST			0	0	2K		Thunderstorm Wind (G50)
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Power lines were blown down on Highway 14.

St. Landry Parish

Countywide	10	0400CST 0800CST			0	0	500K		Flash Flood
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Nearly ten inches of rain over two days resulted in flash flooding across portions of St. Landry Parish. One bridge was damaged, a culvert was washed out, and several parish roads were damaged by flooding. A section of US Highway 190 between Opelousas and

Storm Data and Unusual Weather Phenomena

October 2004

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

LOUISIANA, Southwest

Lawtell was closed due to street flooding.

MAINE, North

MEZ017-029>030

Central Washington - Coastal Hancock - Coastal Washington

12 0030EST 0 0 High Wind (G56)
0800EST

The remnants of Subtropical Storm Nicole lifting north across Nova Scotia brought strong winds to the region. The storm produced sustained winds of 30 to 40 mph with gusts of 60 to 65 mph. The winds snapped branches and toppled trees and power lines...which contributed to power outages. The most extensive damage to trees and power lines was along coastal portions of Washington and Hancock counties...including portions of Mount Desert Island and other coastal islands.

MEZ002-006-017-030-032

Northeast Aroostook - Southeast Aroostook - Central Washington - Coastal Washington - Northern Washington

16 0500EST 0 0 High Wind (G52)
0800EST

An intensifying area of low pressure lifting across Maine produced a narrow zone of strong winds across eastern Maine. The storm produced sustained winds of 20 to 30 mph with gusts of 50 to 60 mph. The winds snapped branches and toppled some power lines resulting in power outages.

MAINE, South

NONE REPORTED.

MARYLAND, Central

NONE REPORTED.

MARYLAND, Northeast

NONE REPORTED.

MARYLAND, South

Dorchester County

5 SW Cambridge 16 1715EST 0.5 25 0 0 2K Tornado (F0)

F0 tornado occurred near David Green Road and caused minor damage to a couple bird houses and trailer, along with one tree downed.

MDZ021

Dorchester

25 1100EST 0 0 Flood
1500EST

Front yards and roads were flooded across southern portions of the county. Strong southerly winds occurring at high tide caused the rising waters.

MARYLAND, West

NONE REPORTED.

MASSACHUSETTS, Central and East

NONE REPORTED.

MASSACHUSETTS, West

MAZ001-025

Northern Berkshire - Southern Berkshire

06 0300EST 0 0 Frost/Freeze
0700EST

A Canadian airmass descended into the region, ushering in first killing frost/freeze of the season in Western Massachusetts.

MICHIGAN, East

MIZ047>049-053>055-060>063-068>070-075>076-082>083

Midland - Bay - Huron - Saginaw - Tuscola - Sanilac - Shiawassee - Genesee - Lapeer - St. Clair - Livingston - Oakland - Macomb - Washtenaw - Wayne - Lenawee - Monroe

30 1130EST 0 0 3.5M High Wind (G54)
1700EST

A strong low pressure system tracked through Lake Superior during the 30th, with the associated cold front moving through southeast Michigan during the morning hours. Strong cold advection and a tight pressure gradient lead to high winds during the afternoon hours. Wind gusts of 60 mph lead to widespread power outages, downed trees and wires, along with some minor property damage throughout all of southeast Michigan. Utility companies reported power outages to 283,000 customers across lower

Storm Data and Unusual Weather Phenomena

October 2004

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

MICHIGAN, East

Michigan, with at least half that total coming from southeast Michigan, where damage was estimated to be 3.5 million dollars. Here are some official winds gusts recorded across the region:

Detroit Metro, 56 mph at 330 PM EST.

Ann Arbor, 56 mph at 223 PM EST.

Howell, 55 mph at 100 PM EST.

NWS White Lake, 55 mph at 130 PM EST.

Ypsilanti, 55 mph at 250 PM EST.

Monroe, 54 mph at 115 PM EST.

Detroit City, 52 mph at 307 PM EST.

Flint, 51 mph at 100 PM EST.

Unofficial wind gust reports from spotters indicated winds approaching 70 mph. There were no reported injuries with this event.

MICHIGAN, Extreme Southwest

MIZ077-080>081

Berrien - Branch - Hillsdale

30 1710EST

0

0

6K

Strong Wind

1810EST

Winds across portions of far southern Lower Michigan were sustained in the 25 to 35 mph range with some areas reporting gusts between 45 to as high as 55 mph. Reports of small branches down and a few downed power lines were received. Some of the measured wind gusts included 53 mph at Coldwater, 51 in Hillsdale and 48 mph at Benton Harbor.

MICHIGAN, North

NONE REPORTED.

MICHIGAN, Upper

MIZ001

Keweenaw

16 1300EST

0

0

High Wind (G55)

17 0500EST

The Upper Peninsula of Michigan was dominated by a chilly north wind between high pressure in Ontario and gathering low pressure in the Lower Great Lakes. A strengthening northwest flow to the west of the path of the low pressure center drew colder air into the Upper Lakes on the 16th. Northwest wind gusts reached over 50 mph across the Keweenaw Peninsula by afternoon as the low strengthened over Ontario. An observer at Phoenix reported the strong winds felled trees as large as 2 feet in diameter, knocking down power and telephone lines and temporarily blocking some secondary roads. The powerful winds that gusted up to 61 mph at Stannard Rock lighthouse also whipped up high waves on Lake Superior, and beach erosion was reported from Grand Marais in Alger County to Deer Park in Luce County.

MICHIGAN, West

MIZ037>040-

043>046-050>052-

056>059-064>067-

071>074

Mason - Lake - Osceola - Clare - Oceana - Newaygo - Mecosta - Isabella - Muskegon - Montcalm - Gratiot - Ottawa - Kent - Ionia - Clinton - Allegan - Barry - Eaton - Ingham - Van Buren - Kalamazoo - Calhoun - Jackson

30 1100EST

0

0

1.1M

High Wind (G59)

1230EST

Law enforcement from all the counties in our area reported scattered downed trees and power lines due to gusty winds. Wind gusts of around 58 to 60 m.p.h. were estimated across our area based on all the reports. In addition, a peak wind gust to 50 knots was recorded at the GLERL site at the South Haven pier, and a wind gust of 59 knots was recorded at the Spyglass Condos along the Lake Michigan shoreline in Holland. The wind knocked out power to about 100,000 people statewide and about 27,000 of those occurred in the Grand Rapids (Kent county) area.

MINNESOTA, Central and South Central

Dakota County

6 NE Waterford

08 1130CST

0

0

Lightning

A home under construction in Randolph burned to the ground after being struck by lightning.

Chippewa County

Montevideo

28 0700CST

0

0

Heavy Rain

1100CST

MNZ054-057

Lac Qui Parle - Kandiyohi

28 0740CST

0

0

Flood

1200CST

A line of showers and thunderstorms remained nearly stationary over an area stretching from Madison to Willmar during the morning of the 28th. An average of 2 to 4 inches of rain fell between 7 and 11 AM. In Lac Qui Parle County 4.35 inches of rain was reported in Dawson and 2.4 inches fell in Madison. Street flooding was also reported in Madison. In Chippewa County water backed up onto streets in Montevideo after leaves clogged storm drains. In Kandiyohi County five intersections in the city of

Storm Data and Unusual Weather Phenomena

October 2004

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

MINNESOTA, Central and South Central

Willmar were flooded. Fields and low lying areas south of Willmar were also flooded.									
Carver County									
Chanhasen	29	1630CST			0	0			Thunderstorm Wind (G50)
Three 250 lb. signs were blown over and 8" limbs were downed at the intersection of highways 212 and 101.									
Scott County									
Shakopee	29	1640CST			0	0			Hail (0.75)
Morrison County									
Camp Ripley	29	1641CST			0	0			Funnel Cloud
A funnel cloud was photographed by the public near Highway 371 in Ripley Township about 6 miles north of Little Falls.									
Steele County									
Ellendale	29	1700CST			0	0			Thunderstorm Wind (G52)
Trees and power lines were downed.									
Hennepin County									
Eden Prairie	29	1701CST			0	0			Hail (0.75)
Dime sized hail fell at the intersection of Highway 5 and County Road 4.									
Steele County									
1 E Hope	29	1703CST			0	0			Thunderstorm Wind (G55)
A MNDOT road sensor measured a 63 MPH gust. Large trees were downed at exit 32 along Interstate 35.									
Steele County									
3 SSW Owatonna	29	1705CST			0	0			Thunderstorm Wind (G55)
Several trees were snapped and a light pole was pulled out of the ground at a homestead along 48th Street.									
Anoka County									
East Bethel	29	1710CST			0	0			Hail (0.75)
Isanti County									
2 S Crown	29	1710CST			0	0			Funnel Cloud
A funnel cloud was spotted by the public just north of the Anoka County line along Highway 28 west of Highway 47.									
Morrison County									
3 SSW Buckman to 1 SW Buckman	29	1710CST 1715CST	1.5	100	0	0			Tornado (F0)
A tornado touched down and damaged a farm field along 260th Avenue in Buckman Township. It moved to the northeast and remained on the ground for 1.5 miles before lifting at 73rd Street.									
Goodhue County									
1 S Stanton	29	1719CST			0	0			Thunderstorm Wind (G55)
A roof was blown off a small building. A quarter mile long irrigator was blown over and a corn field was flattened.									
Rice County									
Nerstrand	29	1730CST			0	0			Thunderstorm Wind (G50)
A tree was downed 1/4 mile south of town.									
Goodhue County									
Cannon Falls	29	1734CST			0	0			Hail (1.00)
Isanti County									
Braham	29	1740CST			0	0			Hail (2.00)
Hail larger than a golf ball damaged a vehicle. The time was estimated.									
Isanti County									
8 NW Cambridge	29	1748CST			0	0			Funnel Cloud
A funnel cloud was spotted by the public west of Rush Lake just east of the Isanti County line.									
Ramsey County									
Vadnais Hgts	30	0105CST			0	0			Hail (0.75)

MINNESOTA, Northeast

St. Louis County									
2 W Zim	29	2004CST			0	0			Thunderstorm Wind (G52)
A car was blown off the road.									

MINNESOTA, Northwest

Otter Tail County									
1 NE Pelican Rapids	22	2108CST			0	0			Hail (0.75)
Becker County									
Frazee	23	0400CST			0	0	5K		Lightning
Lightning struck a large tree twice in less than 30 seconds. The tree was less than a foot from a house in which two people were sleeping. The loud noise gave one of the occupants a concussion. The electrical surge also wrecked several appliances.									

Storm Data and Unusual Weather Phenomena

October 2004

										October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm	
MINNESOTA, Northwest										
Wilkin County										
9 S Foxhome	28	1515CST			0	0			Hail (0.75)	
Otter Tail County										
4 W Western	28	1520CST			0	0			Hail (1.25)	
MINNESOTA, Southeast										
Mower County										
Waltham	29	1730CST			0	0	0.50K		Thunderstorm Wind (G56)	
Mower County										
Le Roy	29	1815CST			0	0			Hail (0.75)	
Winona County										
2 S Winona	29	1925CST			0	0	0.75K		Hail (1.00)	
Winona County										
1 S Dakota	29	1935CST			0	0			Hail (0.75)	
Wind gusts of 60 to 65 mph, along with hail the size of pennies and quarters, was reported by spotters and the public.										
MINNESOTA, Southwest										
NONE REPORTED.										
MINNESOTA, West										
NONE REPORTED.										
MINNESOTA, West Central										
NONE REPORTED.										
MISSISSIPPI, Central										
Lowndes County										
Caledonia	02	1550CST 1553CST			0	1	10K		Thunderstorm Wind (G60)	
One person was injured as debris from a downed wooden fence was blown through a window. In addition, several trees were blown down in the area with a few blown down across a road.										
Lamar County										
6 NNE Baxterville	08	1220CST 1500CST			0	0	50K		Flash Flood	
At 1:20 PM CDT, the dam at York's Lake failed as the owners tried to do a controlled break on the structure with a back hoe. The structure failed and four to six feet of water covered a portion of RL Anderson Road. This water was dispersed into Five Spice Creek then into Grantham Creek and eventually into Lower Little Creek. Due to the relatively small size of York's Lake, the wave of water was dispersed rather quickly and only caused minor flooding on a few rural roads in the area.										
Jasper County										
6 E Bay Spgs	18	0530CST			0	0	3K		Thunderstorm Wind (G57)	
Fifteen to twenty trees were blown down along with one power line.										
Clay County										
6 NE West Pt to 7 NE West Pt	18	1840CST 1843CST	1	75	0	0	1K		Tornado (F0)	
Storm chasers captured this weak tornado on video as it moved east across northern Clay county, six miles northeast of West Point.										
Washington County										
Greenville	19	0820CST 0825CST			0	0	3K		Thunderstorm Wind (G53)	
Two trees and two power lines were blown down near the Washington County Courthouse.										
Holmes County										
Lexington	19	0955CST			0	0	2K		Thunderstorm Wind (G53)	
One tree and 2 power lines were blown down.										
Carroll County										
Vaiden	19	1310CST			0	0			Hail (0.75)	
Neshoba County										
5 W Philadelphia to 3 W Philadelphia	19	1529CST 1535CST			0	0			Hail (1.25)	
Newton County										
Newton	19	1815CST			0	0			Hail (0.75)	

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
Killed	Injured	Property	Crops						
MISSISSIPPI, Central									
Attala County									
Ethel to 2 NE Ethel	19	1930CST 1935CST			0	0			Hail (1.75)
Attala County									
6 NW Mc Cool	19	1940CST			0	0			Hail (0.88)
Choctaw County									
French Camp	19	1940CST			0	0			Hail (0.88)
Choctaw County									
Weir	19	1950CST			0	0			Hail (0.88)
Lowndes County									
3 S Caledonia to 5 S Caledonia	20	2305CST 2308CST			0	0			Hail (0.88)
Lowndes County									
3 S New Hope	20	2350CST			0	0			Hail (0.88)
Nickel sized hail fell at Lake Lowndes State Park.									
Noxubee County									
Macon	21	0020CST			0	0	1K		Thunderstorm Wind (G53)
One power line was blown down.									
Humphreys County									
Honey Is	23	1625CST 1628CST			0	0			Hail (2.50)
An intensifying supercell thunderstorm moved across central Humphreys county and began dropping tennis ball sized hail around Honey Island in the Yazoo River bottom. This storm continued east into west-central Holmes county.									
Holmes County									
1 W Omega to 2 E Omega	23	1628CST 1635CST			0	0			Hail (2.50)
A supercell thunderstorm moved out of Humphreys county in to west-central Holmes county and brought with it a swath of tennis ball sized hail. This large hail fell across the community of Omega as the storm moved east. Due to the rural location of where the hail core passed, no damage was reported.									
Holmes County									
3 NE Coxburg to Brozville	23	1646CST 1653CST	3	40	0	0	2K		Tornado (F0)
This weak tornado touched down three miles northeast of Coxburg and stayed on the ground for 3 miles as it moved east before lifting in the Brozville community. While on the ground numerous large limbs were broken and blown down. In addition, a few small trees and one large tree were blown down along the path.									
MISSISSIPPI, North									
Alcorn County									
Glens	11	2050CST 2055CST			0	0	15K		Lightning
A house was damaged by a fire started by lightning.									
Alcorn County									
Glens to 10 S Corinth	18	1410CST 1420CST			0	0	0.76K		Hail (1.75)
Alcorn County									
5 S Kossuth	18	1430CST 1435CST			0	0	0.10K		Hail (1.00)
Alcorn County									
1 N Kossuth to 3 NE Jacinto	18	1430CST			0	0	25K		Thunderstorm Wind (G60)
A 24' X 8' building was completely demolished near Kossuth. The roof of a trailer was blown off near Jacinto. Some trees were blown down.									
Tishomingo County									
2 N Iuka	18	1452CST 1500CST			0	0	0.01K		Hail (0.75)
Tishomingo County									
Burnsville	18	1454CST 1500CST			0	0	25K		Thunderstorm Wind (G50)
One houses had some of its siding blown off. Some other homes had roof damage. Several trees were blown down on some houses.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
Killed	Injured	Property	Crops						
MISSISSIPPI, North									
Prentiss County									
Wheeler	18	2013CST 2020CST			0	0	0.01K		Hail (0.75)
Lafayette County									
Oxford	19	0245CST 0250CST			0	0	60K		Thunderstorm Wind (G55)
A freestanding garage collapsed on top of two cars. A house suffered roof damage. Three small airplanes were overturned at the Oxford airport.									
Lafayette County									
Oxford	19	0315CST 0530CST			0	0	10K		Flash Flood
Several roads and parking lots were flooded damaging several cars.									
Lafayette County									
3 W Oxford	19	0315CST 0320CST			0	0	25K		Lightning
A trailer was destroyed by a fire started by lightning.									
Tate County									
Senatobia	19	0420CST 0630CST			0	0	1K		Flash Flood
Several roads were impassible due to flood waters.									
Union County									
New Albany	19	0430CST 0600CST			0	0	10K		Flash Flood
A few homes were flooded.									
Lee County									
Tupelo to Saltillo	19	0532CST 0930CST			0	0	50K		Flash Flood
Several homes were flooded. One road was washed out. Many roads were flooded.									
Pontotoc County									
Countywide	19	0615CST 0830CST			0	0	1K		Flash Flood
Several roads across the county were flooded.									
Union County									
5 E New Albany	19	1118CST 1300CST			0	0	1K		Flash Flood
One highway was flooded.									
Union County									
5 E New Albany	19	1123CST 1130CST			0	0	0.01K		Hail (0.75)
Lee County									
2 SW Saltillo	19	1150CST	0.1	25	0	0	5K		Tornado (F0)
A tornado briefly touched down southwest of Saltillo. A wooden fence was knocked down along with a couple of trees.									
Yalobusha County									
Coffeeville	19	1200CST 1205CST			0	0	10K		Thunderstorm Wind (G55)
Several trees and power lines were knocked down.									
Coahoma County									
Friars Pt	23	1215CST 1220CST			0	0	5K		Thunderstorm Wind (G50)
Several trees were knocked down.									
Marshall County									
2 SE Marianna to 3 E Marianna	23	1438CST 1448CST	3	75	0	0	25K		Tornado (F1)
The tornado touched down just southeast of Marianna and moved northeast. One roof was partially ripped off of a house. One shed was overturned. Two trailer homes were partially damaged. One outhouse had its roof torn off. Several trees were uprooted.									
Benton County									
4 SW Ashland	23	1440CST 1445CST			0	0	10K		Thunderstorm Wind (G55)
One power pole was bent over. Several trees were blown down.									

Storm Data and Unusual Weather Phenomena

October 2004

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

MISSISSIPPI, North

Yalobusha County

Coffeeville 23 1530CST
1535CST 0 0 10K **Thunderstorm Wind (G50)**

One home was damaged. Some large tree limbs and power lines were knocked down.

Monroe County

7 NW Hatley 23 1755CST
1800CST 0 0 5K **Thunderstorm Wind (G50)**

Several power lines were knocked down.

MISSISSIPPI, South

MSZ080>081

Hancock - Harrison

09 1500CST 0 0 30K **Storm Surge**
10 0900CST

MSZ080>081

Hancock - Harrison

09 1500CST 0 0 20K **Tropical Storm**
10 0900CST

Tropical Storm Matthew developed from a tropical depression in the southwest Gulf of Mexico on October 8 and initially moved to the east northeast across the western and central Gulf of Mexico before gradually turning to the northeast and north. Matthew made landfall as minimal tropical storm along the south central Louisiana coast near Cocodrie on October 10 and weakened to a tropical depression shortly after moving inland. Matthew continued north and moved across southeast Louisiana and southwest Mississippi as a tropical depression on the 10th before dissipating over extreme southeast Arkansas on October 11.

Tropical storm force winds associated with Matthew affected the western portion of Mississippi Coast. Sustained winds of 34 knots (39 mph) and a maximum gust of 39 knots (45 mph) was recorded at the NOAA automated weather station at Waveland. The storm surge was generally 2 to 4 feet above normal along portions of the Mississippi coast with the highest storm surge recorded at Waveland at 5.13 ft MLLW. The lowest pressure recorded along the Mississippi coast was 1005.4 mb at Gulfport on October 10th at 1654 CST.

No tornadoes were reported. Storm total rainfall varied from 2 to 4 inches in Hancock and Harrison Counties. Some coastal flooding due to storm surge was reported in Hancock County.

Based on reports, total storm damage was estimated at around 50 thousand dollars with approximately 40 percent of the damage due to wind (\$20 thousand) and 60 percent due to storm surge (\$30 thousand).

Hancock County

Kiln 19 0200CST 0 0 1.5K **Thunderstorm Wind (G50)**

Thunderstorm winds knocked down 7 to 9 trees around the Ridgewood area.

MISSISSIPPI, Southeast

George County

2 N Lucedale 19 0613CST 0.1 20 0 0 10K **Tornado (F0)**
0614CST

A weak tornado briefly touched down just north of Lucedale. The tornado damaged several storage buildings at a nursery. Several trees and power lines were also blown down.

MISSOURI, East

Gasconade County

Owensville 18 1431CST 0 0 **Hail (1.00)**

Local law enforcement reported 1 inch hail.

Iron County

Viburnum 18 1446CST 0 0 **Hail (1.75)**

The County Sheriff reported golfball size hail.

Gasconade County

Rosebud 18 1450CST 0 0 **Hail (0.75)**

Storm spotters reported 3/4 inch hail covering the ground.

Washington County

Potosi 18 1500CST 0 0 **Hail (1.00)**

Washington County

Old Mines 18 1505CST 0 0 **Hail (1.75)**

Storm spotters reported 1 inch hail in Potosi and golfball size hail in Old Mines.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
MISSOURI, East									
Washington County .5 NE Potosi	18	1508CST 1509CST	0.2	80	0	7			Tornado (F1)
The 1st in a series of 5 small tornadoes struck just northeast of Potosi along Highway 21. The Potosi Lumberyard was severely damaged. Seven people were injured with one kept overnight at a local hospital.									
Franklin County Stanton	18	1510CST			0	0			Hail (1.00)
A local television station reported 1 inch hail in the Stanton area.									
Washington County 1 NE Potosi to 2 NE Potosi	18	1510CST 1511CST	0.8	50	0	0			Tornado (F0)
The second tornado struck 1 mile northeast of Potosi along State Route E. One mobile home and a storage building were damaged. Several trees were either snapped off at the trunk or uprooted.									
Washington County 1.5 ENE Potosi to 2.5 ENE Potosi	18	1511CST 1513CST	0.8	40	0	0			Tornado (F0)
The third tornado was first observed in an open field about 1.5 miles east northeast of Potosi. A few large trees were either uprooted or snapped off.									
Washington County Mineral Pt	18	1512CST 1514CST	0.8	40	0	0			Tornado (F0)
The fourth tornado struck the small town of Mineral Point. The tornado moved across the central part of town damaging several mobile homes and one permanent home. Trees and power lines were also downed.									
Washington County Mineral Pt to .5 NE Mineral Pt	18	1513CST 1515CST	0.8	40	0	0			Tornado (F0)
The fifth and last in the series of tornadoes formed on the east side of Mineral Point shortly after the fourth tornado was spotted. Both tornadoes were visible at the same time for a short period. This tornado caused some minor roof damage to a few homes and also damaged a couple of mobile homes.									
Reynolds County Corridon	18	1515CST			0	0			Thunderstorm Wind (G60)
Thunderstorm winds blew over several trees in the Corridon area.									
Washington County Cadet	18	1522CST			0	0			Thunderstorm Wind (G60)
Storm spotters reported trees and power lines down.									
Iron County 4 SE Belleview	18	1525CST			0	0			Hail (0.88)
A co-op observer reported nickel size hail.									
Madison County 10 W Fredericktown	18	1525CST			0	0			Hail (0.88)
A trained spotter reported nickel size hail west of Fredericktown.									
St. Francois County 3 N Bonne Terre	18	1525CST			0	0			Hail (2.00)
A local radio station reported hail up to 2 inches in diameter north of Bonne Terre.									
Iron County Ironton	18	1526CST 1530CST	2	400	0	0			Tornado (F1)
A tornado first caused damage on the west side of Ironton at Shepherd Mountain Lake. Trees were downed and damaged on both sides of the north end of the lake as the tornado moved east at about 40 miles an hour. The tornado moved into west Ironton downing and snapping off trees on West Boulder Drive. On Lake Drive part of the roof of the County Health Department was blown off and landed about 75 yards away. A storage shed in this same area was also destroyed with part of it landing in power lines. The majority of the damage was due to downed and snapped off trees. Power lines and poles were down primarily because of the trees and limbs. About one dozen homes suffered minor damage involving downed trees or roof shingles blown off. One car was severely damaged by a downed tree.									
St. Francois County Halifax	18	1530CST			0	0			Hail (1.75)
A storm spotter reported golfball size hail along Highway 67 near Halifax.									
Reynolds County 3 S Centerville	18	1535CST			0	0			Hail (1.75)

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
MISSOURI, East									
Reynolds County 3 S Centerville	18	1535CST			0	0	Thunderstorm Wind (G60)		
The County Sheriff reported golfball size hail and trees down on Highway 21 south of Centerville.									
Iron County 3 E Ironton	18	1535CST 1536CST	0.5	100	0	0	Tornado (F0)		
The second Iron County tornado hit east of Ironton in the Killarney Shores neighborhood. Several trees were downed or snapped off.									
Reynolds County Redford	18	1537CST 1538CST	0.5	40	0	0	100K	Tornado (F0)	
A small tornado hit the Redford area of Reynolds County. Several structures suffered minor damage, primarily roof shingles and siding blown off. One garage and 2 barns also suffered roof damage.									
Ste. Genevieve County 3 NW New Offenburg	18	1550CST			0	0	Hail (0.75)		
Ste. Genevieve County Bloomsdale	18	1555CST			0	0	Hail (0.75)		
Local fire department personnel reported 3/4 inch hail northwest of New Offenburg near Rocky Ridge. Storm spotters also reported 3/4 inch hail in Bloomsdale.									
Madison County 3 NW Fredericktown to 2 NW Fredericktown	18	1559CST 1602CST	1.5	250	0	0	Tornado (F0)		
The same supercell thunderstorm that spawned the Iron County tornadoes spawned two more tornadoes in Madison County. The first tornado caused damage in an area northwest of Fredericktown known as Catherine Place. Witnesses observed the tornado form in an open field and then move east crossing Highway H and causing damage at the County Star Mobile Home Park. The majority of the damage was from downed trees or large tree limbs. One home just south of the mobile homes suffered major damage from a large downed tree. Another home just east of the mobile home park suffered minor roof damage and had four windows blown in. The tornado crossed US Highway 67 near County Road 220 and caused damage in the White Tail Crossing neighborhood. trees were downed and snapped off at this location.									
Jefferson County 5 E De Soto	18	1610CST			0	0	Hail (0.88)		
Storm spotters reported nickel size hail in the Olympian Village area northeast of De Soto.									
Madison County 3 NNE Fredericktown .5 N Higdon	18	1610CST 1619CST	5.5	100	0	0	Tornado (F1)		
The second tornado in Madison County first caused damage near County Road 217 when it blew off part of the roof of a barn, caused minor roof damage to a home, and downed and snapped off trees. The tornado moved east and destroyed a detached garage at a home on County Road 219 just north of County Road 221. The owner of the home was outside and saw the tornado coming. He moved inside just before the tornado arrived and was not injured. The tornado moved east through fields causing intermittent tree damage. The next significant damage occurred near the end of the tornado's track just north of Higdon along County Road 257. A home had almost all of the roof shingles blown off and a couple of windows blown in. The owner commented that he ended up with about 2 inches of leaves inside his house. A trampoline in the backyard was picked up, blown to the north and wrapped around a tree. A 14 foot fishing boat that was on a pond behind the house was picked up and ended up 100 yards away suspended in some trees.									
Ste. Genevieve County Ste Genevieve	18	1620CST			0	0	Hail (0.88)		
The 911 communication center reported nickel size hail.									
Ste. Genevieve County 3 W St Marys	26	1645CST	0.5	50	0	0	Tornado (F0)		
The County Sheriff reported a small tornado formed west of St. Marys near Interstate 55. Damage was restricted to downed and damaged trees. Debris from the trees littered the highway causing it to be closed for a short time.									
Pike County 3 S Louisiana	29	1645CST			0	0	Thunderstorm Wind (G60)		
The Countv Sheriff reported several trees down on Countv Route D.									

Storm Data and Unusual Weather Phenomena

October 2004

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

MISSOURI, Lower

Dunklin County

1 N Holcomb 18 1721CST 1725CST 0 0 0.01K Hail (0.75)

Pemiscot County

Cooter 18 1855CST 1900CST 0.5 125 3 7 300K Tornado (F2)

The tornado struck just south of Cooter and moved east. The tornado produced substantial damage to a farm house and a couple of modular homes. The tornado killed three persons who lived at the farm another injured seven others. A large grain trailer and several trees were blown over. M86PH, F?PH, M?PH

Pemiscot County

2 SE Cooter 18 2025CST 2030CST 0 0 0.10K Hail (1.00)

MISSOURI, Northeast

NONE REPORTED.

MISSOURI, Northwest

Adair County

Kirksville 22 1110CST 0 0 Hail (1.00)

Harrison County

1 N Bethany 29 1631CST 0 0 Hail (0.75)

Daviess County

1 N Coffey 29 1644CST 0 0 Hail (0.75)

Daviess County

1 N Coffey 29 1644CST 0 0 Thunderstorm Wind (G57)

Mercer County

Princeton 29 1715CST 0 0 Hail (0.88)

Mercer County

Princeton 29 1715CST 0 0 Thunderstorm Wind (G61)

A tree three feet in diameter downed by thunderstorm winds.

Jackson County

2 E Independence 29 1730CST 0 0 Thunderstorm Wind (G52)

8 to 12 inch diameter tree downed.

Johnson County

Holden 29 1735CST 0 0 2K Thunderstorm Wind (G65)

Damage to several buildings.

Daviess County

1 W Gallatin 29 1740CST 0 0 Thunderstorm Wind (G57)

6 to 8 inch tree limbs down.

Grundy County

Trenton 29 1745CST 0 0 Hail (1.00)

Johnson County

Warrensburg 29 1750CST 0 0 1K Thunderstorm Wind (G65)

Power lines and 10 inch diameter trees downed.

Johnson County

2 SSW Warrensburg to 1 S Warrensburg 29 1753CST 1758CST 1 50 0 0 5K Tornado (F0)

Tornado touchdown reported near 251 and BB Highway...2 southwest of Warrensburg. Barn partially destroyed. Tornado dissipated just south of Warrensburg.

Johnson County

5 E Warrensburg 29 1802CST 0 0 1K Thunderstorm Wind (G65)

Tractor trailer blown over on U.S. Highway 50 between Warrensburg and Knob Noster.

Putnam County

Unionville 29 1805CST 0 0 Hail (0.88)

Johnson County

7 NNE Knob Noster to 8 NE Knob Noster 29 1815CST 1816CST 1 50 0 0 Tornado (F1)

Tornado touched down just inside the Johnson county line...southwest of the intersection of F/BB/NN Highway. It then tracked northeast into Pettis county. Trees were downed by the tornado.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
MISSOURI, Northwest									
Sullivan County Newtown	29	1815CST			0	0	1K		Thunderstorm Wind (G52)
Power lines down.									
Pettis County 8 WSW Houstonia to 1 N Houstonia	29	1816CST 1828CST	9	50	0	0	300K		Tornado (F1)
Tornado crossed into Pettis county near the intersection of F/BB/NN Highways. Two homes were damaged along Blackwater Chapel Road. Trees and power lines also down. Tornado then tracked northeast to Highway 127 just south of NN...where a shed was destroyed and grain bins damaged. Tornado proceeded to enter Saline county just west of K Highway.									
Saline County 4 ESE Sweet Spgs	29	1828CST 1831CST	0.5	50	0	0	20K		Tornado (F1)
Pettis county Tornado crossed into Saline county just west of Highway K. Then damaged a house near K Highway and County Road 330 before dissipating.									
Sullivan County 6 W Milan	29	1830CST			0	0	40K		Thunderstorm Wind (G65)
Mobile home destroyed and grain bin knocked down.									
MISSOURI, Southeast									
Butler County Poplar Bluff	18	0650CST			0	0			Hail (0.75)
Scott County Sikeston to Vanduser	18	0812CST			0	0	5K		Thunderstorm Wind (G50)
A few billboards and power lines were blown down in Sikeston. Several large tree limbs were blown down in Vanduser, including one that struck a house.									
Mississippi County East Prairie to 5 S Charleston	18	0815CST			0	0			Thunderstorm Wind (G52)
A trained spotter estimated wind gusts to 60 MPH on Highway 105 between East Prairie and Charleston. Large tree limbs were down on Highway 105 near East Prairie.									
Mississippi County Charleston	18	0818CST			0	0			Hail (0.88)
Wayne County Lodi	18	1608CST			0	0			Hail (1.00)
Bollinger County Patton Jct to 4 N Sedgewickville	18	1640CST 1642CST			0	0	50K		Hail (2.50)
Hail up to the size of tennis balls was reported 4 miles north of Sedgewickville with this supercell thunderstorm. Quarter to golf ball size hail was reported in Sedgewickville and Patton Junction.									
Bollinger County 6.4 NNE Patton to 6.5 NNE Patton	18	1651CST	0.2	50	0	0			Tornado (F0)
A trained spotter and other witnesses observed a brief tornado touchdown along Highway KK, near the Perry County line. The tornado occurred in a wooded area. No damage was found, other than some broken small tree branches.									
Cape Girardeau County 3 E Friedheim	18	1700CST			0	0			Funnel Cloud
A funnel cloud was photographed from the interchange of Interstate 55 and KK Highway. The supercell thunderstorm that spawned this funnel cloud was the same storm that produced a tornado in Bollinger County.									
Stoddard County 2 W Bernie	18	1745CST			0	0			Funnel Cloud
Cape Girardeau County Allenville	18	1755CST			0	0			Hail (1.75)
A few supercell thunderstorms moved east across southeast Missouri. The storms exhibited strong rotation for sustained periods of time. The first supercell moved east across northern Wayne County, southern Bollinger County, and southern Cape Girardeau County. This storm produced hail up to the size of golf balls and a rotating wall cloud. The second supercell tracked east along the Bollinger/Perry County line, producing a brief tornado and hail up to the size of tennis balls. A third supercell thunderstorm moved east through Stoddard County, producing a funnel cloud.									

Storm Data and Unusual Weather Phenomena

October 2004

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

MISSOURI, Southeast

Scott County

1.3 W New Hamburg to 26 **1609CST** **0** **0** **75K** **Thunderstorm Wind (G61)**
New Hamburg **1612CST**

Along and north of County Road 234, homes and farm buildings received partial roof and siding damage. A business trailer was overturned. Several utility lines were downed, and numerous trees were uprooted. An assessment by local emergency managers showed about a dozen residences with minor damage and eight with moderate damage. Farm outbuildings were destroyed.

Scott County

.1 NE New Hamburg to 26 **1609CST** **0.1** **100** **0** **0** **100K** **Tornado (F1)**
.2 NE New Hamburg **1610CST**

The very short track of this tornado was all in the northeast part of New Hamburg. The tornado touched down about 100 yards east of Highway A. Two homes received major roof damage, along with some structural damage. About 100 yards east of the two homes, a bed-and-breakfast business was destroyed. Another building lost its roof and two walls. A pole barn, a 100-year-old barn, and a wood silo were all destroyed. The barns contained antique farm equipment and a horse-drawn carriage that were destroyed. A dog was killed when the tornado destroyed the shed it was in. Several cars were damaged. Power was out to most or all of the town. A number of trees were topped. Peak winds were estimated near 110 MPH.

Scott County

4 NE New Hamburg to 26 **1616CST** **0.3** **50** **0** **0** **Tornado (F0)**
4.2 NE New Hamburg **1617CST**

A trained spotter observed the weak tornado crossing Interstate 55. A few tree limbs were blown down. Due to the lack of damage along the tornado's path, the touchdown and lift-off points were estimated.

A supercell thunderstorm formed near a warm front, and then moved east along it. The storm produced two known tornadoes and some wind damage in Scott County, then crossed the Mississippi River into Illinois.

MISSOURI, Southwest

Miller County

5 SE Eldon **17** **1123CST** **0** **0** **Hail (0.88)**

Morgan County

2 NE Gravois Mills **18** **0135CST** **0** **0** **Hail (0.75)**

Benton County

7 SE Lincoln **18** **1248CST** **0** **0** **Hail (0.88)**

Dent County

1 N Boss **18** **1435CST** **0** **0** **Hail (1.75)**

Shannon County

Midridge **18** **1445CST** **0** **0** **Thunderstorm Wind (G50)**

A few trees were downed from severe thunderstorm wind gusts.

Mcdonald County

1 NE Pineville **29** **1730CST** **0** **0** **Thunderstorm Wind (G50)**

Severe thunderstorm wind gusts downed several trees along Highway H.

Barry County

Purdy **29** **1755CST** **0** **0** **Hail (1.00)**

Barry County

Cassville **29** **2010CST** **0** **0** **Hail (1.00)**

Greene County

Springfield **29** **2030CST** **0** **0** **20K** **Thunderstorm Wind (G60)**

A microburst caused significant damage across central and eastern sections of the city of Springfield. Numerous trees were downed on houses and vehicles.

Christian County

2 W Nixa **29** **2030CST** **0** **0** **Thunderstorm Wind (G50)**

A few trees were downed along Highway ZZ from severe thunderstorm wind gusts.

Douglas County

Vanzant **29** **2140CST** **0** **0** **10K** **Thunderstorm Wind (G55)**

A row of 20 foot wide trees were downed on top of a barn which sustained damage.

Douglas County

5 N Coldspring **29** **2145CST** **0** **0** **Thunderstorm Wind (G50)**

A tree was downed across Highway C from severe thunderstorm wind gusts.

Howell County

2 N Mountain View **29** **2230CST** **0** **0** **Thunderstorm Wind (G55)**

A few large trees were downed from severe thunderstorm wind gusts.

Storm Data and Unusual Weather Phenomena

October 2004

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

MONTANA, Central

MTZ047

Blaine

10 1857MST

0

0

High Wind (G55)

A wind gust of 63 mph was reported at Chinook 11S.

MTZ009

North Rocky Mountain Front

16 1400MST

0

0

Winter Storm

18 0830MST

A winter storm brought heavy snow and gusty winds to the Northern Rocky Mountain Front from Saturday afternoon through early Monday morning. Reported snow fall amounts include 7 inches at the Many Glacier SNOTEL site. Two inches of snow also fell across many portions of the Southern Rocky Mountain Front.

MTZ009>010-048

North Rocky Mountain Front - Eastern Glacier - Southern Rocky Mountain Front

29 1920MST

0

0

High Wind (G55)

30 1500MST

A high wind event occurred along the Rocky Mountain Front and adjacent plains from the evening hours on Friday, October 29 through mid afternoon on Saturday, October 30. Reported wind speeds include: a gust to 89 mph at St. Mary 13W, a gust to 63 mph at East Glacier Park 11SE, a gust to 60 mph at Bynum 5W and a gust to 58 mph at East Glacier Park 2E. Additionally, sustained winds of 40 mph were reported at Cut Bank for several hours during the late morning of the 30th.

MTZ047

Blaine

31 1301MST

0

0

High Wind (G54)

A wind gust of 62 mph was reported at Chinook 11S.

MONTANA, East

NONE REPORTED.

MONTANA, South

MTZ034-040>041

Stillwater - Park - Sweet Grass

23 2000MST

0

0

Heavy Snow

24 0500MST

Plenty of moisture ahead of a storm system that moved onto the Pacific Northwest brought the first significant snowfall to elevations above 6000 feet . The following snow totals were reported: 12 inches 21NW Cooke City (Monument Peak Snotel); 10 inches 13W Nye (Placer Basin Snotel); 8 inches 13NE Wilsall (South Fork Shields Snotel); 10 inches 18SW Fishtail; 11 inches 3N Cooke City (Fisher Creek Snotel).

MONTANA, West

MTZ002

West Glacier Region

17 1800MST

0

0

High Wind (G60)

21 1800MST

High winds accompanied a storm system that brought 1 to 2 inches of snow to the West Glacier Region. High winds knocked down several trees in Hungry Horse with spotty power outages.

MTZ004-043

Lower Clark Fork Region - Blackfoot Region

24 0400MST

0

0

Heavy Snow

25 0700MST

Heavy snow fell in the mountains of the Lower Clark Fork Region and throughout the Blackfoot Region. Total snowfall accumulations ranged from 6 inches at Seeley Lake to 8 to 9 inches over the mountain passes. I-90 over Lookout Pass was closed for three hours during the early morning hours due to heavy snow and poor visibility. One automobile accident occurred over the pass.

NEBRASKA, Central

Garden County

10 NE Oshkosh

18

1519MST

0

0

Hail (0.88)

Arthur County

14 SSW Arthur

18

1550MST

0

0

Hail (0.75)

Hail covered the ground.

Keith County

13 NNW Ogallala

18

1600MST

0

0

Hail (0.75)

NEBRASKA, East

NONE REPORTED.

NEBRASKA, Extreme Northeast

NEZ013

Dixon

30 0200CST

0

0

High Wind (G50)

0500CST

Storm Data and Unusual Weather Phenomena

October 2004

		Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		October 2004	
Location	Date				Killed	Injured	Property	Crops	Character of Storm	

NEBRASKA, Extreme Northeast

High winds behind a cold front produced sustained winds of around 40 mph with gusts to near 60 mph for about three hours. The winds caused minor tree damage.

NEBRASKA, Extreme Southwest

NONE REPORTED.

NEBRASKA, South Central

NONE REPORTED.

NEBRASKA, West

NONE REPORTED.

NEVADA, North

NVZ034>035

Ruby Mountains/E Humboldt Range - White Pine

20 0800PST 0 0 Heavy Snow
1700PST

Snotel sites in the Ruby Mountains and East Humboldt Range reported from 8 to 11 inches of new snow. The Berry Creek Snotel in the Schell Creek Range east of Ely reported 10 inches of new snow.

NVZ037

S Lander & S Eureka

27 0400PST 0 0 Heavy Snow
0900PST

Ten to twelve inches of new snow was reported in Austin.

NEVADA, South

Nye County

Pahrump

20 0400PST 0 0 Flash Flood
1030PST

Heavy rain caused some minor flash flooding in Pahrump. A trained spotter reported water to curb high on some streets.

NVZ015

Lincoln County Except The Sheep Range

25 0300PST 0 0 Heavy Snow
0828PST

Local law enforcement reported 8 inches of snow in Pioche with 4 to 5 inches elsewhere around the county.

NVZ018

Sheep Range

25 0800PST 0 0 Heavy Snow
1540PST

Sixteen inches of new snow was measured at the Mount Charleston Ski resort.

NEVADA, West

NVZ003

Greater Reno/Carson City/Minden Area

17 1815PST 0 0 High Wind (G61)

A 61 knot (70 mph) wind gust was reported in Minden.

NVZ003

Greater Reno/Carson City/Minden Area

17 2200PST 0 0 High Wind (G55)

A 55 knot (63 mph) wind gust was recorded by the Washoe Valley NDOT sensor.

NVZ003

Greater Reno/Carson City/Minden Area

17 2337PST 0 0 High Wind (G56)

A 56 knot (65 mph) wind gust was reported 6 miles SW of Gardnerville.

NVZ002

Greater Lake Tahoe Area

19 0100PST 0 0 Heavy Snow
1300PST

A total of 6 inches of snow fell in 12 hours at Incline Village (elevation 7600 ft.).

NVZ002

Greater Lake Tahoe Area

19 2000PST 0 0 Heavy Snow
20 0600PST

From the evening of October 19th through the morning of the 20th a powerful early-season snowstorm deposited up to 3 feet of snow in the Sierra Nevada. In the valleys of northeast California and western Nevada 1 to 2 inches of rainfall was reported at many locations.

Storm total snowfall amounts:

Mount Rose Ski Resort	28 inches
2 N Virginia City	4.5 inches

Storm Data and Unusual Weather Phenomena

October 2004

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

NEVADA, West

NVZ002

Greater Lake Tahoe Area

26 0100PST
2300PST

0 0

Heavy Snow

A strong winter storm hit the central Sierra Nevada on Oct. 26th, depositing over a foot of snow in the Tahoe basin and up to 2 feet of snow in the higher elevations.

Storm total snowfall amounts:

Incline Village (7600 ft.)	12 inches
Dagget Pass	12 inches
Diamond Peak ski resort (6700 ft.)	14 inches
(8500 ft.)	18 inches

NEW HAMPSHIRE, North and Central

NONE REPORTED.

NEW HAMPSHIRE, Southern

NONE REPORTED.

NEW JERSEY, Northeast

NONE REPORTED.

NEW JERSEY, South and Northwest

NJZ014-020>026

Eastern Monmouth - Western Ocean - Cumberland - Western Atlantic - Western Cape May - Eastern Cape May - Eastern Atlantic - Eastern Ocean

15 0800EST
1300EST

0 0

0 Astronomical High Tide

The combination of a southerly flow preceding a cold front and spring tides associated with the new moon caused pockets of minor tidal flooding at the times of the daytime high tide on the 15th along the ocean and in Delaware Bay.

The high tide reached 7.02 feet above mean lower low water at Cape May and 6.70 feet above mean lower low water at Sandy Hook. Minor tidal flooding starts at 6.7 feet above mean lower low water. In Delaware Bay, at Reedy Island, Delaware the high tide reached 7.39 feet above mean lower low water. Minor tidal flooding starts at 7.2 feet above mean lower low water.

NJZ014-024>026

Eastern Monmouth - Eastern Cape May - Eastern Atlantic - Eastern Ocean

21 0000EST
25 2359EST

0 0

0 Heavy Surf/High Surf

NJZ012>014-020>026

Middlesex - Western Monmouth - Eastern Monmouth - Western Ocean - Cumberland - Western Atlantic - Western Cape May - Eastern Cape May - Eastern Atlantic - Eastern Ocean

24 1600EST
2100EST

0 0

0 Astronomical High Tide

The combination of a nearly stationary high pressure system over nearby Canada and low pressure systems over the western Atlantic produced six consecutive days of rough surf along the New Jersey shore from the 20th through the 25th. Waves as large as six to eight feet were reported breaking on the shore. This produced moderate beach erosion along the coast with areas of severe erosion on Long Beach Island in Ocean County.

In Monmouth County, beach erosion averaged between 2 and 4 feet in height across a 50-foot wide section. Erosion in Asbury Park and Ocean Grove averaged between 3 and 4 feet.

In Ocean County, erosion averaged between 3 and 4 feet and cut across as wide as a 60-foot slope. The worst damage was reported within Brant Beach and Beach Haven. At Barnegat Light, severe damage was reported to the bay bulkhead at 5th Avenue and State Park. A commercial fishing vessel was beached just south of the inlet. In Brant Beach, there was a 12 foot high vertical strip eroded in a 10 foot by 20 foot wide block between 42nd Street and 47th Street. In Beach Haven, a 10 foot vertical dune loss up to 40 feet wide and bulkhead damage was reported between Leeward Street and Merrivale Avenue. Homes were undermined in that area and 15 feet of roadway on Merrivale Avenue was destroyed.

Roadways along Barnegat Bay (Ocean County) had several inches of water during the times of high tide. Flooded streets were reported in Bay Head, Beach Haven, Seaside Park and the Normandy Beach section of Brick Township.

In Atlantic County, erosion averaged between 3 and 5 feet vertically and sloped up to 100 feet wide. The worst reported damage was in Brigantine and Atlantic City. In Brigantine, an 8 foot vertical cut to the dune system occurred between Promenade and Vernon Place. In Atlantic City, damage occurred to the dune system north of Rhode Island Avenue with loss of sand fencing. Groins were exposed in Margate.

Storm Data and Unusual Weather Phenomena

October 2004

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

NEW JERSEY, South and Northwest

In Cape May County, erosion averaged between 1 and 2 feet in most places and sloped up to 150 feet wide. Higher vertical cuts occurred in North Wildwood, Ocean City and Avalon. In Ocean City, vertical cuts reached 5 to 6 feet by 25 feet wide from Surf Street south to 12th Street. In Avalon, the vertical cut reached between 3 and 4 feet from 9th Street to the Fishing Pier. Damage to the dune system occurred between 12th and 14th Streets. In North Wildwood, there was a complete loss of 300 feet of dunes and the vertical erosion reached up to 5 feet. In Cape May City, overwashes occurred onto Wilmington Avenue.

Minor tidal flooding also occurred during the times of the late afternoon and early evening high tides from the 23rd through the 25th. Minor tidal flooding also occurred in the back bays, inlets, Sandy Hook Bay and in Delaware Bay. The highest tides occurred on the 24th. Roadways along Barnegat Bay (Ocean County) had several inches of water during the times of high tide. Flood streets were reported in Bay Head, Beach Haven, Seaside Park and the Normandy Beach section of Brick Township. The highest tide reached 7.06 feet above mean lower low water at Cape May and 6.78 feet above mean lower low water at Sandy Hook. Minor tidal flooding starts at 6.7 feet above mean lower low water. In Delaware Bay, at Reedy Island, Delaware the highest tide reached 7.36 feet above mean lower low water. Minor tidal flooding starts at 7.2 feet above mean lower low water.

NEW MEXICO, Central and North

Bernalillo County									
18 WSW Albuquerque	04	2040MST			0	0			Hail (1.25)
Bernalillo County									
4 SW Albuquerque	04	2113MST			0	0			Hail (0.75)
Bernalillo County									
3 W Albuquerque to	04	2125MST			0	0			Hail (0.88)
4 W Albuquerque		2138MST							
Bernalillo County									
Albuquerque	04	2200MST			0	0	1M		Heavy Rain
		2215MST							
Bernalillo County									
Sandia Park	04	2245MST			0	0			Hail (1.00)
Bernalillo County									
Paradise Hills to	04	2332MST			0	0	4M		Hail (1.75)
Albuquerque		2339MST							
Sandoval County									
Rio Rancho	04	2336MST			0	0	500K		Hail (1.00)
Torrance County									
Encino to	05	0030MST			0	0			Hail (2.75)
5 W Encino									
Torrance County									
7 W Encino	05	0040MST			0	0	3K		Hail (1.75)
Guadalupe County									
Vaughn	05	0215MST			0	0			Hail (0.75)
De Baca County									
Ft Sumner	05	0400MST			0	0			Hail (0.75)

A series of late evening thunderstorms moved northeast over the central Rio Grande Valley producing damaging hail mainly over the northwest section of Albuquerque northward into southern Rio Rancho.

De Baca County									
Ft Sumner	05	0500MST			0	0			Flash Flood
		0615MST							
Guadalupe County									
Santa Rosa	05	0530MST			0	0			Flash Flood
		0600MST							
Roosevelt County									
Portales to	05	0730MST			0	0			Flash Flood
Kenna		0900MST							

Heavy rains were reported across De Baca, Guadalupe and Roosevelt Counties. Highway 20 near Fort Sumner and Interstate 40 near Santa Rosa were both briefly closed with either water over the road or mud and rock debris in the travel lanes. Roads from Portales south to Elida and Kenna were also flooded.

Curry County									
Cannon Afb	05	0655MST			0	0			Heavy Rain
		0710MST							

Heavy rain of near one and half inch caused widespread street and road flooding on the airbase.

Storm Data and Unusual Weather Phenomena

October 2004

October 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>NEW MEXICO, Central and North</u>									
Sandoval County									
3 NW Corrales	05	0910MST			0	0			Hail (0.88)
Bernalillo County									
4 W Alameda	05	0915MST			0	0			Hail (0.75)
Valencia County									
Belen	05	1225MST 1242MST			0	0	300K		Hail (1.75)
Bernalillo County									
Albuquerque	05	1230MST			0	0			Hail (0.75)
Valencia County									
Belen	05	1235MST			0	0	200K		Hail (1.75)
Lincoln County									
Picacho	05	1242MST			0	0			Hail (1.25)
Socorro County									
Socorro	05	1306MST 1322MST			0	0	40M		Hail (3.00)
Socorro County									
3 S Escondida	05	1319MST			0	0			Hail (1.75)
Strong thunderstorms developed during the mid morning along the continental divide west of Albuquerque then swept eastward with brief hail again reaching the Albuquerque metro area. A trailing, southern storm that formed over west central Socorro County became intense as it reached the City of Socorro which was pounded by 5 to 10 minutes of baseball size hail with estimated terminal velocities of near 100 mph. This record hail storm produced widespread and intense damage to automobiles, broken windows and screens as well as destroying home and commercial roofs. Damage estimates included \$15 million to the New Mexico Tech campus where nearly every building was damaged and the fleet of university vehicles was almost a total loss. County wide insurance claims had reached \$40 million. The storm passed east into rural and unpopulated areas of Socorro County where it likely produced several small tornadoes.									
Chaves County									
5 W Roswell	05	1444MST	0.1	20	0	0			Tornado (F0)
Emergency Coordinator office reported brief surface debris and touchdown by small tornado.									
Chaves County									
6 S Greenfield	05	1627MST			0	0	20K		Hail (2.50)
Chaves County									
Dexter	05	1720MST			0	0			Hail (0.88)
De Baca County									
5 WSW Yeso	27	1625MST			0	0			Hail (0.75)
<u>NEW MEXICO, South Central and Southwest</u>									
Dona Ana County									
Organ	05	0250MST 0305MST			0	0			Hail (0.88)
<u>NEW MEXICO, Southeast</u>									
Lea County									
2 W Lovington	04	1905MST			0	0	0	0	Hail (1.00)
An isolated severe storm produced quarter size hail at the Lovington Airport on the evening of the 4th.									
Eddy County									
7 SSW Whites City	05	1605MST			0	0	0	0	Hail (0.75)
A spotter reported penny size hail along U.S. Highway 62/180 in southern Eddy County. The hail was ejected several miles north of the main precipitation core of an isolated supercell that propagated east along the Texas and New Mexico border.									
Eddy County									
5 W Malaga	05	1840MST			0	0	0	0	Hail (0.75)
A second supercell developed near Whites City and propagated east to near Malaga. A storm spotter reported penny size hail along State Highway 7.									

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
NEW MEXICO, Southeast									
Lea County 9 N Tatum to 13 E Tatum	05	1755MST 1905MST			0	0	50K	0	Thunderstorm Wind (G61)
A local utility company reported severe thunderstorm winds that downed power poles at several locations in northern Lea County. One pole was blown down along State Highway 206 north of Tatum at 17:55 MST. Additional utility poles were broken along U.S. Highway 380 east of Tatum between 18:25 and 19:05 MST. A resident near Gladiola estimated 60 MPH winds shortly before 19:00 MST. The electric company reported minor damage to a home near that community when thunderstorm winds ripped lines off of the home. Live electric lines came to rest tangled around a nearby pole. The extent of structural damage to the home was unknown. Power lines were blown 100 yards from utility poles just west of Bronco at 19:05 MST.									
Lea County Tatum to Gladiola	05	1818MST 1859MST			0	0	0	0	Hail (1.75)
Local officials reported large hail from near Tatum to Gladiola. Penny size hail was reported in Tatum at 18:17 MST as the core of the storm passed just north of the city. Hail up to the size of golfballs was reported northeast of Tatum at 18:45 MST. Golfball size hailstones also accompanied severe thunderstorm winds at Gladiola shortly before 19:00 MST. No damage was reported as a direct result of the hail. An isolated supercell thunderstorm propagated east-southeast over northern Lea County during the early evening of the 5th and resulted in a swath of damaging winds and large hail.									
Eddy County 13 SSW Artesia to Artesia	05	1800MST 2100MST			0	0	0	0	Flash Flood
A storm spotter reported flash flooding along Rocky Arroyo that caused up to three feet of flowing flood water to inundated State Highway 137 and County Road 401. Additional street flooding was reported in downtown Artesia.									
Eddy County Carlsbad to 6 SE Carlsbad	05	1840MST 1900MST			0	0	0	0	Hail (1.50)
Multiple reports of large hail ranging in size from pennies to ping pong balls were received across Carlsbad and just south of the city.									
Eddy County Loco Hills	05	1900MST 1910MST			0	0	50K	0	Thunderstorm Wind (G57)
A utility pole was blown onto a pickup truck by severe thunderstorm winds in Loco Hills. In addition, minor roof damage to several structures and broken tree limbs up to four inches in diameter also were reported.									
Eddy County Loco Hills	05	1905MST 1910MST			0	0	0	0	Hail (0.88)
Dime to nickel size hail accompanied the damaging winds in Loco Hills.									
Eddy County 2 W Loco Hills to Loco Hills	05	1920MST 2100MST			0	0	0	0	Flash Flood
Storm spotters reported flash flooding near Loco Hills. Flowing water covered several secondary roadways. Road graders were used to clear debris after the water receded.									
Eddy County Carlsbad	05	1928MST 2045MST			0	0	0	0	Flash Flood
Local officials reported flash flooding that resulted in high water flowing through many city streets. Lee and Canal Streets were closed due to the flood waters. Water was reported flowing from sidewalk-to-sidewalk through Main Street.									
Lea County 5 N Tatum to 4 E Tatum	05 06	1930MST 0930MST			0	0	30K	0	Flash Flood
Law enforcement officials reported flash flooding that inundated State Highways 125 and 206 near Tatum. In addition, U.S. Highway 380 also was impacted. Flash flooding caused damage to one structure when flood waters entered a residence in the northern part of town. High water continued to flow over several roadways after the heavy rainfall ended as runoff caused the flash flood threat to persist. Local officials continued to report road closures due to high water after sunrise on the morning of the 6th.									
Lea County Hobbs	05	2050MST 2300MST			0	0	0	0	Flash Flood
The Hobbs Police Department reported over one foot of water flowing through several city streets.									

Storm Data and Unusual Weather Phenomena

October 2004

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

NEW MEXICO, Southeast

Lea County

6 SE Lovington **05** **2105MST**
2106MST **0** **0** **0** **0** **Hail (0.88)**

The New Mexico State Police reported dime to nickel size hail at mile marker 66 on State Highway 18.

Lea County

Jal **05** **2140MST**
2300MST **0** **0** **0** **0** **Flash Flood**

Local officials reported flash flooding in Jal. High water was reported flowing through several city streets. The worst flooding was reported in the southern portions of the city.

An active round of severe weather affected southeastern New Mexico during the late afternoon and evening of the 5th. Isolated supercell storms initially tracked across northern Lea County and southern Eddy County. The storms produced large hail and damaging thunderstorm winds. By early evening, a squall line had evolved along the foothills of the Sacramento and Guadalupe Mountains. The line of severe storms propagated east over southeastern New Mexico and absorbed the supercellular convection. Several reports of hail and wind damage were received as the organized linear complex swept across the area. Heavy rainfall associated with the storms produced flash flooding. Localized flash flooding persisted into the morning of the 6th.

NEW YORK, Central

Oneida County

Verona to **02** **1610EST**
Rome **1620EST** **0** **0** **10K** **Thunderstorm Wind (G60)**

Thunderstorm winds downed trees in the town of Verona and also in the the city of Rome.

NEW YORK, Coastal

NONE REPORTED.

NEW YORK, East

NYZ052

Eastern Albany

06 **0300EST**
0700EST **0** **0** **Frost/Freeze**

NYZ032>033-

038>043-047>048-

051-054-058-061-063-

082>084

Northern Herkimer - Hamilton - Southern Herkimer - Southern Fulton - Montgomery - Northern Saratoga - Northern Warren - Northern Washington - Schoharie - Western Schenectady - Western Albany - Eastern Rensselaer - Western Greene - Eastern Columbia - Western Ulster - Northern Fulton - Southeast Warren - Southern Washington

06 **0300EST**
0700EST **0** **0** **Frost/Freeze**

A Canadian airmass descended southward, ushering in the first killing frost and freeze of the season, officially ending the growing season across the Lake George Saratoga region, and elevated terrain to the west and east of the Hudson Valley.

NYZ065>066

Western Dutchess - Eastern Dutchess

23 **0300EST**
0700EST **0** **0** **Frost/Freeze**

A large Canadian high pressure settled in across eastern New York, early on October 23. The sky cleared enough to allow temperatures to fall to the freezing mark or lower across the Mid Hudson Valley, thus ending the growing season in that region.

NYZ049>050-053-

059>060-064

Eastern Schenectady - Southern Saratoga - Western Rensselaer - Eastern Greene - Western Columbia - Eastern Ulster

24 **0300EST**
0700EST **0** **0** **Frost/Freeze**

NYZ052

Eastern Albany

24 **0300EST**
0700EST **0** **0** **Frost/Freeze**

The Canadian High Pressure remained anchored over eastern New York on the morning of October 24. With a clear sky and light wind, temperatures fell to freezing over the remainder of Eastern New York State, including the Greater Capital District, thus ending the growing season everywhere in Albany's County Warning Area. Officially, this was the latest end to the growing season at Albany since 1936, when the first freeze of the fall season, also took place on October 24.

NEW YORK, North

NONE REPORTED.

NEW YORK, West

Lewis County

Port Leyden **02** **1635EST**
1637EST **0.1** **5** **0** **0** **15K** **Tornado (F0)**

An isolated thunderstorm moving across the north country spawned a weak tornado in Port Leyden, Lewis county. The tornado

Storm Data and Unusual Weather Phenomena

October 2004

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

NEW YORK, West

touched down near Denley Road downing several trees and branches. Large concrete blocks were moved. A large cattle feeder was lifted off the ground and moved fifty feet. No injuries were reported.

NORTH CAROLINA, Central

Durham County

Durham 03 2145EST 0 0 Hail (0.88)

Nickel sized hail was reported on Interstate 40 at Exit 278.

Nash County

3 S Samaria 13 1935EST 0 0 Thunderstorm Wind (G50)

A couple of trees were blown down south of Samaria off of Highway 231.

Wilson County

Elm City 13 2035EST 0 0 Thunderstorm Wind (G50)

Trees were blown down near Elm City.

NORTH CAROLINA, Central Coastal

Lenoir County

Kinston 03 1115EST 0 0 Flash Flood
1200EST

Intersection of Highway 258 North and Highway 70 reported flooded.

Jones County

2 NE Pollocksville 13 1150EST 0.1 10 0 0 Tornado (F0)

Public report of brief tornado touchdown along Highway 17.

Onslow County

2 NW Jacksonville 13 1210EST 0 0 Hail (0.75)

Craven County

James City 13 1220EST 0.1 20 0 0 Tornado (F0)

Craven County Emergency Management reported a brief tornado touchdown near James City and the Neuse River.

Pamlico County

2 N Grantsboro 13 1300EST 0.1 20 0 0 Tornado (F0)

Brief tornado touchdown reported at Highway 306 and Paul Farm Road.

Jones County

2 N Pollocksville 13 1310EST 0 0 Thunderstorm Wind (G50)

Trees down along Highway 17 and Ten Mile Fort Road.

Craven County

2 E James City 13 1330EST 0 0 Thunderstorm Wind (G50)

Storm survey revealed trees down along Highway 17.

Pamlico County

Merritt 13 1330EST 0.1 20 0 0 2K Tornado (F0)

Brief tornado damaged some trees and items on house porch.

NORTH CAROLINA, Extreme Southwest

NONE REPORTED.

NORTH CAROLINA, North Coastal

Currituck County

Poplar Branch 15 1045EST 0 0 5K Thunderstorm Wind (G52)

Several large tree limbs on ground, 20 foot Elm tree uprooted, and minor structural damage to a few trailers in trailer park.

NORTH CAROLINA, Northwest and North Central

NONE REPORTED.

NORTH CAROLINA, South Coastal

NONE REPORTED.

NORTH CAROLINA, Southwest

Davie County

Mocksville 24 1600EST 0 0 Thunderstorm Wind (G50)

Spotter and county officials report trees blown down in the county.

Storm Data and Unusual Weather Phenomena

October 2004

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

NORTH CAROLINA, Southwest

Catawba County

4 N Claremont

25

0600EST

0

0

Thunderstorm Wind (G60)

Barn with tin removed. Unanchored ten-by-ten foot aluminum building moved 150 ft and turned over. An anchored wood frame building was moved about 2 feet, and a carport was flipped onto car. Several trees uprooted in a small area.

NORTH DAKOTA, Central and West

NONE REPORTED.

NORTH DAKOTA, East

Richland County

4 W Colfax

23

0106CST

0

0

Hail (0.88)

Sargent County

6 E Havana

28

1340CST

0

0

Hail (1.00)

Richland County

2 SW Hankinson

28

1420CST

0

0

Hail (0.75)

Richland County

Hankinson

28

1420CST

0

0

Hail (0.75)

Four inch drifts of hail accumulated across Hankinson. The hail dented vehicle hoods and siding on homes.

Richland County

3 N Fairmount

28

1440CST

0

0

Hail (0.75)

Ransom County

Lisbon

29

1600CST

0

0

2K

Lightning

Lightning struck the side of a house in Lisbon. The strike blew the telephone box off the side of the house and knocked a hole in the house foundation.

OHIO, East

NONE REPORTED.

OHIO, North

OHZ003-006>008-017 Lucas - Wood - Ottawa - Sandusky - Hancock

30

1200EST

0

0

195K

High Wind (G50)

1600EST

An area of strong low pressure moved east across the region on October 30th. A cold front trailing the low moved across northwestern Ohio during the middle part of the day. Gusty southwest winds behind the front downed many trees and damaged several vehicles and buildings. Peak measured wind gusts included: 58 mph at Toledo Express Airport (Lucas County); 55 mph at Toledo Metcalf Airport (Ottawa County) and 53 mph at the Findlay Airport (Hancock County).

OHIO, Northwest

OHZ004-025

Defiance - Allen

30

1735EST

0

0

5K

Strong Wind

1745EST

Winds across portions of northwestern Ohio were sustained in the 25 to 35 mph range with some areas reporting gusts between 45 to as high as 55 mph. Reports of small branches down and a few downed power lines were received. Some of the measured wind gusts included 55 mph in Lima and 48 mph in Defiance.

OHIO, Southeast

NONE REPORTED.

OHIO, Southwest

OHZ077>078

Hamilton - Clermont

18

1900EST

0

0

Flood

2030EST

A low pressure system tracking through the Ohio Valley brought heavy rain southwest Ohio. Two to three inches of rain fell across the Cincinnati metro area east into Clermont County. This produced flooding of some roads. There were a few evacuations along Duck Creek in Fairfax.

OKLAHOMA, Eastern

Pushmataha County

Sardis

07

1350CST

0

0

Hail (0.75)

Storm Data and Unusual Weather Phenomena

October 2004

October 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>OKLAHOMA, Eastern</u>									
Creek County Sapulpa	07	1900CST 2000CST			0	0	50K		Flash Flood
Heavy thunderstorm rains caused severe street flooding in Sapulpa. Two streets had to be blocked off and several vehicles stalled due to the high water. In addition to the street flooding water also entered a few buildings including a nursing home.									
Tulsa County Tulsa	07	1900CST 2000CST			0	0			Flash Flood
Heavy thunderstorm rains caused severe street flooding across the city of Tulsa. Some streets were barricaded.									
Tulsa County 2.5 SE Tulsa	29	1645CST			0	0			Hail (0.75)
Penny size hail fell near the intersection of 21st Street and Lewis.									
Nowata County 6 ESE Delaware	29	1647CST			0	0			Hail (0.75)
Craig County 3 W Centralia	29	1701CST			0	0			Hail (0.75)
Rogers County 6 E Claremore	29	1734CST			0	0	3K		Thunderstorm Wind (G61)
Thunderstorm winds blew down power lines and trees.									
Mayes County 2 W Pryor	29	1750CST			0	0	3K		Thunderstorm Wind (G61)
Thunderstorm winds estimated at 70 miles an hour blew down power lines.									
Ottawa County Wyandotte	29	1823CST			0	0			Hail (0.75)
Delaware County 2 SW Zena	29	1826CST			0	0			Thunderstorm Wind (G61)
Thunderstorm winds estimated at 70 miles an hour blew down a tree.									
Delaware County 4 W Grove	29	1832CST			0	0	3K		Thunderstorm Wind (G52)
Thunderstorm winds estimated at 60 miles an hour blew down large tree limbs and power lines.									
Mayes County 1 E Locust Grove	29	1914CST			0	0			Hail (1.00)
Mayes County 1 E Locust Grove	29	1914CST			0	0	3K		Thunderstorm Wind (G61)
Thunderstorm winds estimated at 70 miles an hour blew down trees and power lines.									
Muskogee County Ft Gibson	31	1400CST 1545CST			0	0	50K		Flash Flood
Heavy thunderstorm rains caused several housing divisions to be flooded in and around Fort Gibson.									
Cherokee County 5 WSW Hulbert	31	1500CST 1600CST			0	0	1K		Flash Flood
Heavy thunderstorm rains caused water to enter the lodge at Sequoyah State Park.									
Mcintosh County Checotah	31	2350CST 2359CST			0	0			Flash Flood
Heavy thunderstorm rains caused several roads to be closed in the city of Checotah. The flooding continued into the early morning hours of November 1.e									
Muskogee County Muskogee	31	2350CST 2359CST			0	0			Flash Flood
Heavy thunderstorm rains caused several roads to be closed in and around Muskogee. The flooding continued into the morning November 1.									

OKLAHOMA, Extreme Southeast

NONE REPORTED.

Storm Data and Unusual Weather Phenomena

October 2004

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

OKLAHOMA, Panhandle

NONE REPORTED.

OKLAHOMA, Western, Central and Southeast

Dewey County

1 E Hucmac **04** **0450CST** **0** **0** **Hail (0.75)**

Cotton County

7 W Walters to **06** **1438CST** **1** **25** **0** **0** **Tornado (F0)**
6.3 W Walters **1439CST**

Several people observed and photographed this tornado moving northeast across open country. No damage was reported. This was the second tornado produced by a mini-supercell. The same mini-supercell had produced a tornado near Burkburnett, Texas earlier.

OKZ035>036

Kiowa - Jackson

07 **0100CST** **0** **0** **Flood**
2030CST

As heavy runoff in northwestern Kiowa County eventually traveled from smaller tributaries (including Elk Creek) into the North Fork of the Red River, minor rural flooding occurred on the river along the Kiowa/Jackson County border near and at one river forecast point in the area. The North Fork of the Red River near Headrick crested at 15.6 feet, 1.6 feet above flood stage, at 12:00 pm CST on October 7, and remained above flood stage from 1:00 am CST to 8:30 pm CST on October 7. Only lowland areas along the river were flooded during this event. Further downstream on the North Fork of the Red River, the flood crest attenuated and was measured well below flood stage at the USGS river gage site near Tipton, OK on the Jackson/Tillman County border.

Jackson County

Altus **07** **0205CST** **0** **0** **Hail (0.75)**

Hail was reported on the south side of town.

Comanche County

Lawton **07** **0530CST** **0** **0** **25K** **Thunderstorm Wind (G56)**

A strong wind gust peeled the tin roof and siding off of the Veterans Center. There was also roof damage to a school and several homes on the east side of town. Damage was reported by KSWO-TV in Lawton, Oklahoma.

Kiowa County

Lone Wolf **07** **0800CST** **0** **0** **Flash Flood**
1200CST

At 8:00 am CST on October 7, a city official in Lone Wolf, OK in Kiowa County reported that the city park was flooded, and several homes near the park were briefly isolated by floodwaters. Several motorists had driven into high water and stalled their automobiles during the flash flooding.

Kiowa County

2.5 W Hobart **07** **0830CST** **0** **0** **Flash Flood**
1300CST

At 8:30 am CST, the Kiowa County sheriff's office reported that Elk Creek had overflowed its banks and had inundated E1370 (Iris) Road, about 2.5 miles west of Hobart.

Caddo County

Anadarko **07** **0900CST** **0** **0** **Flash Flood**
1300CST

Flash flooding was reported at 9:15 am CST on October 7, as emergency management officials observed floodwaters as deep as 1.5 feet over several roads in Anadarko, OK.

Caddo County

2 W Cyril **07** **0900CST** **0** **0** **Flash Flood**
1300CST

Flash flooding also occurred at 9:00 am CST at a location 2 miles west of Cyril, OK in Caddo County, where floodwaters reached a depth of 1 foot over Oklahoma State Highway 19.

Kiowa County

4 N Roosevelt **07** **0900CST** **0** **0** **Flash Flood**
1300CST

Flash flooding was observed by the Kiowa County sheriff's department over a county road 4 miles north of Roosevelt, OK at 9:00 am CST.

Caddo County

Apache **07** **0930CST** **0** **0** **Flash Flood**
1330CST

Flash flooding was reported in Apache, OK as floodwaters closed several streets in the north part of the town for several hours during the late morning of October 7.

Heavy rainfall over a small multi-county area in southwestern Oklahoma helped produce a significant flood event on October 7. During this period an upper level storm system and associated warm front located along the Red River valley generated a large complex of thunderstorms near and along the front in western north Texas and southwestern Oklahoma.

Storm Data and Unusual Weather Phenomena

October 2004

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

OKLAHOMA, Western, Central and Southeast

The thunderstorms dropped precipitation at a rate of 1-2 inches per hour, with the heaviest accumulations falling in a 12-hour period between midnight and noon on October 7 along with some hail and strong wind gusts. The area where the highest totals occurred included eastern Greer, northern Kiowa, southern Washita, southern Caddo, northern Comanche, and northwestern Grady counties. Storm total rainfall amounts ranged from 2 to 4+ inches, with an isolated area of 4.5 to 7 inches observed over northwestern Kiowa County.

The highest storm total rainfall reports ranged from 2.5 inches to near 7 inches. These measured totals include: Lone Wolf - 6.50 inches; Gotebo 9S - 5.00 inches; Altus-Lugert Dam - 4.97 inches; Hobart Airport - 4.87 inches; Altus Lake Project Office - 4.39 inches; Apache 4ENE - 4.37 inches; Stecker 5S - 4.21 inches; Stecker 3SSE - 4.08 inches; Cyril 3WNW - 3.94 inches; Stecker 2E - 3.81 inches; Cement 3WNW - 3.53 inches; Stecker 5E - 3.40 inches; Sedan - 3.32 inches; Cement 4N - 3.11 inches; Anadarko 3E - 2.92 inches; Anadarko 1NE - 2.91 inches; Fletcher 3NNW - 2.73 inches; and Roosevelt - 2.56 inches. All of these reports came from Kiowa and Caddo counties.

The subsequent heavy runoff produced by these rains generated flash flooding and riverine flooding in southwestern Oklahoma.

Atoka County Caney

29 1722CST 0 0 Hail (0.75)

OREGON, Central and East

ORZ041

Eastern Columbia River Gorge

08 1800PST 0 0 High Wind (G50)

A northwest wind gusted to 58 MPH at Rufus, 22 miles east of The Dalles.

ORZ044

Lower Columbia Basin

18 1345PST 0 0 18K Wildfire
1530PST

A car driving through a pile of tumbleweeds on McClintock Road off interstate 84 near Echo caught fire when tumbleweeds ignited after getting caught under the bottom of the car. Wind then contributed to the fire spreading quickly across the grassland, burning 40-50 acres. The vehicle valued at \$18,000 was a complete loss.

ORZ044

Lower Columbia Basin

30 1335PST 0 0 1K Strong Wind

A wind gust estimated at 45 knots caused a defective power pole on north Highway 395 to lean over on its side. The power pole was held up by other electrical lines, and did not fall onto the highway below. A nearby weather station in Hermiston reported a peak wind gust of 40 MPH at 1:38 PM PST.

OREGON, Northwest

NONE REPORTED.

OREGON, Southeast

NONE REPORTED.

OREGON, Southwest

ORZ021-021-021-021- 021-021-021-021-021

17 0400PST 0 0 High Wind (G64)
0755PST

Reported at Cape Arago.

A High Wind Watch was issued on 10/16 for this storm, but the watch was cancelled at 0300 PST on 10/17. It appeared at the time that the winds would not meet criteria. However, observations later indicated that winds did meet criteria. A warning should have been issued at that time, but it was not.

ORZ021-021-021-021- 021>022-022-022

18 1000PST 0 0 High Wind (G78)
19 0900PST

Recorded at Cape Blanco. Peak sustained wind is recorded, but winds remained above warning criteria during this time interval.

A High Wind Warning was issued for the coastal headlands of Oregon zones 021/022 at 1445 PDT on 10/10/04 and expired at 1250 PDT on 10/19/04. The above observations verified the warning.

ORZ021-021-021

South Central Oregon Coast

25 1200PST 0 0 High Wind (G69)
1900PST

Cape Blanco sustained winds met or exceeded high wind warning criteria continuously during this time interval. The highest recorded sustained wind is given here, it was recorded at 1600 PDT.

Storm Data and Unusual Weather Phenomena

October 2004

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

OREGON, Southwest

A High Wind Warning was issued for the coastal headlands of Oregon zone ORZ021/022 at 1404 PDT on 10/25/04 and expired at 0125 PDT on 10/26/04. The above observations verified the warning. The first verifying winds actually occurred before the warning was issued, and the last verifying wind was recorded at 1900 PDT on 10/25/04.

ORZ030>031-031-031

Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County

28	0653PST	0	0	Heavy Snow
	0933PST			

Quartz Mountain SNOTEL site recorded 0.40 inches of water equivalent from 0000 PST until 0900 PST.

Heavy snow developed overnight in the warning area...but reports did not arrive until the following morning. Upon receipt of the first reports, a Winter Storm Warning was issued for Oregon zones ORZ030/031 at 0741 PDT and cancelled at 1430 PDT. The warning verified, but with zero lead time.

PACIFIC

NOT RECEIVED.

PACIFIC OCEAN

**San Mateo Pt To
Mexican Bdr Out
30Nm**

1 ESE Point Loma	21	0802PST	0	0	Waterspout
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A pilot spotted a waterspout 2 miles southwest of North Island.

**Outer Waters From
Santa Cruz Is To San
Clemente Is To 60Nm
Offshore**

1 S Santa Cruz Island	27	0923PST	0	0	Waterspout
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**E Santa Barbara Chnl
Pt Conception To Pt
Mugu**

8 S Santa Barbara Har	27	0930PST	0	0	Waterspout
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**Inner Waters From
Pt Mugu To San
Mateo Pt Ca**

20 ESE Point Mugu Na	27	1053PST	0	0	Waterspout
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A cold and unstable air mass produced thunderstorms and waterspouts across the coastal waters of Southern California.

PENNSYLVANIA, Central

NONE REPORTED.

PENNSYLVANIA, East

**Delaware County
Upper Darby**

29	2200EST	0	0	0	Lightning
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A lightning strike blew a transformer at the West Brook Park Elementary School in Upper Darby Township and caused a power failure on Friday night the 2911th. Back-up generators were activated and school was held on Monday November 1st. Substitute food was brought to the school and areas which did not have lightning were not used. Repairs to the electrical system were completed the evening of the 1st.

PENNSYLVANIA, Northeast

NONE REPORTED.

PENNSYLVANIA, Northwest

NONE REPORTED.

PENNSYLVANIA, West

NONE REPORTED.

PUERTO RICO

**North Central
Vega Baja**

09	1706AST	0	0	Heavy Rain
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Heavy rain and half an inch size hail, was reported along road 671 and the intersection with Highway 2 in Vega Baja.

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
PUERTO RICO									
San Juan And Vicinity									
Toa Baja	09	1730AST 1800AST			0	0			Heavy Rain
									Heavy rain, pea size hail and strong gusty winds were reported along the th section of Levittown in the municipality of Toa Baja.
PRZ005									
North Central	09	1739AST 1800AST			0	0	5K		Strong Wind
									Near severe thunderstorm over the coastal waters of Vega Baja produced half an inch size hail along Highway 2 and the intersection of road 671. Strong gusty winds blew off some house roofs in Vega Baja.
San Juan And Vicinity									
San Juan	11	1310AST 1610AST			0	0			Heavy Rain
									65th Infantry Avenue was reported flooded.
Central Interior									
Ciales	12	1600AST 1800AST			1	0	25K		Flash Flood
									Heavy rains over the high terrain of the Toro Negro River basin caused a rapid rise of the river that caused the loss of life of a 39 year old woman which drowned while attempting to transit a low water crossing on Road 615. Six teenagers managed to escape from the same vehicle.
									F39VE
Central Interior									
Coamo	13	1400AST 1600AST			0	0			Flash Flood
									Heavy rains caused river Coamo Arriba to rapidly rise at the Playita sector, overtaking three people which were rescued later.
Eastern Interior									
Comerio	13	1400AST 1600AST			0	0	3K		Flash Flood
									An automobile and its occupants were swept by a river Rio Hondo along road 776, Las Pailas sector, in Barrio Rio Hondo of Comerio municipality. Persons were rescued.
Southwest									
Cabo Rojo	16	1817AST 1845AST	0.1	.5	0	0			Tornado (F0)
									Spotter reported F0 tornado along northwest part of Cabo Rojo.
PRZ001									
San Juan And Vicinity	26	1500AST			2	0			Heavy Surf/High Surf
									Two persons drowned in the Piñones, Vacía Talega Beach overtaken by strong undertow.
									F58IW, F37IW
Central Interior									
Naranjito	31	1430AST 1830AST			0	0			Heavy Rain
									Water was reported covering a bridge in Barrio Lomas.
San Juan And Vicinity									
Catano	31	1600AST 1800AST			0	0			Flash Flood
									Flooding was reported at Barriada Juana Matos, Callejon Gomez. when La Malaria creek overflowed its banks.
Northeast									
Loiza	31	2200AST 2359AST			0	0	2K		Flash Flood
									Two streets in Villas de Loiza were reported flooded by a small stream that runs behind the neighborhood. The Villa Santos sector was reported flooded due to small stream Los Negritos that runs nearby. A home at La Torre sector was flooded was flooded when the Pinones lagoon level rose and the high swells blocked the flow to sea.

Storm Data and Unusual Weather Phenomena

October 2004

		Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		October 2004	
Location	Date				Killed	Injured	Property	Crops	Character of Storm	

PUERTO RICO

Northeast

Canovanas

31 2259AST 2359AST 0 0 2K Flash Flood

Several sectors of Canovanas municipality experienced flooding during the late evening of Sunday. Several home patios were flooded under two feet of water at Las Delicias sector of Barrio San Isidro. A home at River valley park was reported flooded. Street number 10 at Monteverde near road 188 was flooded. In Campo Rico, near road 957 and 185, nearing Palmasol, the river rose over the Moreno bridge, and reached the vocational school, and the Cambalache sector near road 962.

Northeast

Rio Grande

31 2300AST 2359AST 0 0 Heavy Rain

Marginal road at Palmer was partially flooded.

San Juan And

Vicinity

Carolina

31 2300AST 2359AST 0 0 17K Flash Flood

Urban flooding was reported in the Vistamar neighborhood. Seventeen homes were reported flooded in Segovia street. Also, at Estancias del Parque, in Canovanillas, a small stream was reported out of its banks.

RHODE ISLAND

NONE REPORTED.

SOUTH CAROLINA, Central

Lexington County

Leesville

03 1330EST 0 0 0 Hail (0.88)

Local police reported nickel size hail in Leesville.

Chesterfield County

2 W Chesterfield

03 1425EST 0 0 0 0 Thunderstorm Wind (G50)

Sheriff reported a couple of trees down on hwy 265 between Ruby and Chesterfield.

Lee County

8 SW Lynchburg

03 1458EST 0 0 0 Hail (0.88)

SKYWARN spotter reported nickel size hail 2 miles east of Mayesville on hwy 527.

Sumter County

17 E Sumter

03 1505EST 0 0 0 0 Hail (0.75)

Public reported 3/4 inch hail in the Shiloh area near I-20 and exit 141.

Clarendon County

12 SE Manning

03 1715EST 0 0 0 0 Hail (0.75)

River Road Grocery reported 3/4 in hail.

SOUTH CAROLINA, North Coastal

Marion County

5 N Centenary

03 1605EST 0 0 Thunderstorm Wind (G52)

A spotter reported large limbs down.

Georgetown County

Pawleys Is

03 1830EST 2000EST 0 0 Heavy Rain

The Georgetown fire department reported several roads flooded.

SOUTH CAROLINA, Northwest

NONE REPORTED.

SOUTH CAROLINA, South Coastal

NONE REPORTED.

SOUTH DAKOTA, Central and North

Hamlin County

5 WNW Hayti

22 1846CST 0 0 Hail (1.00)

Marshall County

9 ENE Kidder

28 1327CST 0 0 Hail (1.25)

Sully County

21 WNW Onida

29 0823CST 0 0 Hail (0.75)

Storm Data and Unusual Weather Phenomena

October 2004

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

SOUTH DAKOTA, Central and North

Sully County

1 N Agar 29 0925CST 0 0 Hail (1.00)

Sully County

3 N Agar 29 0929CST 0 0 Hail (0.88)

Potter County

8 SW Gettysburg 29 0940CST 0 0 Hail (0.88)

SDZ003-015-033>037-045-048-051 Corson - Dewey - Stanley - Sully - Hughes - Hyde - Hand - Jones - Lyman - Buffalo

29 1930CST 0 0 High Wind (G56)
30 0300CST

High winds gusting over 60 mph blew across central and north central South Dakota with no damage reported.

SOUTH DAKOTA, Southeast

SDZ038-050-052>053-057>060-063>065-068>070 Beadle - Gregory - Jerauld - Sanborn - Brule - Aurora - Davison - Hanson - Charles Mix - Douglas - Hutchinson - Bon Homme - Yankton - Clay

29 2300CST 0 0 High Wind (G53)
30 0500CST

High winds behind a cold front produced sustained winds of around 40 mph with gusts to about 60 mph for about three hours. The winds caused minor tree damage over the area.

SOUTH DAKOTA, West

SDZ024

Northern Black Hills

29 0800MST 0 0 0 0 Heavy Snow
2100MST

A strong low pressure system developed and moved across the Central Plains, bringing heavy snow to parts of the Northern Black Hills. Rain and snow began to fall during the morning hours across Northeast Wyoming and the Black Hills. The heaviest snows fell across the Northern Black Hills, where precipitation became upslope enhanced in the afternoon and early evening. The highest snowfall totals were reported in the Lead and Deadwood area, where 6 to 10 inches fell.

SDZ001>002-013>014-026-031>032-043>044-046>047-049-072>073 Harding - Perkins - Northern Meade Co Plains - Ziebach - Rapid City - Pennington Co Plains - Haakon - Jackson - Bennett - Mellette - Todd - Tripp - Sturgis / Piedmont Foothills - Southern Meade Co Plains

29 1100MST 0 0 0 0 High Wind (G61)
30 0000MST

A strong low pressure system developed and moved across the Central Plains, bringing strong northwest winds to the Western and South Central South Dakota Plains. Sustained winds of 30 to 50 mph, with gusts to 70 mph, were reported across these areas during the afternoon and evening hours.

TENNESSEE, Central

Maury County

3.5 SW Spring Hill 12 0100CST 0 0 30K Lightning

20 heads of cattle were killed by a lightning strike at the University of Tennessee Experimental Farm.

Montgomery County

Palmyra 14 1616CST 0 0 5K Thunderstorm Wind (G50)

There were reports of minor wind damage to out buildings, carports, a garage from Palmyra...Hilltop and Sango.

Montgomery County

Hilltop 14 1622CST 0 0 5K Thunderstorm Wind (G50)

Several homes sustained structural damage. Funnel clouds were reported in the area.

Montgomery County

Sango 14 1632CST 0 0 10K Thunderstorm Wind (G50)

A home that was under construction sustained wind damage. 3 construction workers built a fire to keep warm near the home. The home caught fire and 3 men, along with a rescuer, were injured.

Lawrence County

.8 NE Peppertown to 1.5 NE Peppertown 18 1715CST 0.7 200 0 0 15K Tornado (F1)
1716CST

A strong F1 tornado demolished a mobile home. One witness in a newspaper account said the tornado picked the house trailer up, lifted it above the treetops, spun it around 3 or 4 times, and then slammed it to the ground with brutal force. Another nearby mobile home which was used for storage was overturned. Several homes sustained roof damage. The tornado was part of a storm complex from Northern Alabama, that had spawned tornadoes, moved northeast into Lawrence County. The tornado dropped down on French Road, and continued northeast for 0.7 miles, and ended near the intersection of Highway 227 and Hide-Away Lane. Newspaper article stated that the tornado damaged 8 structures, six of them were residences.

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
<u>TENNESSEE, Central</u>							
Giles County 13 SW Pulaski	18	1750CST			0 0	3K	Thunderstorm Wind (G70)
			Roof blown off a house on Lexington Highway				
Benton County North Portion	18	2000CST 2005CST			0 0	1K	Thunderstorm Wind (G50)
			EMA Director reported a couple of trees were blown down.				
Lewis County Hohenwald	18	2021CST			0 0		Hail (0.75)
Lewis County Hohenwald	18	2028CST			0 0		Hail (0.88)
Humphreys County Waverly	18	2201CST			0 0		Hail (0.88)
Dickson County 5 N Charlotte	18 19	2221CST 0130CST			0 0	1K	Flash Flood
			6 to 12 inches of deep water on Highway 48 near Killian Springs Rd.				
Benton County North Portion	18	2230CST 2345CST			0 0	1K	Flash Flood
			EMA Director reported northern and middle sections of the county had flooded roads. Schools were closed on Tuesday Oct. 19.				
Dickson County Dickson	18 19	2245CST 0130CST			0 0	20K	Flash Flood
			The Hidden Valley Apartments in Dickson were flooded with 18 to 20 inches of water due to heavy rains. 16 units of the apartment had water. The Hidden Valley Apartments is located at 405 Spring Street. 2 feet of water jumped a retaining wall and rolled into the apartments. Soem residents were evacuated and placed at a nearby Holiday Inn by the Red Cross.				
Davidson County 2 S Nashville	18 19	2254CST 0400CST			0 0	1K	Flash Flood
			Major flooding on U.S. Highway 70 South and Old Harding Rd.				
Dickson County 7 N Charlotte	18 19	2309CST 0130CST			0 0	5K	Flash Flood
			A home was flooded at 1098 Old Highway 48.				
Wilson County 14 S Lebanon	19	0010CST			0 1	5K	Thunderstorm Wind (G70)
			Two mobile home trailers and a guard shack were blown over near Nashville Superspeedway off of U.S. Highway 231. The guard was treated and released from U.M.C.				
Davidson County 4 S Nashville	19	0111CST 0400CST			0 0	1K	Flash Flood
			Harding and Hillwood Road flooded.				
Davidson County 5 SW Nashville	19	0112CST 0400CST			0 0	5K	Flash Flood
			Vehicles trapped in flooded road at Edmonson Pike and Blackman Rd.				
Rutherford County 6 N Murfreesboro	19	0129CST 0300CST			0 0	1K	Flash Flood
			Water reported over road on Jefferson Pike just west of Walter Hill.				
Davidson County Nashville	19	0136CST 0400CST			0 0	5K	Flash Flood
			Mill Creek was out of its banks and into nearby homes.				

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
TENNESSEE, Central							
Lawrence County							
Lawrenceburg	19	0152CST 0800CST			0 0	100K	Flash Flood
Urban street flooding was occurring. At 212 AM CST water was getting into homes in Lawrenceburg. A newspaper story said water rescues were made by the Swift Water Rescue Team, including one at Galbreath Subdivision, Jackson Street, Kathy Drive, Weakley Creek Road and Maple Avenue in Lawrenceburg. Other rescues were done on Prosser Road. 2 people were rescued at St. Joseph on U.S. Highway 64, as their car was swept 15 to 20 feet off the side of the roadway. As much as 5 inches of rain fell in 2 hours, and in some places 6 inches were reported. A water main burst near Lawrenceburg, in the Stud Horse Canyon area just off Highway 64. The water main burst made matters worse. Water pressure became low to many businesses and residences. Schools were closed Tuesday and Wednesday, October 19th and 20th. Some roads in Lawrence County were completely washed out.							
Coffee County							
3 W Tullahoma to 2 W Tullahoma	19	0155CST 0156CST			0 0	50K	Thunderstorm Wind (G50)
200 trees fell in the western part of Tullahoma. The storm appeared to have started near Wilson Avenue and Braggs, downing 5 trees. The storm continued to march east. 50 homes received some damage either from fallen trees or flooding. 11 homes received major damage from fallen trees. 3 homes received damage from flooding. The city cemetery received damage to headstones due to trees falling on them. Areas affected by fallen trees were Cowan Lane, Braggs Circle, Cumberland Avenue, Crestwood Drive, Sharondale, and Bel-Aire. High winds blew an aluminum storage shed from 207 Ashley Court to the front of 201 Ashley Court, which is about 100 yards.							
Coffee County							
Tullahoma	19	0200CST			0 0	10K	Lightning
Lightning struck a house in the Westwood area. The fire was contained to 2 rooms.							
Wayne County							
Countywide	19	0230CST			0 0		Thunderstorm Wind (G50)
Several trees were down around the county.							
Lawrence County							
South Portion	19	0240CST 0830CST			0 0	5K	Flash Flood
Streets were flooded in Lawrenceburg. Several roads were flooded in Iron City, St. Joseph and Loretto.							
Coffee County							
Tullahoma	19	0250CST 0700CST			0 0	50K	Flash Flood
Vehicles were trapped in flooding water on Highway 55 in Tullahoma. By 0320 AM CST, numerous streets were flooded along with 2 vehicles. By 0525 AM CST, widespread flooding was occurring in Tullahoma by law enforcement. Storm drains had backed up. One vehicle stalled in high water at Waggoner Park. The Tullahoma Water Plant received 5.34 inches. One estimate in an EMA report placed the rainfall at about 8 inches in a few hours. An EMA report said 3 homes were damaged due to flooding.							
Wayne County							
Lutts	19	0252CST 0900CST			0 0	1K	Flash Flood
Flooding was occurring in Lutts and Highway 203.							
Coffee County							
Manchester	19	0254CST 0700CST			0 0	1K	Flash Flood
Flooding was occurring on U.S. Highway 41A in Manchester with 6 to 8 inches of water.							
Wayne County							
Waynesboro	19	0320CST 0900CST			0 0	50K	Flash Flood
50 homes had 18 to 20 inches of water in them in and around the city of Waynesboro. The Waynesboro water treatment plant was flooded with six feet of water. It was the second time in 2 years that the water plant was breached by flooding waters. The water plant lies along the Green River. On Oct. 19, Waynesboro was under a state of water emergency. Under a water emergency, water rationing is imposed. All non-essential businesses, factories and restaurants are closed. All residential customers are asked to voluntarily conserve water for essential uses only. It would take 2 or 3 days before water service could be restored. Donald Miller, who lives at 1751 Downing Hollow Road, which is about 6 miles south-southwest of Waynesboro, measured 9.6 inches of rain in his rain gage during this rain event.							
Bedford County							
8 S Shelbyville	19	0330CST 0700CST			0 0	1K	Flash Flood
Flooding of roads were reported at Woodlawn, Sugar Creek and Bug Scuffle.							

Storm Data and Unusual Weather Phenomena

October 2004

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

TENNESSEE, Central

Wayne County

North Portion

19 0345CST 0 0 50K Flash Flood
0900CST

Flooding of 35 homes along the Green River in the northern half of the county. The hardest hit area was Green River Drive and Cantrell Lane in Waynesboro. The Green River came out of its banks and flooded the Waynesboro Water Treatment Plant with 4 feet of water. The water heavily damaged the plant, including the equipment and computers. Wayne County schools were closed because of high water on roads and drinking water problems.

Giles County

Countywide

19 0500CST 0 0 10K Flash Flood
1300CST

Many roads were flooded and swift water rescue was done on Weakley Creek Road in western Giles County and at Big Dry Creek Road. Areas in Minor Hill were also flooded. Roads that required attention, that is clearing debris, were Shoal Creek Road, Dog Branch Road, and Puncheon Road and Jimmy Black Road. Schools were closed on Tue. Oct. 19 in Giles County because of high water problems.

Governor Phil Bredesen has requested a federal designation of agricultural disaster for 22 counties in East and Middle Tennessee to help farmers who suffered agricultural and property damages as a result of recent storms in September and October. The results from the remnants of Frances and Ivan, which brought high winds and heavy rains, took a toll on the farmers. The counties in Middle Tennessee affected are Cannon, Giles, Lawrence, Lincoln, Macon, Marion, Rutherford, Sequatchie and Wayne. Some farmers lost as much as 90% of their crop. These crops included corn, soybean, tobacco, and other vegetables. Under a USDA Secretarial Disaster Designation, farmers who sustained sufficient losses are eligible to apply for federal aid in the form of low-interest emergency loans and other possible assistance.

Perry County

Flat Wood

26 1600CST 0 0 Thunderstorm Wind (G50)

TDOT reported large limbs were blown down.

TENNESSEE, East

Marion County

2 NW South Pittsburg

19 0345CST 0 0 2K Thunderstorm Wind (G60)
0350CST

1 tree down on State Route 156

Sequatchie County

3 NW Dunlap

19 0350CST 0 0 2K Thunderstorm Wind (G60)
0400CST

1 tree down near Fredonia

Marion County

1 NE Whitwell

19 0355CST 0 0 2K Thunderstorm Wind (G60)
0410CST

1 tree down on Teague Rd near Whitwell

Sequatchie County

Dunlap

19 0355CST 0 0 2K Thunderstorm Wind (G60)
0410CST

1 tree down on Phelps Rd in Dunlap

Marion County

8 SSE Whitwell

19 0400CST 0 0 2K Thunderstorm Wind (G60)
0410CST

1 tree down across Mullins Cove Rd.

TENNESSEE, South Central

Lincoln County

Dellrose

19 0330CST 0 0 Flash Flood
0600CST

Several inches of water was over the road along Highway 273.

Lincoln County

Fayetteville

19 0330CST 0 0 Flash Flood
0600CST

Several inches of water was over the roads along Main Street and Edison Street in Fayetteville.

Lincoln County

7 S Fayetteville

19 0340CST 0 0 Flash Flood
0600CST

Several inches of water was over the road along Highway 110.

Storm Data and Unusual Weather Phenomena

October 2004

October 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>TENNESSEE, South Central</u>									
Moore County Lynchburg	19	0400CST 0600CST			0	0			Flash Flood
The Moore County News reported that water was over several roads several inches deep in Lynchburg and along Mulberry creek.									
Lincoln County 9 S Fayetteville	19	0420CST 0422CST			0	0			Thunderstorm Wind (G60)
Several power lines were blown down by thunderstorm winds.									
Franklin County Winchester	19	0423CST 0600CST			0	0			Flash Flood
Several inches of water was covering the road along Lynchburg highway near Reuben grocery store in the Winchester area.									
<u>TENNESSEE, West</u>									
Shelby County Memphis	18	1051CST 1055CST			0	0	0.50K		Hail (1.50)
Shelby County Frayser	18	1110CST 1330CST			0	0	1K		Flash Flood
One road was covered in 2 feet of water.									
Shelby County Eads	18	1130CST 1135CST			0	0	10K		Thunderstorm Wind (G60)
A house had some of its siding torn off. A power pole was blown down.									
Obion County Rives	18	1834CST 1840CST			0	0	75K		Thunderstorm Wind (G60)
A pavilion at Rives City Park was destroyed. A church was badly damaged. Several homes and at least three cars were damaged. Many trees were knocked down.									
Weakley County 4 N Dresden	18	1940CST 1945CST			0	0	25K		Thunderstorm Wind (G60)
A roof was partially torn off of a house. Numerous trees were blown down.									
Chester County Henderson	18	1945CST 1950CST			0	0	0.01K		Hail (0.75)
Dyer County 1 NE Evansville to Dyersburg	18	1950CST 2003CST	0.5	100	0	1	1M		Tornado (F1)
The tornado touched down just west of Dyersburg and moved east into the northwest part of the city. Three mobile homes were destroyed. The roof and facade of a manufacturing plant was damaged. Seven other businesses were damaged. Twenty signal lights were destroyed. Many trees, power lines and power poles were blown down.									
Gibson County Milan to Gibson	18	2005CST 2015CST			0	0	10K		Thunderstorm Wind (G55)
Numerous trees were blown down.									
Henry County 2 E Como to Paris	18	2012CST 2029CST	8.3	300	0	1	800K		Tornado (F1)
The tornado touched down in the western part of Henry county and moved east. An outdoor sports facility and two mobile homes were destroyed. The Henry County Courthouse was damaged when a 350 foot tall tree fell on it. Nearly ninety homes and one factory were damaged. Many trees were knocked down with some of the trees falling on some homes. Two persons were injured when a tree fell on their pickup truck as they were driving.									
Gibson County Milan	18	2123CST 2135CST			0	0	1.3K		Hail (1.75)
Carroll County Atwood	18	2145CST 2150CST			0	0	10K		Thunderstorm Wind (G50)
Several trees and power lines were blown down.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
TENNESSEE, West									
Crockett County									
5 SE Friendship	18	2200CST 2205CST			0	0	10K		Thunderstorm Wind (G50)
Several trees and power lines were blown down.									
Shelby County									
Memphis	19	0330CST 0530CST			0	0	1K		Flash Flood
Several roads were covered with water.									
Madison County									
Jackson	19	1409CST 1415CST			0	0	0.05K		Hail (0.88)
Madison County									
1 E Mc Kellar Fld	19	1415CST 1417CST	0.5	25	0	0	1K		Tornado (F0)
A tornado briefly touched down just east of McKellar Airport producing little damage.									
Chester County									
Montezuma	19	1519CST 1525CST			0	0	0.75K		Hail (1.75)
Hardin County									
6 S Savannah	19	1701CST 1705CST			0	0	0.10K		Hail (1.00)
Carroll County									
2 N Huntingdon	23	1536CST 1540CST			0	0	5K		Thunderstorm Wind (G50)
Several trees were knocked down.									
Lauderdale County									
Gates	24	1030CST 1230CST			0	0	1K		Flash Flood
Several streets were flooded.									
TEXAS, Central									
Brown County									
Brownwood	01	1735CST			0	0	6K		Thunderstorm Wind (G52)
Runnels County									
Ballinger	01	1858CST			0	0	8K		Thunderstorm Wind (G57)
Tractor trailer was jackknifed due to the winds.									
Irion County									
Mertzon	10	0215CST			0	0			Hail (1.00)
Tom Green County									
5 SW Christoval	10	0245CST			0	0			Hail (1.50)
Nolan County									
Maryneal	13	1715CST			0	0			Thunderstorm Wind (G52)
Kimble County									
Roosevelt	22	1935CST			0	0	8K		Thunderstorm Wind (G53)
Roof blown off of a home.									
Kimble County									
5 W Junction	22	1940CST			0	0	1K		Hail (1.75)
Car windsheilds were smashed in.									
Taylor County									
Abilene	25	2134CST 2334CST			0	0	15K		Flash Flood
Several cars were stranded in high water and water rescues had to be performed.									
Callahan County									
Clyde	25 26	2312CST 0015CST			0	0			Flash Flood
Sutton County									
Countywide	26	1330CST 1530CST			0	0			Flash Flood
Numerous roads were flooded for several hours across Sutton County. Mainly at low water crossings.									

Storm Data and Unusual Weather Phenomena

October 2004

October 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>TEXAS, Central</u>									
Coleman County									
16 NW Coleman	30	1747CST			0	0			Hail (1.00)
<u>TEXAS, Central Southeast</u>									
Polk County									
Onalaska	04	1234CST			0	0			Thunderstorm Wind (G50)
Tree down									
Polk County									
2 W Alabama/Coushat	04	1253CST			0	0			Thunderstorm Wind (G55)
Trees down on Camp Ruby Road.									
Harris County									
3 S South Houston	04	1557CST			0	0	20K		Hail (1.00)
Quarter-size hail between Dixie Farm Road and Beltway 8 on Interstate 45.									
Galveston County									
Friendswood	04	1600CST	0.3	25	0	0	40K		Tornado (F0)
18 wheeler overturned at intersection of FM 518 and FM 2351. Trees snapped and numerous fences damaged with widespread power outages in and around city. 16 foot boat flipped over in residential yard.									
Galveston County									
Friendswood	04	1603CST			0	0	150K		Hail (1.00)
Quarter-size hail in Coward Creek subdivision.									
Harris County									
Friendswood	04	1603CST			0	0	50K		Hail (0.88)
Nickel-size hail at the intersection of Blackhawk Road and Whittier Oaks Road.									
Galveston County									
Friendswood	04	1605CST			0	0	150K		Hail (1.75)
Golfball-size hail at Friendswood Police Station on FM 518.									
Brazoria County									
.1 E Pearland	04	1612CST			0	0			Thunderstorm Wind (G52)
Galveston County									
League City	04	1615CST			0	0	75K		Thunderstorm Wind (G56)
Widespread tree and fence damage along with minor residential roof and home damage at FM 518 and Bay Area Blvd near Hall Elementary School in the Countyside South subdivision.									
Galveston County									
Friendswood	04	1628CST			0	0	150K		Hail (1.75)
Roof damage to numerous homes 2 miles SW of the intersection of FM 518 and FM 528.									
Austin County									
3 NE Bellville	07	1625CST			0	0			Funnel Cloud
Sighted on Hwy 159 E between Bellville and the Waller County line, or between Oil Field Road and Walton Road.									
Polk County									
2 E Corrigan	24	1800CST 2115CST			0	0			Flash Flood
FM 352 E of Corrigan impassable due to flooding.									
<u>TEXAS, Extreme West</u>									
Hudspeth County									
17 W Sierra Blanca	03	1820MST 1825MST			0	0			Hail (0.88)
Hudspeth County									
Dell City	05	1810MST			0	0			Hail (1.75)
Hudspeth County									
6 E Dell City	05	1830MST 1845MST			0	0	2K		Hail (2.00)
A supercell moved over Dell City and produced golf ball to hen's egg size hail, destroying windshields and damaging a roof/skylights east of town. A funnel cloud was also sighted from the storm when it was 13 miles northwest of Dell City.									
Hudspeth County									
5 W Sierra Blanca	05	2118MST			0	0			Hail (1.00)
Hudspeth County									
5 W Salt Flat	06	2115MST			0	0			Hail (0.88)
Hudspeth County									
6 SE Ft Hancock	11	1912MST			0	0			Hail (0.88)

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004	
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Killed	Injured	Estimated Damage	Property	Crops	Character of Storm
<u>TEXAS, Extreme West</u>										
Hudspeth County										
Sierra Blanca	11	1955MST 2005MST			0	0				Hail (1.00)
<u>TEXAS, Mid - South</u>										
NONE REPORTED.										
<u>TEXAS, North</u>										
Tarrant County										
Benbrook	01	1815CST			0	0				Thunderstorm Wind (G57)
Large tree limbs were blown down.										
Comanche County										
6 SSE Gustine	01	1930CST			0	0				Hail (0.75)
Comanche County										
7 SSE Gustine	01	2015CST			0	0				Hail (1.75)
Golfball size hail occurred at Energy.										
Coryell County										
Gatesville to 10 NE Gatesville	01	2030CST 2055CST			0	0	150K			Thunderstorm Wind (G61)
In Gatesville at least 6 mobile homes received severe damage and one was flipped over and destroyed. Several outbuildings were also destroyed, and there were numerous reports of trees and powerlines blown down. Several small outbuildings were destroyed and at least three large trees were blown down northeast of Gatesville.										
Bell County										
Belton	01	2036CST			0	0				Hail (0.88)
Hamilton County										
5 W Hamilton	01	2038CST			0	0				Hail (1.75)
Hamilton County										
2 N Hamilton	01	2039CST			0	0				Hail (0.88)
Mclennan County										
5 NW Crawford	01	2100CST			0	0				Thunderstorm Wind (G52)
Large tree limbs were blown down.										
Milam County										
Rockdale	01	2242CST			0	0				Thunderstorm Wind (G50)
Trees were blown down by high winds.										
Denton County										
Denton	04	0400CST			0	0	10K			Lightning
Lightning struck two homes, causing moderate electrical damage to one, and blowing a hole in the roof of the other.										
Kaufman County										
Forney	04	0542CST			0	0				Hail (1.00)
Kaufman County										
Kaufman	04	0654CST			0	0				Hail (0.75)
Denton County										
Denton	04	0700CST 0900CST			0	0				Flash Flood
At least 8 roads were temporarily closed by high water. There was one high water rescue and 5 cars were abandoned in high water.										
Kaufman County										
Terrell	04	0700CST 0800CST			0	0				Flash Flood
At least four cars were stranded in high water in town.										
Kaufman County										
1 E Forney	04	0542CST			0	0				Hail (1.00)
Henderson County										
Payne Springs	06	1855CST			0	0	2K			Thunderstorm Wind (G52)
A barn was destroyed by high winds.										
Kaufman County										
10 N Mabank	06	1945CST			0	0				Thunderstorm Wind (G50)
Trees were blown down by high winds.										

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
<u>TEXAS, North</u>							
Henderson County							
Payne Springs	06	1855CST			0 0	10K	Thunderstorm Wind (G52)
			A barn was destroyed by high winds.				
Kaufman County							
1 N Mabank	06	1945CST			0 0		Thunderstorm Wind (G52)
			Trees were blown down by high winds.				
Mclennan County							
Waco	22	2230CST 2330CST			0 0		Flash Flood
			Flooding was reported along Highway 6 west of Waco. 5.75 inches of rain was reported 7 miles southwest of Waco.				
Bell County							
Hood Afb	22	2240CST 2340CST			0 0		Flash Flood
			Numerous roads were closed due to high water.				
Hood County							
10 NE Granbury	24	1537CST			0 0		Hail (1.75)
Hill County							
2 NE Aquilla	25	0930CST 1230CST			0 0		Flash Flood
			All low lying areas were under water and creeks were flooding.				
Hill County							
5 S Hillsboro	25	1136CST 1230CST			0 0		Flash Flood
			Interstate 35 on ramps closed at Chatt due to high water.				
Hill County							
5 W Hillsboro	25	1136CST 1230CST			0 0		Flash Flood
			Flooding was reported on Highway 22 at Peoria.				
Hill County							
Hillsboro	25	1305CST 1405CST			0 0		Flash Flood
			The east service roads of Interstate 35 were closed at Highway 22 and FM 286 due to flooding.				
Comanche County							
6 S De Leon	30	2008CST			0 0		Hail (1.00)
			Occurred on the north shore of Lake Proctor.				
Comanche County							
5 S De Leon	30	2008CST			0 0		Thunderstorm Wind (G52)
Tarrant County							
Ft Worth	30	2137CST			0 0		Hail (1.00)
			Occurred at the intersection of Riverside and Carson.				
Tarrant County							
North Richland Hills	30	2141CST			0 0		Hail (0.88)
Tarrant County							
Haltom City	30	2143CST			0 0		Hail (0.88)
Tarrant County							
Watauga	30	2145CST			0 0		Hail (0.88)
Dallas County							
Coppell	30	2220CST			0 0		Hail (1.00)
<u>TEXAS, North Panhandle</u>							
Dallam County							
7 NE Perico	03	1545CST			0 0		Hail (0.75)
Dallam County							
1 N Dalhart	03	1608CST			0 0		Hail (0.75)
Hartley County							
1 S Dalhart	03	1635CST			0 0		Hail (1.25)
Hartley County							
5 NE Hartley	03	1720CST			0 0		Hail (0.75)
			Severe thunderstorms over the northwest Texas panhandle during the late afternoon and early evening hours produced large hail.				

Storm Data and Unusual Weather Phenomena

October 2004

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

TEXAS, North Panhandle

Randall County

Canyon to	05	2200CST			0	0	68K		Flash Flood
16 ESE Canyon	06	0100CST							

Thunderstorms with very heavy rainfall produced flash flooding across the south-central Texas panhandle during the late evening and into the early morning hours. In the Hunsley Hills area of Canyon...two and a half feet of water was reported flowing hard across the low water crossing at Hunsley Hills Boulevard causing the road to be impassable. Some residents of Canyon reported flooded basements. Southeast Park in Canyon was closed due to the heavy rainfall. Also...the low water crossings at Palo Duro Canyon State Park were closed as four to six inches of water reported the road.

TEXAS, Northeast

NONE REPORTED.

TEXAS, South

NONE REPORTED.

TEXAS, South Central

Hays County

Countywide	02	0430CST			0	0			Flash Flood
		1100CST							

Showers and thunderstorms spread general 2 to 3 inch rain totals over Hays County. Amounts of up to 4 inches were reported just west of San Marcos with the highest totals near 6 inches along the Hays-Comal County line. Numerous low water crossings were under water and closed through the morning, including FM12 and FM32.

Travis County

East Portion	02	0430CST			0	0			Flash Flood
		1100CST							

Heavy rainfall over eastern Travis County caused flash flooding that sent water over the IH-35 frontage road at the 2900 block. The east part of the county received a general 1 inch rainfall with Pflugerville reporting nearly 4 inches and the highest total of 6 inches near Del Valle.

Comal County

Countywide	02	0630CST			0	0			Flash Flood
		1130CST							

Showers and thunderstorms dropped between 2 and 3 inches of water over Comal County. The heaviest rain fell near Canyon Lake, where between 5 and 6 inches was reported. The resulting flash flooding closed parts of IH35 at SH46, as well as River Road, FM2673 and FM3009.

Lee County

Countywide	02	0630CST			0	0			Flash Flood
		1100CST							

Storms covered most of Lee County with between 1 and 2 inches of rain. Nearly 6 inches fell at Giddings, with the maximum accumulation of 9 inches at Loebau, which is halfway between Giddings and Lexington. The resulting flash flooding brought water over FM141 near Giddings. It also washed out a bridge on CR114 north of Giddings, digging a 12 foot deep pit on the north side of the road.

Bandera County

West Portion	02	0730CST			0	0			Flash Flood
		0900CST							

The Bandera County Emergency Manager reported that the western part of the county had received between 1 and 2 inches of rainfall, with up to 3 inches just north of Vanderpool. Flash flooding developed along Fm 187 both north and south of Vanderpool, closing the road in several places.

Bexar County

North Portion	02	0730CST			0	0			Flash Flood
		1200CST							

Between 1 and 2 inches of rain fell over northern Bexar County in the morning period. Higher totals were along the Comal County line where up to 4 inches was reported. Several roads in the northern part of the county were closed through the morning period, including FM3351.

Guadalupe County

Countywide	02	0730CST			0	0			Flash Flood
		1200CST							

The thunderstorms spread from Bexar and Comal Counties southeastward into Guadalupe, producing a general 1 to 2 inch rain over the northwest part of the county. The rest of the county received at least an inch of rain. Highest totals were along the Guadalupe-Comal County line, where up to 4 inches was measured. Among the many roads under water in the morning period was FM78 near Marion.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
TEXAS, South Central									
Kendall County Countywide	02	0800CST 1030CST			0	0			Flash Flood
Thunderstorms built over Kendall County through the morning, dropping a general inch of rain over the county. Highest totals were near 6 inches between Sisterdale and Boerne. Flash flooding sent water over several roads, including FM1376 and FM474.									
Blanco County South Portion	02	0830CST 1100CST			0	0			Flash Flood
The heavy rain spread northward from Kendall County into southern Blanco County, bringing 1 to 2 inch totals to the area. Highest amounts were 5 inches near Blanco. High water flooded FM1623 and FM 165 through much of the morning.									
TXZ206		Comal							
	02	0830CST 1120CST			0	0			Flood
The Guadalupe River at New Braunfels above the Comal crested at 8.58 ft at 1020CST on Oct. 02, where flood stage is 7 ft.									
Fayette County Countywide	02	0830CST 1130CST			0	0			Flash Flood
Between 1 and 2 inches of rain fell during the morning over Fayette County, with up to 6 inches in the Ledbetter area. Flash flooding closed SH237 and FM1291 through most of the morning.									
Gonzales County Countywide	02	0830CST 1200CST			0	0			Flash Flood
The showers and thunderstorms moved into Gonzales County near 0630CST, dropping a general 1 inch rain over the southwest half of the county and between 1 and 2 inches over the northeast half. Highest totals were 4 inches just south of Waelder. The resulting flash flooding closed SH97 and FM532 through the remainder of the morning.									
Bastrop County Bastrop to Cedar Creek	02	0900CST 1200CST			0	0			Flash Flood
Between 1 and 2 inches of rain fell between Bastrop and Cedar Creek during the morning, with some areas receiving over 3 inches. Flash flooding developed quickly and closed FM812 through the rest of the morning.									
Caldwell County Countywide	02	0900CST 1200CST			0	0			Flash Flood
Showers and thunderstorms spread into Caldwell County from Guadalupe County, bringing a general 1 inch rain to the county. The highest amounts were between 2 and 3 inches in the stretch from Lockhart to Maxwell. Several rural roads were under water through the morning, including SH140.									
Lavaca County North Portion	02	0900CST 1200CST			0	0			Flash Flood
The storms from Fayette and Gonzales Counties drifted into the northern part of Lavaca County near 0700 CST. They left an inch of rain across the north half of the county, with up to 4 inches near Moulton. FM532 was reported closed due to flash flooding through much of the morning.									
TXZ207		Guadalupe							
	02	0915CST 1045CST			0	0			Flood
The Guadalupe River at New Braunfels below the Comal crested at 13.34 ft at 0945 CST on Oct. 2, where flood stage is 13 ft.									
Blanco County 1 N Johnson City	02	0920CST 0930CST			0	0	0	0	Hail (0.88)
Medina County Northwest Portion	02	0930CST 1100CST			0	0			Flash Flood
Thunderstorms produced from 1 to 2 inches of rain over the northwestern quarter of Medina County, with nearly 3 inches falling in the extreme northwest corner. FM1796 was closed due to high water for most of the morning.									
Llano County Countywide	04	1630CST 1800CST			0	0	50K		Flash Flood
Flash flooding from a general 1 to 2 inch rain countywide, with totals along the San Saba County line of up to 4 inches, caused widespread flash flooding. A bridge on CR413 around 10 miles northwest of Llano was washed out due to the flooding.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
<u>TEXAS, South Central</u>									
Val Verde County									
Comstock to Langtry	04 05	2230CST 0300CST			0	0			Flash Flood
Heavy rainfall from late on the night of the 4th through the early morning of the 5th resulted in rainfall of 1 to 2 inches from Comstock to Langtry, with totals of 3 to 4 inches near Langtry. Flash flooding closed FM2523 15 miles northeast of Del Rio near 2330 CST. Barricades were put up in Del Rio near 0130 CST.									
Maverick County									
Quemado to El Indio	05	0300CST 0800CST			0	0	2M		Flash Flood
Heavy rain over the central part of Maverick County from Quemado to Eagle Pass to El Indio caused severe flash flooding. Rainfall varied generally from 2 to 3 inches, with up to 6 inches in the city of Eagle Pass. Nearly 50 homes were evacuated in the northern part of Eagle Pass around 0500 CST, with some four dozen persons being taken to shelters as a result of the flooding. Several high water rescues were performed in Eagle Pass as flash flooding closed city and rural streets alike. In addition to the house damage, fences were destroyed and an in-ground swimming pool was lifted out of its bed and floated onto a playground. Among the flooded-out roads were SH277 and FM1021.									
Kinney County									
Countywide	05	0400CST 0700CST			0	0			Flash Flood
Thunderstorms increased just after midnight over Kinney County, dropping between 2 and 3 inches of rain that closed SH277 southeast of Del Rio and FM674 north of Brackettville.									
Val Verde County									
North Portion	06	0730CST 0900CST			0	0			Flash Flood
The Val Verde County Sheriff's Department reported that heavy rain during the early morning had caused flash flooding that closed FM163 between Juno and Comstock. Rain totals between the two towns were generally from 1 to 2 inches, with spots of up to 4 inches.									
Val Verde County									
Comstock	08	1500CST 1503CST			0	0	0	0	Funnel Cloud
The public in Comstock reported a short-lived funnel cloud near Comstock. An observer noted that it "looked just like a small snake coming down." The funnel did not touch down.									
Val Verde County									
Juno to Pandale	08	1600CST 1830CST			0	0			Flash Flood
Heavy rain re-developed over the saturated soils of Val Verde County in the afternoon of the 8th. Storm totals were generally between 1 and 2 inches, with up to 4 inches reported just north of Juno. Several rural roads, including FM189 and FM1024 were closed through the late afternoon due to high water.									
Caldwell County									
Lockhart	13	1530CST 1550CST			0	0			Thunderstorm Wind (G70)
The Caldwell County Sheriff's Department reported trees blown down in the city of Lockhart.									
Blanco County									
10 NE Blanco	13	1605CST 1615CST			0	0	0	0	Hail (1.75)
Hays County									
Dripping Spgs	13	1605CST 1615CST			0	0	0	0	Hail (1.00)
Hays County									
Dripping Spgs	13	1610CST 1620CST			0	0	50K	0	Thunderstorm Wind (G60)
The Hays County Sheriff's Department reported that severe thunderstorm winds had knocked down power lines near Dripping Springs.									
Caldwell County									
Lockhart to 2 S Lockhart	13	1730CST 1740CST			0	0	150K	0	Thunderstorm Wind (G80)
The Caldwell County Emergency Manager reported that severe thunderstorm winds estimated near 80 knots blew over large trees and knocked down power lines just south of Lockhart. The winds also destroyed a metal barn in the area.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
Killed	Injured	Property	Crops						
TEXAS, South Central									
Llano County									
Llano	13	2145CST 2155CST			0	0	80K	0	Hail (1.75)
Hail as large as golfballs damaged vehicle windows and bodies and broke windows in homes in Llano. Most of the hail was reported to be near 1 inch in diameter.									
Comal County									
Countywide	13 14	2230CST 0100CST			0	0			Flash Flood
Between 1 and 2 inches of rain was deposited over Comal County during the evening of Oct. 13 and the early morning of Oct. 14. Highest accumulations were near 3 inches along the Guadalupe County line. An off-duty NWS employee reported that FM483 was closed near midnight due to flash flooding.									
Guadalupe County									
Countywide	13 14	2230CST 0100CST			0	0			Flash Flood
Showers and thunderstorms spread from Comal County into Guadalupe County, dropping 1 to 2 inches over the area. Highest totals were 3 inches along the Comal County line. Several rural roads in Guadalupe County were closed, including Airport Road and Barbarosa Road.									
Gonzales County									
Countywide	13 14	2300CST 0200CST			0	0			Flash Flood
Thunderstorms over Gonzales County dropped from 1 to 2 inch totals countywide, with up to 3 inches just southeast of Waelder. FM1680 and FM532 were reported closed due to high water.									
Bandera County									
Countywide	13 14	2330CST 0400CST			0	0	50K		Flash Flood
The Bandera County Emergency Manager reported that a car was washed off the road just north of Medina and a bridge was damaged as thunderstorms dropped between 2 and 3 inches countywide. The highest totals were 6 inches near Medina.									
Bexar County									
5 W Elmendorf to Elmendorf	14	0030CST 0230CST			0	0			Flash Flood
Heavy rainfall of up to 3 inches around Elmendorf caused flash flooding that closed FM1303 through the early morning hours.									
De Witt County									
Northwest Portion	14	0030CST 0300CST			0	0			Flash Flood
Northwest DeWitt County received between 1 and 2 inches of rain from thunderstorms during the late night of Oct. 13 and early the next morning. Highest accumulations were 3 inches near Westhoff, where FM240 was closed due to high water.									
Lavaca County									
Southwest Portion	14	0030CST 0300CST			0	0			Flash Flood
From 1 to 2 inches of rain fell in southwest Lavaca County during the late night of Oct. 13. Highest rain totals were 3 inches between Yoakum and Sweet Home. FM351 was closed near Sweet Home due to high water.									
Wilson County									
Countywide	14	0030CST 0400CST			0	0			Flash Flood
Thunderstorms produced between 1 and 2 inches of rain over Wilson County, with up to 4 inches near LaVernia. Many of the county roads were under water through the early morning hours, including FM775, FM539, and FM2772.									
Karnes County									
Northeast Portion	14	0100CST 0300CST			0	0			Flash Flood
Rainfall of 1 to 2 inches over northeast Karnes County, with up to 3 inches in spots closed several rural roads due to high water. FM887 was closed west of Gillett through the early morning hours.									
Kendall County									
Countywide	23	0100CST 0700CST			0	0			Flash Flood
Thunderstorms developed over Kerr and Kendall Counties during the late night hours of Oct. 22 and spread eastward. In Kendall County, they dropped general 3 to 4 inch amounts, with isolated 6 inch accumulations near Boerne. Flash flooding was widespread across the county.									

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Character of Storm	
TEXAS, South Central									
Kerr County									
East Portion	23	0100CST 0300CST			0	0		Flash Flood	
Thunderstorms developed over Kerr and Kendall Counties during the late night hours of Oct. 22 and spread eastward. In Kerr County, they dropped general 2 to 3 inch amounts, with up to 5 inches in the Pipe Creek area. The Kerr County Sheriff's Department reported widespread flash flooding across the county through the early morning hours.									
Blanco County									
South Portion	23	0330CST 0530CST			0	0		Flash Flood	
As the storms from Kendall County spread into Blanco County, they produced a general 2 to 3 inch rain over the county. Maximum amounts were near 6 inches in the Blanco area. High water closed several roads across the county through the early morning.									
Comal County									
Countywide	23	0500CST 0730CST			0	0		Flash Flood	
Storms from Kendall County continued to slip very slowly eastward, developing heavy rain after midnight over Comal County. Rain totals averaged 2 to 3 inches over the county, with up to 6 inches near Fischer. The Comal Sheriff's Department reported widespread road closures due to high water through the early morning.									
Hays County									
Countywide	23	0500CST 0730CST			0	0		Flash Flood	
As the storms from Blanco County spread eastward into Hays County, they produced general rain totals of 4 to 5 inches. Driftwood reported receiving as much as 8 inches. Flash flooding began in the early morning hours and continued past sunrise.									
Caldwell County									
Countywide	23	0730CST 1000CST			0	0		Flash Flood	
Showers and thunderstorms continued to spread eastward into Caldwell County, producing general 2 to 3 inch totals. Lockhart reported almost 4 inches of rain and flash flooding of area streets just before 0800 CST.									
Gonzales County									
Countywide	23	0800CST 1100CST			0	0		Flash Flood	
Storms spread southeastward into Gonzales and Guadalupe Counties from Caldwell and Hays Counties before sunrise. Rain totals over the county averaged 2 inches, with 3 to 4 inches across the central part of the county. Highest totals were 6 inches in the stretch from Belmont to Gonzales. Gonzales reported widespread street flooding, with most central Gonzales County rural roads under water.									
Guadalupe County									
Countywide	23	0800CST 1000CST			0	0		Flash Flood	
Storms from Hays County moved southeastward into Guadalupe County before sunrise, producing rain totals of 2 to 3 inches countywide. Highest totals were between 3 and 4 inches along the Gonzales County line near where US90 crosses. Widespread flash flooding closed county roads through the early morning.									
TXZ191									
Hays	23	1000CST 1345CST			0	0		Flood	
The Blanco River at Wimberley crested at 17.94 ft at 1130 CST on Oct. 23, where flood stage is 13 feet.									
TXZ191									
Hays	24	0045CST 2015CST			0	0		Flood	
The San Marcos River below Luling crested at 27.70 ft at 1130 CST on Oct. 24, where flood stage is 20 ft.									
Bexar County									
Countywide	24	1500CST 1800CST			0	0		Flash Flood	
Showers and thunderstorms through the early afternoon spread rain totals of 1 to 2 inches across Bexar County. Highest totals were in the northwest and northeast sections of the county. Totals of up to 8 inches were reported in Helotes and in Schertz. Flash flooding developed by mid afternoon, with emergency crews setting up barricades in all areas of the county. Bexar County Emergency Management reported 31 high water rescues, mainly in the northwest part of the county. Some of these were vehicles stalled in the water, while others were children who had been playing in the fast moving water.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
TEXAS, South Central									
Bexar County									
Randolph Afb	24	1549CST 1555CST			0	0	50K	0	Thunderstorm Wind (G58)
58 knot winds were observed at Randolph AFB as severe thunderstorm winds knocked down power lines between Garden Ridge and Randolph AFB.									
Comal County									
South Portion	24	1600CST 1830CST			0	0			Flash Flood
Bexar County showers spread into Comal and Guadalupe Counties by mid afternoon. Storms in Comal County produced heavy rain over the southern half of the county, with average amounts between 1 and 2 inches and highest amounts between 3 and 4 inches near where FM3009 crosses the Bexar County line. FM3009 was closed in several places due to high water, along with several other rural roads in south Comal County.									
Guadalupe County									
Countywide	24	1630CST 1830CST			0	0			Flash Flood
The storms spreading eastward from Bexar County moved into Guadalupe County by mid afternoon, producing general 1 to 2 inch totals. Highest amounts were between 3 and 4 inches near McQueeney. Numerous roads were closed due to high water.									
Medina County									
South Portion	24	1730CST 2100CST			0	0			Flash Flood
Showers and thunderstorms formed in the late afternoon over southern Medina County. The storms produced a general 1 inch rain over that part of the county, with up to 3 inches in the Yancey area. Several roads in south Medina County were closed due to flash flooding, including FM2200 and FM462									
Val Verde County									
Del Rio	25	0119CST 0130CST			0	0	0	0	Hail (0.88)
TXZ205		Bexar							
	25	0215CST 1645CST			0	0			Flood
The San Antonio River near Elmendorf crested at 36.70 ft at 1200 CST on Oct. 25, where flood stage is 35 ft.									
TXZ222		Karnes							
	26	0515CST 1245CST			0	0			Flood
Cibolo Creek near Falls City crested at 18.20 ft at 1045 CST on Oct. 26, where flood stage is 17 ft.									
Val Verde County									
North Portion	26	1330CST 1500CST			0	0			Flash Flood
Heavy rain began falling across northwestern Val Verde County in the late morning and spread into the north central part of the county by early afternoon. Rain totals averaged 1 to 2 inches over the north part of the county, with 3 to 4 inches between Pandale and Juno. Portions of SH163 and FM1024 were closed through the mid afternoon due to high water.									
TXZ183		Val Verde							
	26	1430CST			0	0			Flood
	27	1430CST							
The Devils River at Cauthorn Ranch near Juno crested at 7.85 ft at 1600 CST on Oct. 26, where flood stage is 5 ft.									
TXZ183		Val Verde							
	26	1830CST			0	0			Flood
	27	1645CST							
The Devils River 19N Bakers Crossing crested at 10.78 ft at 0600 CST on Oct. 27, where flood stage is 8 ft.									
Williamson County									
Liberty Hill to Cedar Park	26	2000CST 2230CST			0	0	100K		Flash Flood
Slow-moving showers and thunderstorms dropped between 2 and 3 inches of rain in southwest Williamson County in the late evening period. Maximum totals were 5 to 6 inches between Leander and Cedar Park, closing most low water crossings due to flash flooding. Several high water rescues were made between the two cities. Newspapers reported several cars cut off and stranded by water up to 6 feet deep and rising on FM2243 just northeast of Leander.									
TXZ183		Val Verde							
	27	1300CST 1500CST			0	0			Flood
The Devils River at Pafford Crossing crested at 5.02 ft at 1400 CST on Oct. 27, where flood stage is 5 ft.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
<u>TEXAS, South Panhandle</u>									
Swisher County									
Tulia	05	1024CST			0	1			Lightning
Tulia Police Department reported to the National Weather Service that a person was struck and injured by a lightning strike at the Tulia feed lot and was later hospitalized but recovered.									
Yoakum County									
Bronco	05	2000CST 2010CST			0	0			Hail (1.75)
Yoakum County									
6 W Plains to Plains	05	2055CST			0	0			Hail (1.75)
Yoakum County									
3 N Plains	05	2125CST			0	0			Thunderstorm Wind (G68)
Bailey County									
Muleshoe	05	2200CST 2300CST			0	0			Flash Flood
One to two feet of water flooded Highway 84 with surrounded roadways flooded.									
Yoakum County									
Plains	05	2200CST 2230CST			0	0			Flash Flood
Three inches of rain flooded the area in 30 minutes. Law enforcement reported cars washed off roadways.									
Parmer County									
Friona	05	2225CST 2305CST			0	0			Flash Flood
Several roads reported to be under water.									
Parmer County									
Farwell	05 06	2300CST 2300CST			0	0			Flash Flood
Several automobiles stranded on highway 60 between Friona and Farwell.									
Garza County									
12 NW Post	09	1545CST			0	0			Hail (1.00)
Garza County									
2 S Southland	09	1547CST			0	0			Hail (0.88)
<u>TEXAS, Southeast</u>									
Tyler County									
5 W Woodville	04	1305CST			0	0			Hail (1.00)
Newton County									
Bon Wier	04	1349CST			0	0	2K		Thunderstorm Wind (G50)
Trees fell on power lines.									
Tyler County									
Fred	04	1352CST			0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

October 2004

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

TEXAS, West

TXZ046

Dawson

01 0000CST

08 1800CST

0 0 250K 100K Flood



A flooded playa lake inundated a section of U.S. Highway 87 north of Lamesa for more than a week during early October. Traffic was detoured at times to smaller state routes. The driving surface was severely damaged by the time flood waters receded on October 8th. Photo Courtesy: Russel Skiles - The Lamesa News - Reporter.

Local newspapers reported that a playa lake just west of U.S. Highway 87 in northern Dawson County flooded and restricted travel on the federal highway for an extended period of time. Rain fell over portions of Dawson County for a sixteen day period spanning the last week in September and the first week in October. The playa lake swelled to inundate a stretch of the U.S. highway's southbound lane during a flash flood event on September 30th. Runoff from daily rainfall maintained flood waters that covered the highway through October 8th. These flood waters ranged in depth from nine to fourteen inches over the driving surface.

Texas Department of Transportation crews and troopers from the Texas Department of Public Safety worked around the clock to divert traffic west from U.S. Highway 87 along Farm to Market Road 1066, then south along State Highway 179 to Lamesa. Water levels rose to additionally inundate the elevated northbound lane briefly during several periods of additional rainfall. Portions of the highway were damaged by the ponding water.

Brewster County Marathon

01 1640CST

0 0 0 0 Hail (0.75)

Penny size hail was reported in Marathon.

Reeves County Pecos

02 0027CST
0030CST

0 0 0 0 Hail (1.00)

Reports of large hail were received as a severe thunderstorm passed over the city of Pecos. Hailstones ranged in size from pennies to quarters.

Reeves County Pecos

02 0040CST
0230CST

0 0 0 0 Flash Flood

Numerous reports of flash flooding were received following heavy rainfall that fell as the severe storm moved over the city of Pecos. At 00:40 CST local officials reported over one foot of flowing water that covered several city street intersections. By 01:25 CST at least nine city streets were closed due to flash flooding.

Reeves County Pecos

02 0128CST

0 0 30K 0 Heavy Rain

Heavy rainfall resulted in the collapse of a roof on a residence in the eastern parts of the city.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
TEXAS, West									
Upton County 4 SW Rankin	02	0400CST 1400CST			0	0	0	0	Flash Flood
The Rankin News reported over one and half inches of rain fell during the early morning hours of the 2nd. Runoff resulted in flash flooding near the intersection of U.S. Highway 67 and Texas Route 349 southwest of Rankin. High water was observed flowing across the intersection and inundating a rest area. Event times are estimated.									
TXZ069 Upton	02	1600CST			0	0	0	0	Flood
03	1000CST								
Standing flood waters continued to inundate the intersection of U.S. Highway 67 and State Route 349 hours after heavy rainfall and thunderstorms ended over Upton County. Local newspaper reporters indicated that the flood waters slowly receded by early morning on the 3rd.									
Strong to severe thunderstorms developed in the vicinity of the Davis Mountains and the west Texas Upper Trans Pecos during the late afternoon and evening of the 1st. Convection lingered past midnight and propagated east across the southern Permian Basin. A few storms became severe and produced large hail and very heavy rainfall during the evening hours. Heavy rainfall over the southern Permian Basin additionally resulted in flash flooding.									
Andrews County 13 N Andrews	03	0736CST 0900CST			0	0	0	0	Flash Flood
Local officials reported high water flowing over U.S. Highway 385 at the Gaines and Andrews County line.									
Gaines County 14 S Seminole	03	0736CST 0900CST			0	0	0	0	Flash Flood
Local officials reported high water flowing over U.S. Highway 385 at the Gaines and Andrews County line.									
Dawson County 2 SSW Patricia	03	0927CST 1100CST			0	0	0	0	Flash Flood
Flash flooding caused high water to flow out of cotton fields and across Texas State Highway 349 south of Patricia. The highway was covered by more than half a foot of flowing water in some spots.									
A round of strong convection during the morning hours of the 3rd resulted in very heavy rainfall and flash flooding over parts of the northern Permian Basin.									
Jeff Davis County Ft Davis	03	1840CST 1855CST			0	0	0	0	Hail (1.75)
Isolated thunderstorms developed by early evening on the 3rd over the Davis Mountains. At least one thunderstorm became severe and produced quarter to golfball size hail over Fort Davis. No damage was reported.									
Loving County 4 NW Mentone	04	0630CST			0	0	0	0	Hail (0.75)
A storm spotter reported pea to penny size hail northwest of Mentone.									
Ector County Odessa	04	0837CST 1130CST			0	0	20K	0	Flash Flood
Several strong to severe thunderstorms impacted Ector County during the morning of the 4th. Urban flash flooding quickly developed as heavy rains fell over Odessa. Several city streets were closed due to flowing flood waters, including portions of 42nd, University, and Farm to Market Road 1936. Although most of the heavy rainfall had moved away from the city by 10:00 CST, runoff along asphalt and concrete surfaces posed a continued threat of flash flooding. At 10:15 CST the local broadcast media reported that the Odessa Police Department conducted high water rescues at the intersection of 42nd and Grandview.									
Ector County West Odessa to 3 NE Odessa	04	0845CST 0900CST			0	0	0	0	Hail (1.00)
Multiple reports were received of nickel to quarter size hail from West Odessa to the intersection of Interstate 20 and Loop 338 on the northeast side of Odessa. No damage was reported.									
Midland County 10 SW Midland	04	0910CST			0	0	0	0	Hail (1.00)
Quarter size hail was reported by motorists along Interstate 20 in western Midland County.									
Pecos County 6 N Sheffield to Sheffield	04	1139CST 1330CST			0	0	0	0	Flash Flood

Storm Data and Unusual Weather Phenomena

October 2004

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
TEXAS, West									
A round of strong to severe thunderstorms produced large hail and very heavy rainfall over portions of the west Texas Upper Trans Pecos and the Permian Basin during the morning hours of the 4th. Flash flooding in Odessa prompted the rescue of several stranded motorists.									
Brewster County 10 E Marathon	04	1545CST			0	0	0	0	Hail (1.75)
A local radio station relayed reports of golfball size hail along U.S. Highway 90 east of Marathon.									
Brewster County 22 S Alpine	04	1607CST			0	0	0	0	Hail (0.75)
Local law enforcement officials reported three-quarter inch diameter hail along State Highway 118 south of Alpine.									
Presidio County 2 WNW Ryan	04	1626CST			0	0	0	0	Hail (1.25)
Quarter to half dollar size hail was reported west of Ryan.									
A second round of severe convection developed over the Davis Mountains and Big Bend of west Texas during the afternoon of the 4th. This activity produced large hail up to the size of golfballs.									
Reeves County 18 NW Pecos	05	1838CST	0.1	50	0	0	0	0	Tornado (F0)
A local television broadcast meteorologist observed a brief tornado near Farm to Market Road 2119 northwest of Pecos. The tornado remained in open rangeland for less than one minute and no damage was reported.									
Reeves County Orla	05	2110CST			0	0	0	0	Hail (0.75)
The public reported large hail in Orla.									
At least five supercell thunderstorms developed in vicinity of the Guadalupe Mountains and over of the Upper Trans Pecos region of west Texas during the late afternoon and early evening of the 5th. Several of these storms displayed Doppler radar signatures characteristic of very large hail (well-defined three-body scatter spikes) and tornadic activity (strong mesocyclones and hook echo reflectivity structures). Given that the storms generally occurred over remote rural areas, however, few reports of severe weather were received. A local television meteorologist that was storm chasing in the area did observe a brief tornado in northern Reeves County.									
Loving County Mentone	05	2205CST			0	0	0	0	Hail (0.88)
A storm spotter in Mentone reported penny to nickel size hail.									
Reeves County 17 NNW Pecos	05	2225CST 2230CST			0	0	0	0	Hail (0.75)
Local law enforcement officials reported three-quarter inch diameter hail that accumulated on the ground four inches deep at the intersection of State Highway 302 and U.S. Highway 285.									
Ward County 2 WSW Monahans to 2 W Monahans	06	0005CST			0	0	0	0	Thunderstorm Wind (G52)
A large tree was blown down by severe thunderstorm winds just west of Monahans.									
Pecos County Ft Stockton	06	0150CST			0	0	0	0	Hail (0.88)
A storm spotter reported nickel size hail and 60 MPH winds in Fort Stockton. No damage was reported.									
Pecos County Ft Stockton	06	0150CST			0	0	0	0	Thunderstorm Wind (G52)
The supercell storms that affected portions of the west Texas Upper Trans Pecos on the 5th merged with a squall line that moved southeast out of the plains of southeastern New Mexico. The threat for tornadoes, large hail, and damaging winds slowly diminished during the late evening hours as the evolution to a large linear complex occurred.									
Gaines County Seminole	05 06	2225CST 0000CST			0	0	0	0	Flash Flood
Local emergency management officials reported flash flooding that resulted in curb-high water flowing through many city streets in Seminole.									
Winkler County Kermit	05 06	2310CST 0100CST			0	0	0	0	Flash Flood
The Winkler County Sheriff's Office reported high water that flowed through several city streets in Kermit.									

Storm Data and Unusual Weather Phenomena

October 2004

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

TEXAS, West

Andrews County

Andrews

05	2318CST				0	0	0	0	Flash Flood
06	0230CST								

Local law enforcement officials reported flash flooding along several city streets. High water was reported flowing across portions of Mustang, Avenue B, and 5th Streets in the northwestern parts of the city.

Dawson County

3 N Lamesa

05	2338CST				0	0	0	0	Flash Flood
06	0200CST								

Dawson County officials reported flash flooding along State Route 137 with over one foot of flowing water over the highway just north of Lamesa.

Ector County

Odessa

05	2355CST				0	0	75K	0	Flash Flood
06	0800CST								



Crews from the City of Odessa pump flood waters off Stevenson Street and into a tanker-truck as a resident walks through his inundated yard following a flash flood event on the morning of the 6th. Overnight flash flooding across the city resulted in stranded motorists and high water that threatened several homes. Photo Courtesy: Mark Sterkel - Odessa American.

Numerous reports of flash flooding were received from Odessa during the hours around midnight on the 5th. High water was initially reported crossing portions of Business Interstate 20 on the east side of the city. By 00:30 CST significant street flooding in the city was reported with fire department personnel conducting high water rescues of stranded motorists on Pueblo Street between 8th and 10th Streets. At 00:50 CST flood waters entered several residences along Moss, Stevenson, and Yukon Streets. Portions of Pueblo and Stevenson Streets remained underwater through sunrise on the 6th as runoff maintained the flash flood threat.

Midland County

Midland

06	0000CST				0	0	200K	0	Heavy Rain
	0130CST								

According to local newspaper accounts, very heavy rainfall associated with a complex of strong thunderstorms late on the 5th and early on the 6th caused damage to structures in Midland. Several business and homes suffered minor roof damage when water accumulated on flat-roof surfaces. Water entered the structures through the compromised roofs and caused significant interior damage. One local resident interviewed in the newspaper reported damage to both her home and place of employment.

Ward County

Monahans to
4 S Monahans

06	0010CST				0	0	0	0	Flash Flood
	0400CST								

More than one and a half feet of water was reported flowing through several city streets in Monahans shortly after midnight on the 5th. By 01:00 CST the public reported three feet of flood waters crossing Farm to Market Road 1176 near the intersection of State Highway 18 south of the city.

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
TEXAS, West									
Midland County									
Midland to Greenwood	06	0015CST 0630CST			0	0	10K	0	Flash Flood
Multiple reports of flash flooding were received from the Midland area. Initial reports indicated high water flowing through the intersection of Midkiff Drive and Wall street. Additional flooding was reported throughout the night including high water that crossed the intersection of State Highway 158 and Interstate 20 near Greenwood, where flood waters were reported to be up to the doors on a stranded vehicle shortly before 05:00 CST.									
Scurry County									
Snyder	06	0140CST 0600CST			0	0	0	0	Flash Flood
Law enforcement officials in Snyder reported flash flooding along several low water crossings in the city. Barricades were deployed to close some streets.									
Crane County									
13 N Crane	06	0155CST 0430CST			0	0	0	0	Flash Flood
Local law enforcement officials reported that a fifty foot section of U.S. Highway 385 was inundated by flood waters north of Crane.									
Upton County									
5 N Mc Camey	06	0200CST 0300CST			0	0	0	0	Flash Flood
The Upton County Sheriff's Department reported that high water briefly covered a stretch of U.S. Highway 385 north of McCamey.									
Pecos County									
Ft Stockton to 12 SSW Ft Stockton	06	0211CST 0500CST			0	0	0	0	Flash Flood
Local officials reported flash flooding that resulted in high water flowing through several city streets and over portions of U.S. Highway 67 south of Interstate 10.									
Howard County									
Big Spring	06	0230CST 0400CST			0	0	0	0	Flash Flood
Big Spring authorities reported flash flooding in the city. Between two and three feet of water inundated the 1300 block of 6th Street in the eastern portions of the city.									
Reagan County									
21 NE Stiles	06	0315CST 0800CST			0	0	0	0	Flash Flood
A local newspaper reported that Reagan County officials closed portions of Farm to Market Road 2600 in northeastern Reagan County due to flash flooding. Event time is estimated based on radar data. The threat of hazardous weather transitioned from severe local storms to flash flooding around midnight on the 5th as an extensive complex of thunderstorms propagated slowly east over the west Texas Upper Trans Pecos region and the Permian Basin. Extensive rainfall that accompanied this activity resulted in road closures and a few high water rescues of stranded motorists during the overnight hours. No injuries were reported.									
Reeves County									
Toyah to 13 ESE Toyah	06 07	2340CST 0000CST			0	0	0	0	Thunderstorm Wind (G52)
A linear complex of convection initiated over Reeves County and produced severe wind gusts as reported by both law enforcement officials and trained storm spotters.									
Jeff Davis County									
Valentine	06	2345CST 2355CST			0	0	50K	0	Hail (1.75)
A severe thunderstorm at the south end of the developing squall line produced large hail over Valentine. Golfball size hail covered the ground and broke numerous windows.									
Pecos County									
Coyanosa	07	0104CST			0	0	0	0	Hail (0.75)
Winkler County									
17 NE Wink	07	0105CST 0110CST			0	0	0	0	Thunderstorm Wind (G52)
Severe thunderstorm winds broke large tree limbs up to half a foot in diameter near a rural residence in northeastern Winkler County.									

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage	Crops	Character of Storm
TEXAS, West									
Ector County									
West Odessa to Odessa	07	0135CST 0150CST			0	0	15K	0	Thunderstorm Wind (G57)
A bow-shaped segment of the linear complex moved across central Ector County. Damaging thunderstorm winds blew down traffic signs in West Odessa. Power lines also were blown down in Odessa. In addition, a few windows were broken by the winds and several garbage dumpsters were blown into the city streets. No injuries were reported.									
Andrews County									
Andrews	07	0150CST			0	0	0	0	Hail (0.75)
Penny size hail was reported in Andrews.									
Ector County									
West Odessa to Odessa	07	0210CST 1000CST			0	0	0	0	Flash Flood
Flash flooding resulted in high water that inundated a few city streets in West Odessa.									
Midland County									
Spraberry	07	0235CST			0	0	0	0	Thunderstorm Wind (G52)
A storm spotter reported severe thunderstorm winds that downed large tree limbs near a rural residence in eastern Midland County.									
Dawson County									
Lamesa	07	0258CST			0	0	0	0	Thunderstorm Wind (G52)
Law enforcement officials estimated severe thunderstorm wind gusts to 60 MPH in Lamesa.									
Dawson County									
Lamesa to 7 NNE Lamesa	07	0350CST 0830CST			0	0	0	0	Flash Flood
Flash flooding conditions developed during the pre-dawn hours when flowing high water forced the closures of numerous city streets in Lamesa. By 06:00 CST, the flash flood threat had spread north of the city. High water was reported flowing over U.S. Highway 87 north of Lamesa, and traffic was detoured away from the flooded area.									
Pecos County									
21 NW Ft Stockton	07	0418CST			0	0	0	0	Hail (0.75)
An isolated severe storm developed in the wake of a departing squall line and produced large hail along U.S. Highway 285 in northwestern Pecos County.									
Pecos County									
13 NW Ft Stockton	07	0423CST 1020CST			0	0	0	0	Flash Flood
Local officials reported flash flooding in northern Pecos County. At 04:23 CST high water was reported flowing over Farm to Market Road 1776 northwest of Fort Stockton. Additional rainfall and runoff caused the flooding to persist through the late morning hours.									
A linear convective complex developed over the west Texas Upper Trans Pecos region shortly before midnight CST on the 6th. This activity propagated east across the Permian Basin during the early morning hours of the 7th and produced damaging winds and large hail.									
Jeff Davis County									
8 NW Ft Davis	07	1720CST 1930CST			0	0	0	0	Flash Flood
The Jeff Davis County Emergency Manager reported flash flooding in low lying areas along State Highway 118 near the McDonald Observatory.									
Jeff Davis County									
8 NW Ft Davis	07	1720CST			0	0	0	0	Hail (0.88)
Nickel size hail was reported near the McDonald Observatory.									
Thunderstorms developed over the Davis Mountains during the afternoon of the 7th. Nickel size hail accompanied very heavy rainfall near the McDonald Observatory north of Fort Davis.									
Upton County									
Mc Camey	08	1650CST			0	0	0	0	Hail (1.00)
Upton County									
Mc Camey to 1 S Mc Camey	08	1720CST 1830CST			0	0	0	0	Flash Flood
Convection developed over the west Texas Upper Trans Pecos region and the southern Permian Basin during the late afternoon of the 8th. An isolated severe thunderstorm produced large hail in McCamey. In addition, more than half a foot of high water flowed over Farm to Market Road 1901 just south of the city.									
Glasscock County									
2 E Garden City	09	2345CST			0	0	0	0	Hail (1.00)
A sheriff's deputy report quarter size hail just east of Garden City.									

Storm Data and Unusual Weather Phenomena

October 2004

									October 2004
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
TEXAS, West									
Glasscock County 12 SSE Garden City	10	0015CST 0020CST			0	0	0	275K	Hail (0.75)
Farmers in southeastern Glasscock County reported that large hail damaged almost 4,000 acres of cotton crops.									
Reagan County 18 NE Stiles	10	0100CST			0	0	0	0	Hail (0.75)
Residents at a ranch headquarters in northeastern Reagan County reported penny size hail that covered the ground. A pair of supercell thunderstorms developed over the eastern Permian Basin of west Texas during the hours around midnight on the 9th. These storms produced large hail that damaged cotton crops.									
Borden County Gail	13	1513CST			0	0	0	0	Hail (0.75)
Three-quarter inch diameter hail and "very strong winds" were reported in Gail.									
Midland County 6 SE Midland	13	1526CST			0	0	0	0	Hail (0.88)
Penny to nickel size hail was reported in Valley View.									
Dawson County Lamesa	13	1530CST 1532CST			0	0	0	0	Hail (0.75)
Several reports of three-quarter inch diameter hail were received as a severe thunderstorm moved over Lamesa.									
Scurry County 4 SE Knapp to 4.6 SE Knapp	13	1549CST 1550CST	0.6	50	0	0	0	0	Tornado (F0)
Multiple reports from both a local radio station and the public were received of a tornado between Knapp and Ira. The tornado remained in open fields north of Farm to Market Road 2085. No damage was reported.									
Scurry County 7 W Ira	13	1550CST 1607CST			0	0	0	150K	Hail (0.88)
A tornadic supercell resulted in agricultural damage in southwest Scurry County. A local farmer reported that large hail and strong winds combined to destroy cotton crops west of Ira.									
Mitchell County Colorado City	13	1615CST 1700CST			0	0	0	0	Flash Flood
Flash flood conditions briefly affected Colorado City when over two inches of rain and large hail fell over the city. More than half a foot of water flowed through many city streets.									
Mitchell County Colorado City	13	1615CST 1630CST			0	0	0	0	Hail (1.00)
Dime to quarter size hail covered the ground on the north side of Colorado City.									
Mitchell County Colorado City	13	1630CST			0	0	0	0	Thunderstorm Wind (G52)
Severe thunderstorm winds produced damage to trees in Colorado City. A ten inch diameter tree limb was broken by the winds.									
Howard County (Bgs)Big Spring Arpt to Forsan	13	1645CST 1730CST			0	0	0	0	Hail (1.00)
A severe thunderstorm produced a swath of large hail up the size of quarters from just southwest of Big Spring to Forsan. At 16:45 CST, three-quarter inch hail was reported at the Big Spring Airpark. The storm then tracked southeast along U.S. Highway 87. Between 17:20 and 17:30 CST, penny to quarter size hail was reported in Forsan. No damage was reported. Severe thunderstorms developed in advance of a cold front over the central and eastern Permian Basin during the late afternoon and early evening hours of the 13th. Several supercell storms developed within a cluster of strong to severe convection. A tornado was observed in southwestern Scurry County. Hail up to one inch in diameter also resulted in agricultural losses.									

TEXAS, Western North

TXZ087

Knox

01 0700CST
1000CST

0 0

Flood

Thunderstorms generated heavy rainfall totals of 2 to 3 inches during the early morning hours of October 1 in parts of western north Texas, and the subsequent runoff produced riverine flooding along the South Wichita River in Knox County. Minor rural flooding occurred on the South Wichita River at and near the USGS gage site 4 miles north of Benjamin, TX. The South Wichita River near Benjamin crested at 12.2 feet, 0.2 feet above flood stage, at 8:45 am CST on October 1, and remained above flood stage from 7:00 am CST to 10:00 am CST on October 1.

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops	Character of Storm	
TEXAS, Western North									
Archer County									
Lake Kickapoo	03	2340CST			0	0			Hail (1.75)
Knox County									
Munday	04	0035CST			0	0			Hail (1.00)
Wichita County									
5 WSW Burkburnett	06	1330CST	0.1	50	0	0			Tornado (F0)
A spotter observed this brief tornado which produced no known damage. This tornado was due to a mini-supercell that later produced another tornado west of Walters, Oklahoma in Cotton county.									
Wichita County									
5 WNW Burkburnett	07	0020CST			0	0			Hail (0.88)
UTAH, East									
UTZ2022>025-027>029 Southeast Utah - Eastern Uinta Mountains - Eastern Uinta Basin - Tavaputs Plateau - Grand Flat And Arches - La Sal & Abajo Mountains - Canyonlands / Natural Bridges									
	01	0000MST			0	0			Drought
	31	2359MST							
Several storm systems affected eastern Utah during the month. A number of these storms brought moderate to heavy precipitation to some areas, but this offered little relief due to the extensive nature of the drought. A small portion of northeast Utah was improved to severe drought conditions, while extreme drought continued across the remainder of eastern Utah. Please see the November 2004 Storm Data Publication for a continuation on this drought situation.									
San Juan County									
14 NW Monticello	05	1030MST 1040MST			0	0			Hail (0.88)
San Juan County									
30 NW Monticello	05	1035MST 1100MST			0	0			Flash Flood
Runoff from heavy rain caused a rapid flow of water 8 to 10 inches deep across several secondary roads in the Needles Outpost area. Traffic was stopped for a while on some roads.									
UTZ2024 Eastern Uinta Basin									
	14	0500MST 0700MST			0	0			Frost/Freeze
Minimum temperatures from 30 to 32 degrees occurred across the eastern Uinta Basin, resulting in the first killing frost and freeze of the season.									
UTZ2023 Eastern Uinta Mountains									
	19	0000MST			0	0			Winter Storm
	20	0900MST							
A vigorous early season storm produced 1 to 2 feet of snow above 8000 feet, as well as winds that caused blowing and drifting snow.									
UTZ2023 Eastern Uinta Mountains									
	21	0000MST			0	0			Winter Storm
	22	1400MST							
A vigorous Pacific storm produced snowfall amounts from 9 to 30 inches. Strong winds also caused blowing and drifting snow.									
UTZ2025-028 Tavaputs Plateau - La Sal & Abajo Mountains									
	21	1200MST			0	0			Winter Weather/Mix
	22	0600MST							
A vigorous Pacific storm system produced strong wind gusts from 30 to 50 mph, along with 3 to 10 inches of snow.									
UTZ2029 Canyonlands / Natural Bridges									
	23	0000MST 0700MST			0	0			Frost/Freeze
Minimum temperatures ranged from 27 to 32 degrees across most of the area.									
UTZ2023 Eastern Uinta Mountains									
	27	0600MST			0	0			Winter Storm
	29	1800MST							
13 to 27 inches of snow fell across the mountains of extreme northeast Utah.									
UTZ2025-028 Tavaputs Plateau - La Sal & Abajo Mountains									
	27	1000MST			0	0			Winter Weather/Mix
	29	1200MST							
A storm system produced 5 to 12 inches of snow across the central and southern mountains of extreme eastern Utah.									

Storm Data and Unusual Weather Phenomena

October 2004

October 2004									
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
<u>UTAH, East</u>									
UTZ022		Southeast Utah							
	29	0600MST			0	0			Frost/Freeze
		0700MST							
Minimum temperatures from 27 to 32 degrees occurred across much of extreme southeast Utah.									
<u>UTAH, West and Central</u>									
Washington County									
Toquerville	20	1158MST			0	0	15K		Flash Flood
	21	1400MST							
Washington County									
Pine Vly	20	1415MST			0	0	2K		Flash Flood
	21	1600MST							
Washington County									
New Harmony	20	1500MST			0	0	50K		Flash Flood
	21	1700MST							
Washington County									
Pine Vly	20	1635MST			0	0	25K		Flash Flood
		1800MST							
Washington County									
Enterprise	20	1906MST			0	0	80K		Flash Flood
		2100MST							
Washington County									
Toquerville	20	1931MST			0	0	10K		Flash Flood
		2130MST							
Washington County									
Hurricane	21	0000MST			0	0	20K		Flash Flood
		0200MST							
Davis County									
Centerville	21	0800MST			0	0	10K		Flash Flood
		0900MST							
Washington County									
Southeast Portion	21	0810MST			0	0	0		Flash Flood
		1000MST							
UTZ017		Central And Southwest Mountains							
	21	1000MST			0	0	25K		Heavy Snow
		1400MST							
Washington County									
Zion National Park	21	1110MST			0	0	0		Flash Flood
		1300MST							
Iron County									
Cedar City	21	1420MST			0	0	400K		Flash Flood
		1600MST							

A major Pacific storm system slowly moved east over Utah and brought incredible amounts of rain and snow to most locations. Strong southwest flow ahead of an upper level trough tapped tropical moisture southwest of Hawaii. This moisture streamed northeastward over the state from Sunday the 17th through Friday the 22nd. Many areas in Washington county reported flash flooding. Several bridges were washed away and many people reported flooded basements. Heavy snow fell at higher elevations in the mountains near the Elk Meadows Ski Resort where 5 feet of the white stuff was measured. The heavy, wet snow knocked down power lines in the mountains of southwest Utah. Many mountain roads east and southeast of Cedar City became impassible.

Several homes in the Cedar Meadows subdivision in Cedar City were completely flooded by the heavy rains. In St. George, the Virgin River was running 25 to 30 feet higher than average by the 21st. Northern Utah did not escape the flooding and heavy, wet snow. A flash flood was reported in Centerville after 1.51 inches of rain fell in a two hour period. Heavy snow also fell in the mountains of the north with 56 inches on Mt. Baldy above Alta, 36 inches in Alta, 25 inches in Thaynes Canyon above Park City, 24 inches at Snowbird, and 22 inches at Trial Lake. It was the snowiest October on record for Alta and Silver Lake Brighton. Alta recorded 81 inches and Silver Lake Brighton came in with 77.5. The water equivalent of the snow that fell was also impressive with 7.91 inches at Lava Point in Zion National Park, 7.80 inches at Snowbird, 7.60 inches at Timpanogos Divide, 6.54 in Thaynes Canyon, 6.20 inches at Rocky Basin in the Oquirrh mountains, 5.54 inches at Alta, and 5.20 inches in Farmington Canyon.

The worst flooding problems with this storm system occurred in Washington and Iron counties. Flooding along the La Verkin Creek in Zion National Park trapped several hikers. Rushing water unable to make its way around debris underneath a bridge on Coal Creek in Cedar City caused water to flood homes in a nearby subdivision. High water on the Ash and La Verkin Creeks took

Storm Data and Unusual Weather Phenomena

October 2004

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

UTAH, West and Central

out several bridges in Toquerville. Water from the overflowing Baker Dam Reservoir flooded homes in the town of Brookside along the Santa Clara River. Basement and Creek/River flooding was reported in Escalante, New Harmony, Hildale, Farmington, Draper, and Herriman.

The following stations recorded their wettest October on record. Silver Lake Brighton with 10.22 inches, Ogden with 7.50 inches, Alpine 5.91, Zion National Park and Kanab 5.83 inches, Logan 5.62 inches, Brigham City 5.41, Farmington 5.29, Milford 4.83, Pleasant Grove 4.81, Cedar City 3.80, and Myton 3.30.

Salt Lake City recorded a record tying 13 days of measurable precipitation. October 2004 was the fourth wettest month on record in Salt Lake City with 3.48 inches.

VERMONT, North and Central

NONE REPORTED.

VERMONT, South

VTZ013>015

Bennington - Western Windham - Eastern Windham

06 0300EST 0 0 Frost/Freeze

A Canadian airmass descended into the region, bringing the first killing frost/freeze of the season in Southern Vermont.

VIRGIN ISLANDS

**St. Thomas/St. John
& Islands County**

St. Thomas 04 0800AST 1700AST 0 0 Heavy Rain

Heavy downpours affected part of the island.

**St. Thomas/St. John
& Islands County**

St. Thomas 06 1200AST 1700AST 0 0 Heavy Rain

Intermittent heavy downpours were reported during the afternoon due to an upper level trough anchored over the Eastern Caribbean.

**St. Croix County
St. Croix**

21 0800AST 1700AST 0 0 Heavy Rain

The combined effects of a low level trough interacting with an upper level trough brought showers and thunderstorms to the territory that resulted in minor flooding. The heavy rains forced school officials to cancel classes at Central High School due to flooding conditions.

**St. Croix County
St. Croix**

22 1600AST 2200AST 0 0 Heavy Rain

Heavy rains affected the island late in the afternoon and into the early evening, with the west end of the island receiving more than one inch of rain.

**St. Croix County
St. Croix**

23 0800AST 1900AST 0 0 Heavy Rain

Persistent rains affected the island most of the day with rainfall accumulations varying from one to two inches.

VIRGINIA, East

NONE REPORTED.

VIRGINIA, Extreme Southwest

NONE REPORTED.

VIRGINIA, North

NONE REPORTED.

VIRGINIA, Northwest

NONE REPORTED.

Storm Data and Unusual Weather Phenomena

October 2004

		Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		October 2004	
Location	Date				Killed	Injured	Property	Crops	Character of Storm	

VIRGINIA, Southwest

VAZ058>059

Halifax - Charlotte

01 0000EST

0 0

Flood

02 1752EST

River flooding caused by heavy rains from the remnants of Hurricane Jeanne in late September, continued along the Lower Dan, and Lower Roanoke Rivers into early October.

On the Dan River, at Paces, Halifax Co., the river fell below flood stage at 06:34 on October 1st.

On the Dan River, at South Boston, Halifax Co., the river crested at 25.19 feet at 05:00 on October 1st, then fell below the flood stage at 22:07 on the 1st.

On the Roanoke River, at Randolph, Charlotte county, the river fell below flood stage at 17:52 pm October 2nd.

WASHINGTON, Northeast

Grant County

Ephrata

17

1400PST

0 0

30K

Thunderstorm Wind (G60)

1600PST

A cold front moved across Grant County Sunday afternoon October 17. Winds to 60 mph caused considerable damage. A hay storage building 2 miles east of Soap Lake was destroyed along with extensive damage to a wheel irrigation system. At the same time heavy rain occurred in Ephrata resulting in areas of ponding water and local power outages.

WASHINGTON, Northwest

NONE REPORTED.

WASHINGTON, Southeast

Franklin County

11 NNE Pasco

17

1408PST

0 0

Thunderstorm Wind (G57)

Outflow from a thunderstorm combined with a passing cold front produced a wind gust of 57 knots.

WASHINGTON, Southwest

NONE REPORTED.

WEST VIRGINIA, East

NONE REPORTED.

WEST VIRGINIA, North

WVZ003

Ohio

18

1825EST

0 0

Flood

1930EST

Short Creek flooded North Fork Rd and GC&P Rd about 3 miles south of West Liberty because of debris in the creek.

WEST VIRGINIA, Southeast

NONE REPORTED.

WEST VIRGINIA, West

WVZ038-046>047

Webster - Pocahontas - Randolph

06

0200EST

0 0

Frost/Freeze

0800EST

A clear sky, dry air, and nearly calm winds allowed dawn temperatures to drop into the mid 20s to around 30 degrees in the coldest valley locations. Gladys was 24 degrees, Bartow measured 29 degrees, Frost and Cheat Bridge were 30 degrees, and near Webster Springs had 31 degrees.

WISCONSIN, Northeast

Winnebago County

Omro

23

1245CST

0 0

Hail (1.00)

Outagamie County

2 NW Appleton

23

1320CST

0 0

Funnel Cloud

Outagamie County

2 NW Kimberly

23

1325CST

0 0

Funnel Cloud

Winnebago County

1 NW Oshkosh

23

1326CST

0 0

Thunderstorm Wind (G50)

Storm Data and Unusual Weather Phenomena

October 2004

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

WISCONSIN, Northeast

Winnebago County

1 SE Winneconne to 23 1329CST 0 0 Thunderstorm Wind (G50)
3 NE Winneconne 1333CST

Brown County

Ashwaubenon 23 1410CST 0 0 Hail (0.88)

Brown County

Green Bay 23 1411CST 0 0 Thunderstorm Wind (G52)

Brown County

Green Bay 23 1415CST 0 0 Hail (0.75)

A front made its way through Wisconsin as a strong low pressure system moved across the northwest part of the state. Severe thunderstorms developed in a moist airmass ahead of the front. Winds from the storms downed tree limbs and blew a pontoon boat from its trailer into a ditch near Winneconne (Winnebago co.). Road signs in the Oshkosh (Winnebago co.) area also sustained wind damage. Quarter size hail was reported in Omro (Winnebago co.) and nickel size hail fell in Ashwaubenon (Brown co.). A pair of funnel clouds were observed simultaneously northwest of Appleton (Outagamie co.) and another funnel was spotted northwest of Kimberly (Outagamie co.).

Marathon County

Spencer 29 2106CST 0 0 Hail (0.88)

Marathon County

Athens 29 2122CST 0 0 Hail (0.88)

Marathon County

Athens 29 2122CST 0 0 Thunderstorm Wind (G52)

Lincoln County

Heafford Jct 29 2206CST 0 0 Thunderstorm Wind (G50)

Oneida County

2 SW Woodboro 29 2210CST 0 0 Thunderstorm Wind (G50)

A line of thunderstorms developed in unstable air ahead of a strong cold front that moved through Wisconsin. The storms produced high winds that downed large tree limbs in Heafford Junction (Lincoln co.), knocked down trees and power lines near Woodboro (Oneida co.) and dropped nickel size hail at Spencer (Marathon co.) and Athens (Marathon co.).

WISCONSIN, Northwest

Price County

1 W Phillips 23 1153CST 0 0 Hail (1.00)

Bayfield County

Washburn 23 1302CST 0 0 Hail (0.75)

Ashland County

La Pointe 23 1304CST 0 0 Hail (0.75)

WISCONSIN, Southeast

WIZ056-062

Sauk - Iowa

10 0430CST 0 0 Dense Fog
0730CST

Dense fog developed shortly before sunrise in the Wisconsin River Valley, reducing visibilities to 1/8 to 1/4 mile. School buses were delayed a couple hours, and airplane traffic at the Lone Rock airport were delayed.

WIZ052-060

Sheboygan - Ozaukee

10 2100CST 0 0 Dense Fog
11 0600CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some school buses were delayed a couple hours, and some airplane traffic was delayed.

WIZ051-059

Fond Du Lac - Washington

11 0000CST 0 0 Dense Fog
0600CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some school buses were delayed a couple hours, and some airplane traffic was delayed.

WIZ062>063-067>068 Iowa - Dane - Lafayette - Green

12 0200CST 0 0 Dense Fog
0800CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some school buses were delayed a couple hours, and some airplane traffic was delayed.

Storm Data and Unusual Weather Phenomena

October 2004

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

WISCONSIN, Southeast

WIZ064>066-069>072 Jefferson - Waukesha - Milwaukee - Rock - Walworth - Racine - Kenosha

12 0200CST 0 0 Dense Fog
0700CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some school buses were delayed a couple hours, and some airplane traffic was delayed.

WIZ051>052-058>060 Fond Du Lac - Sheboygan - Dodge - Washington - Ozaukee

12 0300CST 0 0 Dense Fog
1000CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some school buses were delayed a couple hours, and some airplane traffic was delayed.

Green Lake County

Berlin 23 1224CST 0 0 Hail (0.88)

Scattered thunderstorms developed over south-central Wisconsin and then moved northeast. One storm briefly pulsed to severe limits and dumped some large hail. Afternoon maximum temperatures were in the lower 70s, or about 15 degrees above normal. As low pressure tracked northeast through northwest Wisconsin, a broken line of cells moved northeast at 35 knots (40 mph) through the Green Lake County area.

WIZ062>063-067>068 Iowa - Dane - Lafayette - Green

28 2200CST 0 0 Dense Fog
29 0400CST

Dense fog developed overnight, reducing visibilities to 1/8 to 1/4 miles. Some vehicle accidents were noted in newspapers.

Kenosha County

5 W Kenosha 29 2049CST 0 0 Thunderstorm Wind (G52)

Lafayette County

2 S Belmont 29 2130CST 0 0 Thunderstorm Wind (G52)

Rock County

3 SE Orfordville 29 2235CST 0 0 Hail (0.75)

Rock County

1 S Orfordville 29 2239CST 0 0 Thunderstorm Wind (G56)

Jefferson County

3 SW Palmyra 29 2320CST 0 0 Thunderstorm Wind (G52)

A late-season severe weather outbreak affected parts of south-central and southeast Wisconsin. Locally powerful downburst wind gusts of 52 to 56 knots (60-65 mph) toppled large trees, and there was a report of large hail. The storms, in the form of bowed lines along a near a cold front, moved quickly from west to east at 50 to 60 knots (58 to 69 mph) thanks to a strong jet stream aloft. One toppled tree caught fire after pulling down a power line south of Orfordville (Rock Co.). Synoptically, a very strong vorticity maxima at 500 mb moved east through the Wisconsin/Illinois stateline area. A strong cold front plowed into unstable air with LI's of -6 and CAPE's of 1500-2000. Maximum afternoon temperatures peaked in the mid 70s F, or about 20 degrees above normal.

WISCONSIN, Southwest

NONE REPORTED.

WISCONSIN, West

Pierce County

Prescott to 29 1750CST 0 0 Thunderstorm Wind (G55)
River Falls 1800CST

Trees were downed from Prescott to River Falls.

St. Croix County

2 NW Hammond 29 1805CST 0 0 Thunderstorm Wind (G55)

Near the intersection of Highway 12 and 160th Street 2 miles northwest of Hammond a pole barn was damaged. Pieces of the barn's corrugated steel roofing were found up to one quarter mile away. A playhouse made out of timbers was destroyed. A car was damaged by flying debris. A second barn lost a portion of its roof.

St. Croix County

1 S Hammond 29 1805CST 0 0 Thunderstorm Wind (G55)

A tractor trailer was blown over on Interstate 94 at mile post 13.

Polk County

Countywide 29 1835CST 0 0 Thunderstorm Wind (G55)

Trees and power lines were downed in Clear Lake, Luck, Clayton, Balsam Lake, St. Croix Falls, Dresser, and Alden Township.

Barron County

1 E Turtle Lake 29 1850CST 0 0 Hail (1.75)

Storm Data and Unusual Weather Phenomena

October 2004

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

WISCONSIN, West

Barron County

Central Portion	29	1900CST 1910CST			0	0			Thunderstorm Wind (G55)
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In Standfold Township the south wall and roof of a new pole barn were blown off and several trees were downed onto power lines. Trees were also downed east and southeast of Cumberland along Highway 48 and at the intersection of County Road T and 7th Street.

St. Croix County

Emerald	30	0140CST			0	0			Thunderstorm Wind (G52)
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The roof of a barn was blown off near Emerald on Co. Hwy. D south of Hwy. 64. The time was estimated.

Barron County

1 N Cameron	30	0145CST			0	0			Hail (0.75)
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WYOMING, Central and West

WYZ003-011- 019>020	Cody Foothills - Southeast Johnson County - Green Mountains & Rattlesnake Range - Natrona County Lower Elevations
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18	0900MST 1040MST			0	0			High Wind (G54)
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WYOMING, Extreme Southwest

NONE REPORTED.

WYOMING, North Central

WYZ099

Sheridan Foothills

31	1200MST			0	0			Heavy Snow
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7 inches of new snow in Sheridan

WYOMING, Northeast

NONE REPORTED.

WYOMING, Southeast

NONE REPORTED.

Storm Data and Unusual Weather Phenomena

April 2004

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

Additions/Corrections

ATLANTIC OCEAN

**Tidal Potomac Key
Bridge To Indian Hd
Md**

Rnld Reagan Natl Arpt	23	1720EST			0	0			Marine Tstm Wind
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**Chesapeake Bay Sandy
Pt To N Beach Md**

2 NE Stevensville	23	1811EST			0	0			Marine Tstm Wind
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Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

ATLANTIC OCEAN

Chesapeake Bay Pooles

Is To Sandy Pt Md

3 N Riviera Beach	25	1848EST			0	0			Marine Tstm Wind
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Chesapeake Bay Pooles

Is To Sandy Pt Md

Tolchester Beach	25	1934EST			0	0			Marine Tstm Wind
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Tidal Potomac Key

Bridge To Indian Hd

Md

Rnld Reagan Natl Arpt	25	2005EST			0	0			Marine Tstm Wind
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Tidal Potomac Key

Bridge To Indian Hd

Md

Rnld Reagan Natl Arpt	31	2005EST			0	0			Marine Tstm Wind
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Chesapeake Bay N Beach To Drum Pt Md

Cove Pt	31	2124EST			0	0			Marine Tstm Wind
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Chesapeake Bay Drum Pt To Smith Pt Va

Solomons Island	31	2130EST			0	0			Marine Tstm Wind
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MARYLAND, Central

Howard County

Elk Ridge	25	1815EST			0	0	1K		Thunderstorm Wind (G60)
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Strong thunderstorm winds knocked down trees.

MISSOURI, East

Marion County

5.5 NW Hannibal to 4 NW Hannibal	24	2155CST 2158CST	2	50	0	0			Tornado (F0)
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A weak tornado caused tree damage just south of Highway 61 northwest of Hannibal.

TEXAS, Mid - South

Calhoun County

Countywide	08	0840CST 1500CST			0	0			Flash Flood
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Numerous roads flooded throughout the county. Law enforcement and media reported road closures in the Port Oconnor and Seadrift communities. See episode narrative below for more information.

Refugio County

East Portion	08	0914CST 1445CST			0	0			Flash Flood
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Numerous county and farm to market roads flooded across the eastern half of Refugio county, mainly east of U.S. 77. See episode narrative below for more information.

Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

TEXAS, Mid - South

Aransas National Wildlife Refuge..... 7.15
 Aransas RAWS..... 6.40
 Matagorda Island RAWS..... 2.69
 Refugio..... 1.52

Victoria County Countywide

13 1700CST 0 0 Flash Flood
2330CST

Several secondary lowland roads throughout the county were flooded. Several city streets in the City of Victoria covered with over 6 inches of water, forcing closures. Radar estimated widespread 3 to 4 inches fell across most of the county. An isolated 5 to 6 inches was estimated across the southern portion of the county, between the Guadalupe and San Antonio rivers. See episode narrative below for additional rainfall totals.

San Patricio County Northwest Portion

13 1715CST 0 0 Flash Flood
1915CST

Flash flooding occurred across the northwest portion of San Patricio county. Access roads to Interstate 37 were flooded near Mathis. Secondary roads between Mathis and Tynan were flooded. Radar estimated 5 to 8 inches of rain fell between Mathis and the Bee county line, along Highway 359. See episode narrative below for more information including rainfall amounts.

San Patricio County 4 SE Mathis

13 1720CST 0.5 50 0 0 Tornado (F0)
1721CST

Law enforcement relayed tornado on ground near Highway 188 and Interstate 37. Tornado was briefly on ground over open country and produced no damage.

San Patricio County 3 ESE Mathis

13 1740CST 0.5 50 0 0 Tornado (F0)
1741CST

Spotter reported brief tornado over open county. No damage resulted.

Bee County South Portion

13 1800CST 0 0 94K Flash Flood
2230CST

Extensive flash flooding occurred across the southern portion of Bee county, mainly south of U.S. 59. All primary and secondary roads became impassible. Roads into Tynan, Skidmore and Papalote were all cut off due to high water. Several homes, a church and three school buildings were flooded in Skidmore. Rescues were required for some residents throughout the southern part of the county. Schools were closed the next day due to impassible roads. Radar estimates widespread 5 to 8 inches of rain fell over the southern half of the county, south of Beeville. A bullseye of 8 to 12 inches was estimated to have fallen between Skidmore, Tynan and Olmos. A spotter recorded 7.7 inches of rain falling in just 2.5 hours. See episode narrative below for more information including rainfall amounts.

Live Oak County South Portion

13 1913CST 0 0 Flash Flood
2130CST

F.M. road 3024 was flooded just north of KOA campgrounds. F.M. 888 also reported flooded. Radar estimated 3 to 5 inches of rain fell across the southern part of the county, around Lake Corpus Christi. See episode narrative below for additional rainfall totals.

Refugio County Woodsboro

13 1940CST 0 0 Hail (1.75)

Golf-ball sized hail damaged windshield of Sheriff Officer's vehicle.

Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

TEXAS, Mid - South

Calhoun County

Countywide

13	1945CST	0	0	Flash Flood
	2300CST			

County officials reported major street flooding from Port O'Connor to Magnolia Beach to Seadrift. Cars reported stalled in high water on streets in Port O'Connor. Radar estimated 3 to 4 inches of rain to have fallen across some of these locations. See episode narrative below for additional rainfall totals.

Refugio County

Woodsboro

13	1945CST	0	0	Flash Flood
	2300CST			

Several roads in Woodsboro experienced flooding. Radar estimated 3 to 5 inches of rain fell along and west of U.S. 77, across the west-central portion of the county, including the city of Woodsboro. See episode narrative below for additional rainfall totals.

Aransas County

Countywide

13	2115CST	0	0	Flash Flood
	2345CST			

Aransas County Emergency Management reported most roads throughout the county flooded, with a foot of water over some. Some drivers in Rockport required rescuing after their vehicles stalled in high water. Radar estimated 3 to 4 inches of rain fell from Rockport to the Aransas Wildlife Refuge. See episode narrative below for additional rainfall totals.

Nueces County

Corpus Christi

13	2145CST	0	0	Flash Flood
14	0030CST			

Flooding of streets was reported near the 358 and I-37 interchange. Radar estimated widespread 2 to 3 inches of rain fell across the county. Isolated areas of 3 to 4 inches were estimated. See episode narrative below for additional rainfall totals.

Nueces County

Corpus Christi

13	2238CST	0	0	Hail (0.88)
	2245CST			

Nickle sized hail reported at Holly and Everhart intersection in Corpus Christi. Numerous other reports of pea to dime sized hail throughout Nueces County and the city of Corpus Christi.

Kleberg County

Kingsville

13	2340CST	0	0	Thunderstorm Wind (G52)
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Kleberg County

Kingsville

13	2345CST	0	0	Flash Flood
14	0115CST			

Some city streets in Kingsville reported flooded with up to 8 inches of water over the roadway. Radar estimated 2 to 3 inches of rain fell near Kingsville. See episode narrative below for additional rainfall totals.

Outflow from earlier thunderstorms over southeast Texas interacted with a sea breeze boundary and very moist and unstable atmosphere during the afternoon hours of the 13th. Strong to severe thunderstorms erupted by late afternoon and early evening from Cotulla to George West to Victoria, persisting for several hours and training over several locations producing flooding rainfall. The thunderstorms eventually organized into a line and pushed offshore during the early morning hours of the 14th. Extensive flooding crippled the southern half of Bee county, where radar estimated up to 10 to 12 inches of rainfall may have fallen. Virtually all roads throughout the southern half of the Bee county were impassable. Several residents were reported to have been rescued. Below are selected rainfall totals for this event during the afternoon of the 13th and early morning hours of the 14th from ASOS, RAWS, Cooperative Observer and media sites.

...Victoria Crossroads Area...

Station..... Amouts (inches)

Coletto Creek..... 2.59

Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

TEXAS, Mid - South

Victoria Fire Station..... 3.30

...Coastal Bend Area...

Station..... Amounts (inches)

Aransas Wildlife Refuge..... 5.89

Bishop..... 2.59

Beeville..... 1.68

Corpus Christi Intl Arpt..... 2.78 (2.43 new daily record for the 13th)

Kingsville..... 2.67

N.A.S. Corpus Christi..... 4.29

Refugio 2 NW..... 5.15

Rockport..... 4.82

Sinton..... 3.60

Tynan (1 NE)..... 9.35 (unofficial)

...Media Reports...

Station..... Amounts (inches)

Beeville 4 S..... 7.20

Ingleside On-The-Bay..... 3.80

CC Airline & McArdle..... 5.10

VIRGINIA, North

Rockingham County

Elkton

02

1805EST

0

0

5K

Thunderstorm Wind (G55)

Trees down in Eastern Rockingham County.

Shenandoah County

1 SW Basye

07

1600EST

0

0

1K

Thunderstorm Wind (G53)

Trees down around Orkney Springs.

Warren County

Front Royal

07

1643EST

0

0

1K

Thunderstorm Wind (G57)

Trees down.

Rappahannock County

Flint Hill

07

1700EST

0

0

15K

Thunderstorm Wind (G57)

Roof torn off restaurant.

Fauquier County

Warrenton

07

1728EST

0

0

3K

Thunderstorm Wind (G56)

Large trees down across a highway.

Frederick County

5 N Winchester Arpt

07

1735EST

0

0

5K

Thunderstorm Wind (G57)

Trees down countywide.

Culpeper County

Richardsville

07

1740EST

0

0

2K

Thunderstorm Wind (G53)

Trees down.

Rappahannock County

Sperryville

07

1740EST

0

0

3K

Thunderstorm Wind (G55)

Trees down at 211 and 522.

Stafford County

Countywide

07

1755EST

0

0

5K

Thunderstorm Wind (G55)

Numerous trees down.

Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

VIRGINIA, North

Orange County **Unionville**

07 1825EST 0 0 5K Thunderstorm Wind (G60)

Trees down.

Fredericksburg (C) **Fredericksburg**

07 1830EST 0 0 2K Thunderstorm Wind (G52)

Media reported 60 mph wind.

Stafford County **3 SE Falmouth**

07 1830EST 0 0 10K Thunderstorm Wind (G65)

Trees down.

Frederick County **Stephens City**

07 1840EST 0 0 5K Thunderstorm Wind (G55)

Trees down across the county.

King George County **King George**

07 1840EST 0 0 500K Thunderstorm Wind (G70)

Several dwellings were damaged from felled trees and power lines.

King George County **1 NW Shiloh to** **2 SE Shiloh**

07 1851EST 3 300 0 0 10K Tornado (F1)
1853EST

A tornado touched down in southeast King George County. The damage began just northwest of Shiloh and the path continued southeast for approximately three miles. Many trees were topped, snapped and uprooted. Damage was intermittent, and the strongest damage occurred near the end of the tornado path.

Spotsylvania County **Spotsylvania**

07 1920EST 0 0 15K Thunderstorm Wind (G72)

A stage collapsed at an outdoor festival, and several portable toilets were overturned by strong winds.

A strong cold front move through the region on the 7th. Numerous showers and very strong thunderstorms accompanied the front. The thunderstorms produced widespread damage in the Piedmont region of Northern Virginia. Significant damage was reported in northwest King George, east Stafford, and northeast Spotsylvania Counties. In King George County, an F1 tornado touched down near Shiloh. At least a dozen dwelling, and 10 boats were damaged. The boats were stored in dry dock in the Waugh Marina. Several trees were also uprooted or topped out along the storms three mile path. In Stafford County, 80 to 90 mph winds destroyed two homes caused major damage to twenty others. The Japazawas Subdivision Eastern Stafford County had about 40 felled trees. Three Amtrak trains were stalled between the Chatham area of Stafford and Fredericksburg due to downed trees and power lines. Finally, in the City of Spotsylvania, Spotsylvania County, the main stage at the re-enactment of the Battle of Spotsylvania collapsed due to strong winds. A number of tents and a couple of portable toilets were also blown over.

Page County **Luray**

25 1705EST 0 0 3K Thunderstorm Wind (G60)

Trees down at several locations.

Page County **Luray**

25 1710EST 0 0 10K Hail (1.00)

Quarter size hail was reported in Luray. The hail dented cars and damaged gardens.

Loudoun County **1 NW Lovettsville to** **.7 N Lovettsville**

25 1749EST 0.5 50 0 0 1K Tornado (F0)
1752EST

A very weak tornado damaged a few trees near Lovettsville. Eye witnesses reported golf ball size hail covering the ground as this storm moved across the area. Overall damage from the tornado was minimal.

Loudoun County **Purcellville**

25 1757EST 0 0 5K Thunderstorm Wind (G60)

Multiple trees down.

Storm Data and Unusual Weather Phenomena

May 2004

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

Additions/Corrections

VIRGINIA, North

Fairfax (C)

Fairfax	25	1903EST			0	0	10K		Hail (1.00)
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Quarter size hail reported at Route 50 and Prosperity.

Alexandria (C)

Theological Seminary	25	1920EST			0	0			Hail (1.25)
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Hail the size of a half dollar was reported.

Strong thunderstorms produced widespread wind damage across Northern Virginia on May 25th. One thunderstorm spawned a tornado in Northern Loudoun County, near Lovettsville. The weak tornado topped trees, shredded leaves and spread debris along a two mile track. Straight-line winds downed trees and power lines area wide. At the height of the storms thousands were without power. Some areas were pelted with nickel to half dollar size hail, which dented cars and damaged gardens. Several minor automobile accidents were reported to the 911 Center.

WEST VIRGINIA, East

Grant County

Countywide	07	1625EST			0	0	3K		Thunderstorm Wind (G55)
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Trees down across the county.

Mineral County

Ft Ashby	07	1647EST			0	0	5K		Thunderstorm Wind (G55)
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Trees down.

Hampshire County

Romney	07	1652EST			0	0	5K		Thunderstorm Wind (G53)
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Downed trees.

Scattered showers and thunderstorms ahead of a strong cold front downed trees and power lines across the Panhandle of West Virginia on May 7th.

Storm Data and Unusual Weather Phenomena

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

June 2004

Additions/Corrections

ILLINOIS, Northwest

Bureau County

3.4 SW Neponset to 10 1628CST 0.3 125 0 0 12K 4K Tornado (F1)
3.1 SW Neponset 1629CST

Winds estimated around 100 mph.

Bureau County

2.7 SW Neponset to 10 1630CST 0.3 125 0 0 12K 4K Tornado (F1)
2.4 SW Neponset 1631CST

Winds estimated around 100 mph.

A small supercell produced two tornadoes in quick succession during the afternoon of 10 June 2004. The first (1628-1629 CST) touched down near the intersection of Kentville Rd and 150 East. The Snyder farm lost several outbuildings with damage done to the roof of the farm house and a window blown out with 3 semi trailers tossed onto their sides. Across the road at the VanWinkle farm, a window was blown out and the roof was lifted and set back down with more outbuildings destroyed. The tornado dissipated near the intersection of Kentville Rd and 200 East.

The second tornado (1630-1631 CST) developed just north of the first and affected an area just west and east of 200 East Street. The Stabler farm had several windows blown out.

Storm Data and Unusual Weather Phenomena

July 2004

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

Additions/Corrections

COLORADO, West

Montrose County

1.5 S Montrose	23	1230MST			0	0			Thunderstorm Wind (G56)
		1235MST							

The strong winds occurred in a rural location where tree branches were broken off and some personal property, such as trash cans, were blown over or blown away.

Montrose County

4 SW Montrose	23	1240MST			0	0			Funnel Cloud
		1255MST							

FLORIDA, Northeastern

St. Johns County

6 ESE Hastings	11	1405EST			1	0			Lightning
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Man struck by lightning in Flagler Estates area. Report relayed to NWS JAX by State Warning Point. M?OU

Nassau County

Fernandina Beach	30	1400EST			1	0			Rip Current
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M161W

GEORGIA, North and Central

Harris County

3 W Mulberry Grove	13	1500EST			0	0			Hail (0.75)
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The public reported penny-sized hail.

Wilcox County

Abbeville to Rochelle	13	1600EST			0	0	1K		Thunderstorm Wind (G50)
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A cooperative observer for the National Weather Service reported that several trees were down on the roads between Abbeville and Rochelle.

Wilcox County

Rochelle	13	1600EST			0	0			Hail (0.75)
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A cooperative observer for the National Weather Service reported penny-sized hail.

Walker County

Rossville	13	2310EST			0	0	0.50K		Thunderstorm Wind (G50)
		2321EST							

The Walker County 911 center reported that a couple of trees were blown down.

Catoosa County

Ringgold	13	2321EST			0	0	3K		Thunderstorm Wind (G50)
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The Catoosa County 911 center reported that trees were down on power lines causing several power outages in the Ringgold area.

Whitfield County

Cohutta to Dawnville	13	2321EST			0	0	35K		Thunderstorm Wind (G50)
		2338EST							

Amateur radio operators reported that several trees were blown down in the Dawnville area. Trees were down on power lines and a couple of vehicles. The Whitfield County 911 center reported that three trees were blown down in the Tunnel Hill area. The Daily Citizen of Dalton reported that a large tree fell on a police vehicle in Cohutta with an estimated value of \$20,000. An adjacent shed was also destroyed by the tree.

Dade County

Countywide	13	2330EST			0	0	10K		Thunderstorm Wind (G52)
		2334EST							

The Dade County Emergency Management Director reported that a number of trees had been blown down throughout the county.

Fannin County

Union	13	2355EST			0	0	3K		Thunderstorm Wind (G50)
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The Fannin County 911 center reported that some power lines were down.

Storm Data and Unusual Weather Phenomena

July 2004

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

Additions/Corrections

GEORGIA, North and Central

Gilmer County

Tails Creek to Cherrylog 14 0013EST 0 0 5K **Thunderstorm Wind (G50)**

The Gilmer County 911 center reported that several trees were blown down across the northwest portion of the county. One tree was on a power line just south of Ellijay.

Gordon County

Countywide 14 0015EST 0 0 8K **Thunderstorm Wind (G52)**

The Gordon County 911 center reported that a number of trees were down in various areas throughout the county.

Lumpkin County

12 W Dahlonega to Dahlonega 14 0020EST
0035EST 0 0 0.75K **Thunderstorm Wind (G50)**

The Lumpkin County 911 center reported that a few trees were blown down. A storm spotter reported that several large limbs, some up to two inches in diameter, were broken off trees four miles east of Amicalola Falls on the western border of Lumpkin county near the Lumpkin/Dawson county line. The Dahlonega Nugget newspaper reported that a large tree fell in front of the Royal Guard Inn in Dahlonega.

Cherokee County

Countywide 14 0028EST
0050EST 0 0 15K **Thunderstorm Wind (G50)**

The Cherokee County Emergency Management Director reported that strong straight line thunderstorm winds, associated with a Derecho or bow echo, caused extensive damage to trees and power lines across much of the county. A measured wind gust of 68 mph was observed 5 miles northwest of Waleska at 1:28 am EDT and a wind gust of 58 mph was measured by wind recording equipment at the Cherokee County Emergency Operations Center in Canton at 1:38 am EDT. Dozens of trees were blown down and a number of power lines were either brought down by the fallen trees or blown down by the strong winds. However, no significant damage to structures was reported during the event.

Pickens County

Jasper 14 0028EST 0 0 0.50K **Thunderstorm Wind (G50)**

The Pickens County 911 center reported that a couple of trees had been blown down.

Bartow County

Countywide 14 0030EST
0050EST 0 0 5K **Thunderstorm Wind (G50)**

The Bartow County 911 center reported that several trees were blown down in various areas throughout the counties.

Dawson County

Dawsonville 14 0041EST 0 0 2K **Thunderstorm Wind (G50)**

The Dawson County 911 center reported that several trees were blown down.

Polk County

5 S Cedartown to Cedartown 14 0046EST 0 0 **Hail (1.00)**

Amateur radio operators reported dime to quarter-size hail at the intersection of U.S. Highway 27 and Georgia Highway 100, while the public reported quarter-size hail in Cedartown.

Cobb County

2 N Marietta to 2 NE Marietta 14 0056EST 0 0 1K **Thunderstorm Wind (G50)**

The Cobb County 911 center reported that a few trees were blown down just north and northeast of Marietta.

Haralson County

Tallapoosa 14 0115EST 0 0 0.50K **Thunderstorm Wind (G50)**

The Haralson County 911 center reported that a couple of trees were blown down.

Fannin County

Blue Ridge to Epworth 14 1500EST 0 0 **Hail (2.50)**

Several reports of hail, ranging in size from quarters to golf balls, were received from a storm spotter, the public, and the Fannin County 911 center. The largest hail fell in the vicinity of Blue Ridge, where hail up to the size of baseballs was reported. One person noted that one of the hail stones he saw looked like two golf balls glued together. Generally only nickel to quarter-sized hail was reported elsewhere.

Storm Data and Unusual Weather Phenomena

July 2004

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

Additions/Corrections

GEORGIA, North and Central

Fannin County

Blue Ridge

14	1515EST				0	3	1K		Lightning
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The News Observer - Blue Ridge reported that three teenagers, who were tubing down a river in the Toccoa Valley Campground area, were injured when lightning struck the water nearby. All three were treated and released from the hospital. In addition, a minor fire was reported in a home struck by lightning in a separate incident. Damage was minor.

Fannin County

Mc Caysville to Epworth

14	1530EST 1600EST				0	0	50K		Thunderstorm Wind (G52)
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A National Weather Service storm survey, along with reports from the Fannin County 911 center and the public reported that numerous trees were blown down in a swath running from northwest to southeast across the county from the Tennessee border near McCaysville southeast across Blue Ridge to near Epworth, especially along or near Georgia Highway 5. The majority of the damage occurred in the vicinity of Blue Ridge. Numerous trees were uprooted and lying in a southeast to southwest direction. Hence, it was concluded that the damage was not caused by a tornado. Several of the trees were large hardwoods. A number of power lines were brought down by the large trees and much of the area was without power for the evening. In addition, a garage in Blue Ridge was damaged by downed trees.

Gilmer County

Ellijay

14	1535EST				0	0	1K		Thunderstorm Wind (G50)
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The public reported that several trees were down.

Murray County

Chatsworth

14	1542EST				0	0	100K		Thunderstorm Wind (G50)
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The Daily Citizen of Dalton reported significant damage to trees and power lines in the Chatsworth area from thunderstorm winds. At one residence, nine trees were blown down, one causing minor damage to the roof. Another tree fell across the Mason apartments on Mount Carmel Road. Part of the tree went through the kitchen of one of the apartments. The tree also caused damage to the roof and other structural damage to the building. Two families were forced to relocate as a result of the damage. The strong winds and downed trees also knocked a power pole adjacent to the building down onto the apartments. Elsewhere in the county, at least eight roads were blocked by downed trees.

Gilmer County

Yukon

14	1543EST				0	0			Hail (1.00)
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The public reported quarter-sized hail.

Gilmer County

Ellijay

14	1552EST				0	0	3K		Thunderstorm Wind (G50)
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The Gilmer county 911 center reported that several trees had been blown down.

Fannin County

Blue Ridge

14	1600EST 1819EST				0	0			Heavy Rain
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The Fannin County 911 center reported that several roads in Blue Ridge had to be closed because of high standing water. Georgia Highway 5 was flooded in two areas and Aiken Street in the city also had to be closed.

Gilmer County

Ellijay

14	1625EST 1630EST				0	0	5K		Thunderstorm Wind (G52)
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The public reported that several trees and power lines had been blown down.

Gilmer County

Ellijay

14	1630EST				0	0			Hail (1.00)
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The public reported quarter-sized hail.

Dawson County

Dawsonville

14	1638EST				0	0			Hail (0.75)
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The Dawson County 911 center reported penny-sized hail.

Storm Data and Unusual Weather Phenomena

July 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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Additions/Corrections

GEORGIA, North and Central

Hall County

Countywide	14	1700EST 1715EST			0	0	7K	Thunderstorm Wind (G52)
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The Hall County 911 center reported that many trees had been blown down throughout the county.

Pickens County

Tate	14	1703EST 1708EST			0	0		Hail (1.00)
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The public reported dime to quarter-sized hail.

Cherokee County

3 ENE Ball Ground to 3.2 E Ball Ground	14	1714EST 1715EST	0.2	50	0	0	1K	Tornado (F0)
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The Cherokee County Emergency Management Director conducted a damage survey and concluded that a short-lived, approximately 50-yard wide F0 tornado, developed in a rural area of dense woods and brush 3 miles east-northeast of Ball Ground and traveled along the ground for approximately 400 yards. The tornado crossed Cherry Grove Road near the end of its path. Damage was confined to trees and brush. The Emergency Management Director concluded that it was a tornado since there was definite indication of rotation in the woods where the damaged occurred.

Barrow County

Countywide	14	1730EST 1800EST			0	0	10K	Thunderstorm Wind (G52)
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The Barrow County Emergency Management Director reported widespread damage to trees and power lines across the county.

Cherokee County

Ball Ground	14	1730EST			0	0		Hail (0.75)
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The public reported penny-sized hail.

Cherokee County

Ball Ground to 3 E Canton	14	1730EST 1732EST			0	0	2K	Thunderstorm Wind (G61)
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The public reported that a number of trees had been blown down by strong thunderstorm wind gusts. Winds gusts were estimated at 70 mph.

Cherokee County

6.5 SE Canton to 6.6 SE Canton	14	1743EST	0.1	50	0	0	1K	Tornado (F0)
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The Cherokee County Emergency Management Director conducted a damage survey and concluded that yet another short-lived, approximately 50-yard wide F0 tornado, developed in a rural area of dense woods and brush just east of Georgia Highway 140 about 6.5 miles southeast of Canton. The tornado only traveled on the ground for a distance of 150 yards. Damage was again confined to trees and brush. The Emergency Management Director concluded that it was a tornado since there was definite indication of rotation in the woods where the damaged occurred.

Oconee County

2 S Bogart	14	1750EST			0	0	1K	Thunderstorm Wind (G50)
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The Oconee County Emergency Management Director reported that a few trees were down along U.S. Highway 78 in extreme northeast Oconee county.

Cherokee County

8 SE Canton	14	1751EST 1752EST			0	0		Hail (1.75)
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The Cherokee County Emergency Management Director reported golf ball-sized hail.

Gwinnett County

Buford	14	1752EST			0	0		Hail (0.75)
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A spotter with the Gwinnett County SkyWarn reported penny-sized hail.

Walton County

3 NNE Monroe	14	1800EST			0	0	2K	Thunderstorm Wind (G50)
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The public reported that some power lines were down on Mountain Creek Church Road between Walker Park and Mount Vernon.

Morgan County

Buckhead	14	1804EST			0	0		Hail (0.75)
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The Morgan County Emergency Management Director reported penny-sized hail.

Storm Data and Unusual Weather Phenomena

July 2004

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

Additions/Corrections

GEORGIA, North and Central

Fannin County

Blue Ridge

14 1819EST
2019EST

0 0 20K

Flash Flood

The News Observer - Blue Ridge reported that a man had to be rescued from his truck during flash flooding on Ada Street. The man drove his S-10 pickup truck into the high water when the truck stalled as the vehicle was submerged up to the windows with water. The man reported that water was up to his rib cage inside the truck. Ada street at Highway 5 was later closed. In addition, a storm spotter reported that a house was flooded in Blue Ridge.

Greene County

Countywide

14 1830EST
1900EST

0 0 5K

Thunderstorm Wind (G52)

The Greene County 911 center reported widespread damage to trees and power lines throughout the county.

Morgan County

Madison to Buckhead

14 1830EST
1900EST

0 0 5K

Thunderstorm Wind (G50)

The Madisonian newspaper reported that a number of trees and several power lines were blown down by strong thunderstorm winds.

Fulton County

Alpharetta

14 1833EST

0 0

Hail (0.75)

The Alpharetta Police Department reported penny-sized hail.

Newton County

Countywide

14 1849EST
1915EST

0 0 5K

Thunderstorm Wind (G50)

The Newton County 911 center reported widespread damage to trees countywide. Some power lines were blown down as well.

Forsyth County

Cumming

14 1854EST

0 0 0.50K

Thunderstorm Wind (G39)

The Cumming Police Department reported that one tree was blown down onto a road.

Storm Data and Unusual Weather Phenomena

August 2004

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

Additions/Corrections

ATLANTIC OCEAN

Tidal Potomac Key Bridge To Indian Hd Md

5 W Rnld Reagan Natl / 11 1520EST 0 0 Marine Hail

Chesapeake Bay Pooles Is To Sandy Pt Md

3 N Riviera Beach 11 1548EST 0 0 Marine Tstm Wind

Chesapeake Bay Pooles Is To Sandy Pt Md

Millers Island 11 1600EST 0 0 Marine Tstm Wind

Chesapeake Bay Sandy Pt To N Beach Md

5 SE Annapolis 11 1657EST 0 0 Marine Tstm Wind

IDAHO, Southwest

Elmore County

12 W Atlanta 17 0000MST 0 0 Flash Flood
0100MST
Middle Fork Rd closed near Phifer Creek from a mud slide due to heavy rain.

Boise County

9 SW Idaho City 18 1650MST 0 0 Flash Flood
1720MST
Heavy rain caused two mud slides on Grimes Creek RD. One at mile post 2.2 and one futher up.

Ada County

Boise 21 1745MST 0 0 Thunderstorm Wind (G52)
1810MST
Trees and Power lines down.

Gem County

13 SW Emmett 25 1259MST 0 16 0 0 Tornado (F0)
1310MST
Near Sand Hollow, Payette, Gem county line. No damaged reported.

Payette County

10 SE New Plymouth 25 1259MST 0 16 0 0 Tornado (F0)
Near Sand Hollow, Payette, Gem county line. No damaged reported.

Ada County

5 SE Boise 31 1630MST 0 0 Thunderstorm Wind (G58)
1715MST
Microburst winds...semi truck overturned, trees uprooted and roofs damaged.

MARYLAND, Central

Allegany County

Mt Savage 04 1520EST 0 0 2K Thunderstorm Wind (G55)
Large limbs and power lines down.

Washington County

Hagerstown 04 1630EST 0 0 2K Thunderstorm Wind (G55)
Trees down.

Washington County

Williamsport 04 1630EST 0 0 2K Thunderstorm Wind (G55)
Downed trees.

Storm Data and Unusual Weather Phenomena

August 2004

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

Additions/Corrections

MARYLAND, Central

Baltimore County

Cockeysville 04 1820EST 0 0 2K **Thunderstorm Wind (G55)**

Downed trees and power lines.

Baltimore City (C)

2 SE Baltimore 04 1845EST 0 0 2K **Thunderstorm Wind (G55)**

TREES DOWNED

Prince George'S County

Beltsville 04 1845EST 0 0 2K **Thunderstorm Wind (G50)**

Large limbs and power lines down.

Prince George'S County

College Park 04 1845EST 0 0 3K **Thunderstorm Wind (G55)**

Large limbs down on power lines.

Harford County

Bel Air 04 1850EST 0 0 2K **Thunderstorm Wind (G55)**

Trees and power lines down.

Prince George'S County

Capitol Hgts 04 1850EST 0 0 2K **Thunderstorm Wind (G55)**

Several trees and power lines down.

Prince George'S County

District Hgts 04 1850EST 0 0 2K **Thunderstorm Wind (G55)**

Anne Arundel County

Pasadena 04 1905EST 0 0 3K **Thunderstorm Wind (G54)**

Large branches and power lines. down.

Strong thunderstorms moved through the region on August 4th. The storms toppled trees and downed power lines. At the height of the storm Baltimore Gas and Electric Company reported about 14,000 customers without power in portions of Prince Georges, Baltimore and Anne Arundel Counties. The storms even caused a 57 minute delay to the Baltimore Orioles and Seattle Mariners baseball game at Camden Yards Stadium, in downtown Baltimore.

Howard County

Clarksville 11 1510EST 0 0 2K **Thunderstorm Wind (G55)**

Trees and power lines down across the area.

Montgomery County

Silver Spg 11 1530EST 0 0 1K **Thunderstorm Wind (G55)**

Large limbs down on power lines.

Anne Arundel County

Lothian 11 1630EST 0 0 2K **Thunderstorm Wind (G55)**

Trees and power lines down.

Strong thunderstorms downed trees and power lines in east Maryland. Around 20,000 people were without power. The three regional international airports, Reagan National, Dulles International, and Baltimore-Washington, reported 1 to 3 hour weather delays for flights departing to the northeast.

Storm Data and Unusual Weather Phenomena

August 2004

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

Additions/Corrections

UTAH, West and Central

based thunderstorms. These storms initially formed over the mountains and moved out into valley and basin locations during the afternoon. Several of these storms produced severe microburst winds in Utah and Tooele counties. A 70 mph wind gust was measured in 14 miles southwest of Dugway in the Dugway mesonet, 66 mph gust was clocked 15 east of Lakeside, and a 58 mph gust occurred 14 miles northeast of Lucin. A thunderstorm moving east from the crest of the Wasatch created a cloud to ground lightning strike that struck a Heber City home. The strike damaged the roof of the home and a nearby water well.

Tooele County

Dugway	02	1340MST			0	2	12K		Thunderstorm Wind (G63)
		1400MST							

Box Elder County

Promontory	02	1537MST			0	0	0		Thunderstorm Wind (G58)
		1600MST							

Utah County

Orem	02	1538MST			0	0	5K		Thunderstorm Wind (G60)
		1600MST							

Residual moisture from the previous day's thunderstorms combined with another weak short wave trough moving through northern Utah to produce a round of scattered thunderstorms. These storms were able to produce more in the way of measurable rainfall but several severe outflow/microburst winds gusts were still observed. A gust to 63 mph was measured at Dugway, a gust to 60 mph in Orem, and a gust to 58 mph occurred at Promontory.

Carbon County

Wellington	10	1400MST			0	0	10K		Thunderstorm Wind (G60)
		1430MST							

A strong high based thunderstorm moved through the Price/Wellington area. This storm produced strong microburst winds that blew the side of a lean-to and its roof flying onto a neighbors house, causing extensive damage. A large piece of timber crashed through a home in Wellington and another was lodged in the side of the same home.

VIRGINIA, North

Prince William County

2 N Dumfries	01	1530EST			0	0			Flash Flood
		1830EST							

Route 1 closed due to high water at a couple of spots.

Nelson County

Lovington	01	1710EST			0	0			Flash Flood
		2110EST							

Streets closed due to standing water.

Loudoun County

Round Hill	11	1340EST			0	0	1K		Thunderstorm Wind (G50)
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Downed trees.

Fauquier County

Marshall	11	1400EST			0	0	2K		Thunderstorm Wind (G55)
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Trees and power lines down.

Fairfax County

Chantilly	11	1425EST			0	0			Hail (1.75)
		1439EST							

Penny to golf ball size hail was reported in Chantilly.

Fairfax (C)

Fairfax	11	1455EST			0	0			Hail (0.75)
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Penny size hail was observed in the City of Fairfax.

Fairfax County

Annandale	11	1510EST			0	0			Hail (3.00)
		1520EST							

Quarter to teacup size hail fell in Annandale. The larger hail caused dents to several cars in the vicinity.

Storm Data and Unusual Weather Phenomena

August 2004

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

Additions/Corrections

VIRGINIA, North

Falls Church (C)

Falls Church	11	1515EST			0	0	3K		Thunderstorm Wind (G55)
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Trees and power lines down. across the city.

Fairfax County

Annandale	11	1540EST			0	0			Hail (2.00)
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Hen egg size hail was reported.

Strong winds downed trees and power lines in Fairfax, Fauquier, and Loudoun Counties. Approximately 24,000 people were without power at some point during the storms. The area was also riddled with penny to quarter size hail. Trained spotters reported a few hail stones as large as tea cups. Reagan National and Dulles International Airports had weather delays of 1 to 3 hours for flights traveling to the northeast.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

ALABAMA, Southwest

ALZ051>064

Choctaw - Washington - Clarke - Wilcox - Monroe - Conecuh - Butler - Crenshaw - Escambia - Covington - Upper Mobile - Upper Baldwin - Lower Mobile - Lower Baldwin

13	2100CST	0	0	2.5B	25M	Hurricane/Typhoon
16	1500CST					

Hurricane Ivan affected the region from September 13 through the 16th. The coastal areas were put under a hurricane watch at 900 PM CST on September 13. The area was put under a hurricane warning at 300 PM CST on September 14. The hurricane warning was dropped at 900 AM CST on September 16 and we were put under a tropical storm warning. The tropical storm warning was dropped at 300 PM CST on September 16.

Ivan made landfall around 100 AM CST near Gulf Shores, Alabama on September 16. An interesting note, as Ivan approached the Alabama coast during the day on the 15th, a buoy just south of the Alabama coastal waters recorded a peak wave height of 52 feet, before breaking loose of its mooring. This was one of the highest wave heights ever observed.

Some of the winds recorded across Southwest Alabama were as follows: Mobile Regional Airport, sustained wind of 51 knots from the north with a peak gust of 65 knots from the north northeast. Dauphin Island, sustained wind of 61 knots from the east with a gust of 89 knots from the northeast. USS Alabama, located off the Mobile Bay causeway, peak gust 91 knots (site is more than 100 feet high). Fairhope, peak gust 63 knots. Semmes, peak gust 51 knots. Grand Bay, peak gust 62 knots. WKRG in Mobile, peak gust 64 knots. Wallace Tunnel in Mobile, peak gust 51 knots. Gulf Shores Airport, sustained winds 73 knots with a peak gust of 100 knots (Doppler on Wheels site). Fairhope, sustained wind 59 knots with a peak gust of 77 knots (Doppler on wheels).

Some of the winds across Northwest Florida were as follows: Pensacola Naval Air Station, sustained wind of 76 knots from the southeast with a gust of 93 knots from the southeast. Pensacola Regional Airport, sustained wind of 67 knots from the southeast with a peak gust of 87 knots. West Pensacola, peak gust 84 knots. Pensacola, sustained wind 70 knots with a peak gust of 92 knots (Doppler on wheels). Pace, sustained wind of 73 knots with a peak gust of 87 knots (Air Products location - about 160 feet high). Escambia county EMA office peak gust 90 knots. Eglin Air Force Base sites; 2 SW of Mary Esther, peak gust 103 knots (200 feet high). 10 S Harold, peak gust 78 knots. 10 N Mary Esther, peak gust 75 knots. 5 NE Seminole, peak gust 75 knots.

Some of the lowest sea level pressures were as follows: In Alabama: Fairhope 947.9 MB. Mobile Regional Airport 964.4 MB. Brookley Field (Mobile) 956.0 MB. Semmes 967.5 MB. Dauphin Island 952.7 MB.

In Florida: Pensacola Regional Airport 970.2 MB. Pensacola Naval Air Station 965.8 MB. 5 S Harold 981.4 MB.

Two day rainfall totals ending at midnight on September 16 were as follows: In Alabama: Mobile Regional Airport (MOB) 5.56 inches. Coden 6.30 inches. Evergreen 7.25 inches. Alberta 6.85 inches. Semmes 5.00 inches. Daphne 7.5 inches. Andalusia 9.96 inches. 2 S Mobile 9.90 inches. Silverhill 10.16 inches. Robertsedale 9.35 inches. Spanish Fort 8.00 inches.

In Florida: Pensacola Naval Air Station (NPA) 8.00 inches. Pensacola (WEAR TV) 15.79 inches. Crestview 8.40 inches. Fort Walton Beach 6.06 inches. Munson 6.5 inches. Niceville 6.55 inches. Eglin Air Force Base (VPS) 7.43 inches. 10 S Mossy Head 8.92 inches.

Storm surge values along the coast from Baldwin county east to Santa Rosa county were the highest observed in over a hundred years of record keeping. The high surge values of 10 to 14 feet caused extensive damage to homes and condos located along the Gulf beachfront, as well as along the shoreline of area inland waterways. Dauphin Island had several areas that were breached by the high surge. There was less damage on Dauphin Island than with Hurricane Frederic in 1979, even with the extensive building that has occurred on the island since 1979. In Baldwin county, the coastal areas from Fort Morgan to Gulf Shores to Orange Beach saw the worst damage from a hurricane in over a hundred years. This area has seen rapid development in the past 20 years and it seemed that the homes and condo's constructed in the past five years held up better than homes that were constructed earlier. Surge values were estimated between nine and twelve feet along the Baldwin county coastline, and the beach was breached at several locations. No one died as a result of storm surge in Baldwin county.

In Escambia county Florida, surge values were estimated at ten to fourteen feet. These coastal areas were the hardest hit, with major damage occurring from Perdido Key to Pensacola Beach. Almost every structure that was on the waterfront in Escambia county suffered some degree of damage. Generally, if the property elevation was below fifteen feet, water flooded the property. Property that was on Perdido Bay, Big Lagoon, Bayou Grande, Pensacola Bay and Escambia Bay suffered major damage. Many homes were completely washed away by the high surge. Almost all of the deaths directly attributed to Ivan in Escambia County were surge related, and occurred near Big Lagoon. The beach area from Perdido Key to Pensacola Beach was breached in several places. Fort Pickens was cut off and isolated from the rest of Pensacola Beach as a result of several breaches. The highest surge values observed during the storm were in the upper reaches of Escambia Bay. The surge, and accompanying wind waves, damaged the I-10 bridge across Escambia Bay. A trucker died on the bridge when his truck plummeted off a bridge section that had been displaced by the surge. Pensacola Naval Air Station, which is located on Pensacola Bay across from Fort Pickens, suffered major damage to structures that were located on the water. Many of the structures had been built in the late 1800's, and had been through several other hurricanes with only minor damage. In Santa Rosa county, surge values were between nine and twelve feet. Navarre Beach had several breaches, and major damage occurred to almost all structures that were on the Gulf front. Major damage also occurred along the shores of Gulf Breeze and along Blackwater Bay. Some of the highest surge values in Santa Rosa county were near Ward Basin. Surge values across most locations east of where the center of the hurricane moved ashore were higher than those of hurricane George in 1998. As in Escambia county, almost every structure that was on the water in Santa Rosa county

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

ALABAMA, Southwest

every structure that was on the water in Santa Rosa county suffered some type of damage. In Okaloosa county surge values were six to nine feet. Structures that were located on or near the beach suffered major damage. Farther to the east, storm surge values dropped off, but the wave action essentially destroyed the beach, with four to eight feet of the sand eroded away. Low lying structures on Choctawatchee Bay also suffered major damage. US Highway 98 between Fort Walton and Destin was again washed away. Structures near the beach that were part of Eglin Air Force Base also suffered major damage.

The following surge values were measured in Alabama: Middle Gage at Bayou LaBatre 4.66 feet. Mobile Bay at Cedar Point 6.90 feet. Dauphin Island Bay at Dauphin Island 7.80 feet. Mobile Bay at Dauphin Island Coast Guard 8.00 feet. Mobile River at Mobile 4.87 feet. Mobile River at Bucks 6.82 feet. Mobile Bay at Fort Morgan Front Range 7.85 feet. Perdido Pass at Orange Beach 8.81 feet.

The following surge values were measured in Northwest Florida; Perdido Bay near US Highway 98 estimated 10.00 feet. GIWW at Pensacola Gulf Beach 9.68 feet. Pensacola Bay at Fort McRee 9.70 feet. Pensacola Bay at Pensacola 10.20 feet. Escambia Bay West Bank at Highway 90 12.92 feet. Escambia Bay West Bank 1.5 miles north of I-10 12.12 feet. Escambia Bay near Pace estimated 12.00 feet. GIWW at Gulf Breeze 10.30 feet. Pensacola Beach Fire Station estimated 12 feet. Yellow River near Milton 9.66 feet. Fort Walton Brooks Bridge 6.12 feet. Destin at Choctawatchee Bay Coast Guard 5.39 feet.

As Ivan moved ashore during the morning hours of September 16th, the winds caused major damage to trees along and east of the track of the storm. Hurricane force winds were felt across the entire area, including all inland counties. Most of the area probably had hurricane force winds for two to four hours. This caused 100 year old trees to break due to the constant force from the strong winds. Many of the trees fell on homes and vehicles and damaged them. While some structural wind damage would have been expected, most of the major structural damage that occurred over inland areas would not have been as substantial if it had not been for fallen trees. It was estimated that in Alabama over \$500,000,000 damage was done to timber, with an additional estimate of \$250,000,000 in Escambia, Santa Rosa and Okaloosa counties in Florida. Power was out for a week or more across the inland areas due to trees across lines.

Along the immediate coast, power was not restored for an additional several weeks, until much of the infrastructure was rebuilt.

It was estimated that six weak tornadoes occurred across the area during the afternoon and early evening of September 15th as Ivan neared the coast. These weak tornadoes occurred in Escambia and Santa Rosa counties in Florida, and in Baldwin, Escambia and Conecuh in Alabama and produced only minor damages.

Seven deaths were directly related to Ivan. Six of these were in Escambia county with one in Santa Rosa county. In Escambia county Florida: Five people (three women and two males) drowned at different locations around Grand Lagoon as the surge inundated the area. A male drowned after his truck ran off the damaged I-10 bridge. In Santa Rosa county, a young female died when a tree fell on their manufactured home and killed her.

Sixteen deaths were indirectly related to Ivan. In Escambia county Florida: A 78 year old female died of a heart attack in a shelter just before Ivan moved ashore. A 7 year old boy was killed as he was watching someone remove a tree and a large limb fell on him. A 58 year old female died when she was overcome by fumes from a generator that was not properly ventilated. A 41 year old male died in a traffic accident at an intersection with no power and no stop lights. A 83 year old male fell off a roof while repairing damage from Ivan. A 63 year old male fell out of a tree in Escambia county Alabama and was taken to a Pensacola hospital where he later died from injuries sustained in the fall. A 40 year old male died when a tree fell on him. In Santa Rosa county: A 67 year old male died of a heart attack preparing for Ivan. A 76 year old male died of a heart attack. A 56 year old male died of a heart attack cleaning up days after the storm. In Okaloosa county: A 54 year old female died of a heart attack when emergency crews could not get to her due to the storm. A 51 year old male died of a heart attack. A 50 year old female died days after Ivan from a drug overdose due to depression cause by the storm.

In Covington county a 75 year old female died from a fire caused by a candle used for light after the storm. In Conecuh county a 34 year old male died from a car accident when he hit debris still in the road from the storm. In Mobile county a 59 year old male died when a tree fell on him after the storm.

Agriculture interests suffered a major blow from Ivan with most of the soybean and pecan crop destroyed. The cotton crop also suffered damage but not as bad as that of the soybean and pecan crop.

Ivan will be remembered as being one of the most damaging hurricanes to affect the coastal counties of Baldwin, Escambia and Santa Rosa in modern history. It will also be remembered as one of the most damaging hurricanes to affect the inland counties of Escambia, Clarke, Monroe, Conecuh and Butler in southwest Alabama.

CARIBBEAN SEA AND TROPICAL ATLANTIC

Fernandina Beach To

St Augustine Fl Out

20Nm

Mayport Nas

11

0702EST

0705EST

0

0

Waterspout

Law enforcement officials and the public reported a waterspout offshore of NAS Mayport. It was reported that the waterspout was heading toward shore, but dissipated prior to making landfall as a tornado.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

FLORIDA, Northeastern

FLZ020>025-030>033-035>038-040 **Hamilton - Suwannee - Columbia - Baker - Nassau - Duval - Union - Bradford - Clay - St. Johns - Gilchrist - Alachua - Putnam - Flagler - Marion**

04 2100EST 4 0 Tropical Storm
07 2359EST
Hurricane "Frances"

Hurricane "Frances" made landfall along the central Florida coast and, as a weakening system, moved west-northwest across central Florida and then northwestwards into southwest Georgia. This motion brought the area into the periphery of the storm and north Florida experienced sustained tropical storm force winds with gusts to near hurricane force. Across the Suwannee Valley heavy rainfall resulted in extensive flooding in many locations.

The lowest north Florida Mean Sea Level Pressure (MSLP) of 987.8/29.16 in Hg was recorded in Ocala as the center moved to the southwest of the city. The lowest MSLP readings across north Florida ranged from 987.8/29.16 in HG at Ocala Airport (KOCF) to 1002.7 mb/29.61 in Hg at the National Ocean Systems (NOS) Tide Gage in Fernandina Beach, Florida.

Maximum sustained winds recorded were 56 knots/64 mph at the St. Augustine CMAN site (SAUF1) at the St. Augustine Pier. The peak gust was also recorded at SAUF1 with 71 knots/82 mph reported on the evening of the 5th. Generally inland stations (ASOS, AWOS III and mesonet stations) reported sustained winds of 30 to 50 mph with gusts of 40 to 65 mph. Extensive tree blow down occurred in bands with roof and some structural damage. Most structural damage was associated with mobile homes and generally weakly constructed permanent structures. Several cases of large trees destroying manufactured homes were observed, especially across Clay, Flagler, Putnam and St. Johns Counties.

Wave heights of 10 to 20 feet were recorded across the coastal waters with tides running one to two feet above astronomical tide levels. Extensive beach erosion occurred due to long duration of onshore winds due both to "Frances" and a period of onshore flow preceding the event.

Rainfall totals across north Florida generally ranged from 5 to 15 inches. The heaviest rainfall was associated with a rainband which moved out of Apalachee Bay across north Florida and the Suwannee Valley. This band dropped between 10 and 16 inches of rain from near Ocala through the Suwannee Valley. Peak Rainfall reports with this band are 15.84 inches in High Springs, Florida; 14.84 at Lake Butler, Florida; and 13.63 inches at Orange Springs, Florida. Extensive sheet flooding, river flooding and road washouts occurred with this band. Numerous homes were flooded across the entire region with the Trenton and Lake City areas especially hard hit. Most rivers in the region were pushed to flood stage with several approaching record flood. Portions of Interstate 10 were closed due to flooding.

Tornadoes occurred across the region with over 20 confirmed touchdowns. The banded nature of the Tropical Storm wind damage made it very difficult to differentiate between wind damage and tornado damage in subsequent storm damage surveys. No fatalities or injuries occurred due to tornado touchdowns.

Overall extensive tree blow down, power outages and roadways blocked by trees were reported in all areas. In the heavy rainfall areas many dirt and secondary roads were left impassable for up to a week.

Fatalities all occurred in Alachua County, Florida. 09/05/04, 1100 EST a 28 year old male lost control of his vehicle while northbound on Interstate 75 near Micanopy. The Vehicle hydroplaned and skidded into a wooded area wrapping the vehicle around trees. KGNV observation at 1100 EST, winds 050 degrees 24 mph (21 knots) with gusts to 43 mph (37 knots). Visibility was 7 miles in light rain. 09/05/04, 1815 EST A 61 year old woman was killed when a tree toppled onto her mobile home. 4 persons were in the home when the tree fell. Alachua County Emergency Management received the report at 1819 EST. KGNV observation at 1909 EST, winds 060 degrees 37 mph (32 knots) with gusts to 47 mph (41 knots). 09/06/04 1825 EST, An 86 year old woman died in a house fire related to the storm. Due to power outages she was using candles for lighting, fell asleep and the smoldering candles ignited a fire in her home killing her. 09/04/04, 1200 EST, A man and his dog were on board a boat when it capsized in a heavy squall. The dog was found the following day alive, but the man's body was recovered several days later. M21VE, F61MH, F86PH, M?BO

St. Johns County
St Augustine

10 1500EST 1 0 Rip Current
M51IW

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

FLORIDA, West Panhandle

FLZ001>006	Inland Escambia - Coastal Escambia - Inland Santa Rosa - Coastal Santa Rosa - Inland Okaloosa - Coastal Okaloosa								
13	2100CST				7	0	4B	25M	Hurricane/Typhoon
16	1500CST								

See the narrative on Hurricane Ivan under Alabama, Southwest, September 13-16 ,2004. Ivan will be remembered as one of the most damaging hurricanes to affect the extreme western Florida panhandle in modern history. The \$4 billion in property damage is an estimate, but the final figure could be as low as \$2.5 billion or as high as \$7 billion. F71PH, M78PH, F52PH, M53PH, F82PH, M46VE, F8MH

GEORGIA, Lower

Coffee County

7 S Ambrose	16	1035EST	2	1	0	0	Tornado (F0)		
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2335 EDT reported by County 911 Center

Mobile homes and sheds were damaged. Tree tops were twisted and other trees were uprooted. The report was relayed to the 911 center at 1250 am 9/17. The event time is approximate.

A newspaper article stated that there was also extensive damage just south of Bridgetown where several farm sheds and crop fields were damaged. One mobile home was blown off of its foundation, but the resident inside was unharmed.

GEORGIA, North and Central

GAZ001>009-011>016-019>025-027-030>039-041>062-066>076-078>086-089>098-102>113	Dade - Walker - Catoosa - Whitfield - Murray - Fannin - Gilmer - Union - Towns - Chattooga - Gordon - Pickens - Dawson - Lumpkin - White - Floyd - Bartow - Cherokee - Forsyth - Hall - Banks - Jackson - Madison - Polk - Paulding - Cobb - North Fulton - Gwinnett - Barrow - Clarke - Oconee - Oglethorpe - Wilkes - Haralson - Carroll - Douglas - South Fulton - De Kalb - Rockdale - Walton - Newton - Morgan - Greene - Taliaferro - Heard - Coweta - Fayette - Clayton - Spalding - Henry - Butts - Jasper - Putnam - Hancock - Warren - Troup - Meriwether - Pike - Upson - Lamar - Monroe - Jones - Baldwin - Washington - Glascock - Jefferson - Harris - Talbot - Taylor - Crawford - Bibb - Twiggs - Wilkinson - Johnson - Emanuel - Muscogee - Chattahoochee - Marion - Schley - Macon - Peach - Houston - Bleckley - Laurens - Treutlen - Stewart - Webster - Sumter - Dooly - Crisp - Pulaski - Wilcox - Dodge - Telfair - Wheeler - Montgomery - Toombs								
06	1200EST				0	0	Tropical Storm		
07	2000EST								

Hurricane Frances, at one point a category four hurricane (on the Saffir-Simpson scale) with sustained winds of 145 mph, reached the east coast of Florida just north of West Palm Beach, Florida early on September 5th. The storm weakened to a Tropical Storm as it continued west-northwest across the Central Florida Peninsula reemerging over the northwest Gulf of Mexico early on September 6th. The storm then took on more of a northwestward movement, making landfall later on the 6th near Saint Marks Florida along the Florida Panhandle Gulf Coast. Continuing north-northwestward from this point, Tropical Storm Frances entered far southwest Georgia near Bainbridge late in the evening on the 6th. The storm continued moving north-northwest through far western Georgia on the 7th to near Atlanta around midnight on the 7th, then to near Chattanooga, Tennessee early on the 8th. By far the most significant problem with Frances for Georgia was strong, sustained winds of 35 to 40 mph with gusts in excess of 50 mph. Most of the high winds were concentrated in a large east-west oriented rain band that moved north across Georgia during the evening of the 6th and the early morning hours of the 7th. It was during this period of time that significant damage occurred across many Central, East Central, and North Central Georgia counties. The strongest winds and most significant damage occurred in the areas east and south of a line from Americus, to Atlanta, to Athens. Many of the counties within this area suffered extensive wind damage. Dozens to hundreds of trees were blown down, also bringing down dozens to hundreds of power lines. Nearly 300,000 people were left without power during the storm, several thousand for several days. Dozens of homes suffered major damage throughout Central and North Central Georgia, with dozens more sustaining minor damage. The most significant damage took place in an area bounded by Macon, Atlanta, Greensboro, Dublin, Americus, and back to Macon. Damages in the millions were observed in several of these counties, including several large pecan orchards which were virtually destroyed. Estimated total damage with Frances \$14.9 million to property and \$26.5 million to crops (mostly pecan, but some peanut and cotton). Forty-one counties in the Peachtree City forecast area received a disaster declaration from the Federal Emergency Management Agency.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Madison County

**1 NNE Colbert to
.5 WNW Danielsville** **16 1405EST
1415EST** **7 150** **0 0** **1.3M** **Tornado (F1)**

A damage assessment conducted by the National Weather Service and the Madison County Emergency Management Director concluded that a 7-mile long path, 150-yard wide, F1 tornado with near 100 mph winds was spawned by the remnants of Tropical Storm Ivan causing major damage to several large homes in a country club, along with extensive damage to trees and power lines along its path. The tornado began just south of Georgia Highway 72, just east of Colbert, near the intersection of Walnut Grove Church Road and Kingston Road and continued moving north-northwest around 40 mph, terminating near the Madison County High School on Georgia Highway 98, just west of Danielsville. The most significant damage occurred along the southern part of the storm's path in the Kingston Road Subdivision/Country Club. Here, around five homes sustained major to extensive damage, while approximately another 20 homes sustained minor to moderate damage. In addition, widespread damage to trees and power lines was observed along the path of the tornado. Damage to the windward side of the roofs on several homes was consistent with a tornado circulation.

Carroll County Countywide

**16 1408EST
1700EST** **0 0** **30K** **Flash Flood**

The Carroll County Emergency Management Director reported severe flooding throughout the county. Rainfall of 6 to 8 inches was common throughout the county during the afternoon hours. At least 30 roads around the county were flooded and closed. Lake Paradise Road was closed indefinitely when flood waters ripped away a large portion of one lane of the road which runs above a creek.

Coweta County Countywide

**16 1430EST
1630EST** **0 0** **20K** **Flash Flood**

The Coweta County Sheriff's Office reported that heavy rain squalls, associated with the remnants of Tropical Storm Ivan, forced the closure of several roads in Newnan with up to one foot of water flowing over several roads. Many roads were under water throughout the county. Rainfall reports from citizens around the county showed rainfall amounts from four to over seven inches during the afternoon hours.

Madison County

**Paoli to
1 NNW Paoli** **16 1433EST** **1 50** **0 0** **50K** **Tornado (F0)**

A damage assessment conducted by the National Weather Service and the Madison County Emergency Management Director concluded that a short-lived, F0 tornado, associated with the remnants of Hurricane Ivan, touched down near Paoli at the intersection of New Hope Church Road and Paoli New Towns Road and travelled north-northwest at 40 mph along a one-mile long broken path terminating near Collins Brooks Road. One barn was completely destroyed along the path and several homes sustained minor structural damage. Numerous trees were topped along the path of the tornado.

Haralson County Countywide

**16 1440EST
1730EST** **0 0** **5K** **Flash Flood**

The Haralson County 911 Center reported that several roads were flooded, especially across the eastern portion of the county.

Upson County 5 N Yatesville to 5.1 N Yatesville

16 1442EST **0.1 50** **0 0** **0.50K** **Tornado (F0)**

The Upson County Emergency Management Director reported that a short-lived and weak F0 tornado, associated with the remnants of Tropical Storm Ivan, touched down in extreme northeast Upson county near the Lamar county line. The tornado occurred in a rural area and as a result, only a few trees were damaged. There was a convergent pattern evident in the damage consistent with a tornado. Doppler radar also supported a tornadic circulation in this area.

Clayton County Countywide

**16 1500EST
1700EST** **0 0** **10K** **Flash Flood**

The Clayton County Emergency Management Director reported that 31 roads were flooded and closed. Some of the roads sustained minor damage as a result. Major flooding occurred at the headwaters of the Flint River and various creeks which lead into the Flint river, all in far northern Clayton county near the Atlanta Hartsfield-Jackson International Airport. At least six homes in the Springs Subdivision just south of Jonesboro sustained extensive damage from flood waters. The Tara Mobile Home Park and Edmonson Mobile Home Park were flooded. The county Emergency Management Office had to evacuate 37 people in this area by boat. Some businesses in the area also sustained flood damage. Upper Riverdale Road was flooded with one to two feet of water flowing over the road, blocking an entrance to Southern Regional Hospital.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Douglas County

Lithia Spgs	16	1500EST			0	0	1K		Flash Flood
		1815EST							

The Douglas County 911 Center reported that flood waters from Sweetwater Creek caused flooding of Mt. Vernon Road. Around one foot of water was flowing over the road in this area.

Meriwether County

Countywide	16	1505EST			0	0	5K		Flash Flood
		1715EST							

The Meriwether County 911 Center reported flash flooding throughout the county. Significant flooding was observed along Mill Pond Creek, which became a swift moving river during the afternoon. Several roads had water flowing over them and had to be closed.

Talbot County

Countywide	16	1515EST			0	0	0		Flash Flood
		1915EST							

The Talbot County 911 Center reported that Georgia Highway 80, leading out of downtown Talbotton, was flooded and closed.

Spalding County

.5 SE Griffin Spaulding	16	1521EST	0.2	50	0	0	250K		Tornado (F0)
.4 SE Griffin Spaulding									
Ar									

A damage survey conducted by the National Weather Service and the Spalding County Emergency Management Director concluded that a high end F0 tornado affected a small, 1/5-mile long and 50-yard wide path just southeast of the Griffin-Spaulding Airport near the intersection of Maddox and Etheridge Roads. Extensive damage to around one dozen large mature pecan trees was observed, along with minor damage to several surrounding trees in a residential neighborhood. Minor roof damage was also noted to several of the homes. Many of the trees were uprooted inward to the path showing convergence and consistent with high end F0 70 mph tornado damage.

Cobb County

Countywide	16	1528EST			0	0	1M		Flash Flood
	17	0145EST							

Numerous reports of widespread flooding were received from the public as rainfall from 6-10 inches fell across most of the county during the afternoon and evening. Many creeks were flowing several feet out of their banks in Acworth, Smyrna, Powder Springs, Marietta, and other areas in the county. Significant flooding was reported on Indian River Creek and Story Creek, which was five feet out of its banks. Many roads were flooded also, especially U.S. Highway 41 in Marietta where water was up to the bottom of cars. This flooding was a result of moderate flooding on nearby Sope Creek. In Smyrna, a foot of water was flowing across Atlanta Road at Spring Street. A number of roads in the county, especially the northern areas, sustained damage. Some neighborhoods in Smyrna were reported to be almost completely under water with minor damage to a number of homes. Many yards were flooded in Powder Springs, with up to six feet of water in some streets. Sope Creek went above its flood stage of 12 feet at 545 pm EDT, crested at 17.5 feet around 11 pm EDT, and the fell below flood stage at 245 am EDT on September 17th.

Fayette County

Countywide	16	1546EST			0	0	25K		Flash Flood
		1800EST							

The Georgia Emergency Management Agency reported that several roads in the county were briefly flooded as 4-5 inches of rain fell across the county during the afternoon and early evening hours. Four residences suffered minor flood damage. A trained spotter for the National Weather Service reported that many of the golf cart paths in Peachtree City were flooded with swift flowing water over the paths. In addition, several creeks and streams in Peachtree City were out of their banks. Furthermore, New Hope Road west of Brandon Mill Circle was flooded and impassable.

Pike County

Countywide	16	1610EST			0	0	5K		Flash Flood
		1745EST							

The Pike County 911 Center reported that several roads were flooded with up to a foot of water flowing over some of these roads.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Wilkes County

.5 S Tignall to
1.5 N Norman

16 1610EST 7 500 0 0 1.5M Tornado (F1)

A damage assessment conducted by the Wilkes County Emergency Management Director indicated that an F1 tornado, briefly at the high end of the F1 scale, touched down just south of Tignall near Georgia Highway 17 and continued north from six to seven miles along or just west of Georgia Highway 17 to just north of Norman. The path width of the tornado was mostly between 100 and 200 yards, but briefly was up to 500 yards wide between Malloryville and Georgia Highway 17. The tornado was believed to have been on the ground from 70 to 80 percent of the time along its path. Large trees were uprooted on six single-family dwellings in the Tignall area and several other dwellings were damaged in Norman. All together 23 structures sustained damage from the tornado, ranging from very minor to major. Numerous trees and power lines were blown down, twisted, or uprooted along the path, many causing additional damage to farm fences along the way. A large communications tower was also destroyed. Georgia Highway 17 was blocked in two places along the path by downed trees and three county dirt roads were also blocked along the path. At least 1000 residents in the area lost power and phone service during the event.

Rockdale County Countywide

16 1630EST
1845EST 0 0 50K Flash Flood

The Rockdale County Emergency Management Director reported minor flooding in the Capri Subdivision near the headwaters of the Yellow River. Several roads were flooded and several homes sustained minor damage as a result.

Spalding County Countywide

16 1630EST
1900EST 0 0 50K Flash Flood

The Griffin Daily News reported significant flooding across much of the county. A number of roads were flooded and rendered impassable. Old Atlanta Road was submerged by flood waters at two intersections. The Main Street Players headquarters building in Griffin sustained damage from flooding.

Cherokee County Countywide

16 1645EST
2045EST 0 2 1M Flash Flood

The Cherokee County Emergency Management Director, as well as many reports from the public, indicated that extensive and widespread flooding was occurring throughout much of Cherokee county as rainfall on the order of 10 inches or more fell throughout the county during the afternoon and early evening hours. Many roads were flooded and closed. Several roads were washed out and rendered impassable. Several homes and businesses were flooded as well. A car was swept 250 yards down an un-named creek flowing under Water Tank Road. The creek rose over 10 feet out of its banks. The creek is usually only about one foot deep. The single occupant of the vehicle was rescued by emergency personnel without injury. In another incident, a Sheriff's Deputy narrowly escaped from her patrol vehicle as it was swept down a swollen stream. She was attempting to set up a road block because of road flooding. She was able to escape through one of the windows and to the safety of a tree. Major flooding was observed on the upper branch of Town Creek in Canton. Several buildings were washed into the road by the creek as it reached its 100-year flood plain extent. Two residents of the county were injured during the flash floods.

De Kalb County Countywide

16 1645EST
17 0430EST 0 0 5M Flash Flood

Numerous reports were received from the DeKalb County Emergency Manager, the media, and the public of extensive flooding across much of the Atlanta metropolitan area, especially the northern parts of the county. Widespread flooding of roads, streets, and highways was reported throughout the county, several of which had to be closed. Many homes, businesses, property and vehicles across the county were flooded during this event. Major flooding was reported in many areas of the central and northern parts of the county, specifically between Interstates 20 and 285. Some of these areas experienced catastrophic and historical flooding, with some of the worst flooding observed in nearly 100 years. National Weather Service river gages showed that Peachtree Creek and Nancy Creek quickly rose to record flood levels during the late evening hours. Peachtree Creek rose above its flood stage of 17 feet at 545 pm EDT, then went into record flood stage at 845 pm EDT, then fell below flood stage between 5 and 6 am EDT September 17th. The river crested at 22.7 feet, which is 5.7 feet above flood stage and 1.5 feet above the record flood stage of 21.1 feet, previously reached in 1990. The river gage on Peachtree Creek was washed away during this event. Hundreds of residents along and near Peachtree Creek had to be evacuated, some by boat. Twenty-five to 50 homes and several apartment complexes, including the Peachtree Apartments, were impacted by the flood waters, many sustaining significant and extensive damage. Record flooding was also observed on Nancy Creek, which reached its 11 foot flood stage at 600 pm EDT, reached a record flood stage of 15 feet at 1130 pm EDT, then fell below flood stage around 4 am EDT September 17th. The impact in this area was similar to that near Peachtree Creek, with dozens of homes flooded and many residents having to be evacuated. In Decatur, one home was devastated when the waters of Peavine Creek rose over two feet in the basement of one home. A number of sinkholes were left in the county after the flooding receded, the largest being a 65 by 25 foot sinkhole on Durret Way in Dunwoody.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Fulton County

Countywide

16 1645EST 0 0 20M Flash Flood
17 0430EST

Numerous reports were received from the Fulton County Emergency Manager, the media, and the public of extensive flooding across much of the Atlanta metropolitan area, especially the northern part of the county. Widespread flooding of roads, streets, and highways was reported throughout the county, several of which had to be closed. Many homes, businesses, property, and vehicles across the county were flooded during the event. However, major flooding was reported in many areas of the central and northern part of the county, specifically between Interstates 20 and 285. Some areas experienced catastrophic and historical flooding, with some of the worst flooding reported in nearly 100 years. National Weather Service river gages showed that Peachtree Creek and Nancy Creek quickly rose to record flood levels during the late evening hours. Peachtree Creek rose above flood stage of 17 feet at 545 pm EDT, went into record flood stage at 845 pm EDT, and fell below flood stage between 5 and 6 am EDT September 17th. The river crested at 22.7 feet, which is 5.7 feet above flood stage and 1.5 feet above the record flood stage of 21.1 feet, previously reached in 1990. The river gage at Peachtree Creek was washed away during this event. Hundreds of residents along and near Peachtree Creek and to be evacuated, some by boat. At least 50 homes in this area were impacted by the flood waters, many sustaining significant and extensive damage. Record flooding was also observed on Nancy Creek, which rose above its flood stage of 11 feet at 600 pm EDT, reached a record flood stage of 15 feet at 1130 pm EDT, then fell below flood stage around 4 am EDT September 17th. The impact in this area was similar to that near Peachtree Creek with dozens of homes flooded and many residents having to be evacuated. Moderate flooding also occurred on Procter Creek, west of Atlanta. The creek went into flood at 515 pm EDT, crested at 14 feet around 630 pm EDT, then fell below flood stage around 7 pm EDT. Hortense Way at Northwest Place was completely flooded as a result. At least a dozen homes and apartments were also flooded in this area. Several residents lost all of their possessions. The Chattahoochee River also rose to major flood levels within 6 to 12 hours, but this fell more into the category of main stem river flooding instead of flash flooding.

Cherokee County

2 WSW Orange to 2 WNW Orange

16 1655EST 1 400 0 4 300K Tornado (F1)
1656EST

The Cherokee County Emergency Management Director reported that a brief F1 tornado occurred at the end of a path of extensive damage caused by strong straight-lined winds. The tornado touched down near Georgia Highway 20, also known as Cumming Highway, near the town of White City about 8 miles east of Canton. The tornado continued north to north-northwest, roughly centered along Jack Page Lane, for about 1 mile before lifting. The damage path was determined to be approximately 400 yards wide. Dozens of trees were blown down in this area in a convergent pattern. Four people were injured on Georgia Highway 20 when trees fell on their vehicles during the tornado. North of Georgia Highway 20 and mostly west of Jack Page Lane, six homes suffered extensive damage, mostly from fallen trees.

Gwinnett County

Countywide

16 1655EST 0 0 100K Heavy Rain

Heavy rain, on the order of 4-6 inches during the afternoon, caused the roof of a distribution center to collapse and caused a partial roof collapse at an apartment building.

Gwinnett County

South Portion

16 1730EST 0 0 10K Flash Flood
2315EST

Spotters with the Gwinnett County SkyWarn program reported widespread flooding across much of the county. The most significant flooding was occurring in the Norcross and Grayson areas where water was two feet over the road in places. The Yellow River rose several feet out of its banks. Holcolmb Bridge Road was flooded and closed.

Forsyth County

Countywide

16 1745EST 0 0 250K Flash Flood
2315EST

The Forsyth County Emergency Management Director, as well as several reports from the public, indicated that significant flooding was occurring across much of the county. The Etowah River rose to 15 feet, five feet above its 10 foot flood stage. This caused minor damage to Old Federal and Nicholson Roads. In addition, a portion of Cambridge Hills Drive was washed out. Wildcat Creek just northeast of Chestatee rose well out of its banks with reported rainfall in the area of 5 inches per hour. Three residents of the county had to be rescued from their vehicles by county emergency crews in rising flood waters. The telephone company lost a distribution box that was inundated by flood waters causing an estimated \$100,000 in damage. Near major flooding occurred along Big Creek from Cumming southwest to the Fulton county line. Big Creek crested at 12 feet, which is five feet above its flood stage of seven feet. The public reported that several homes in Cumming suffered minor damage from flooding.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Catoosa County

Countywide

16 1842EST 0 0 150K Flash Flood
17 0045EST

The Catoosa County News of Ringgold reported that major flooding was observed across the county in association with the heavy rain from the remnants of Hurricane Ivan. At least 18 roads were closed because of flooding and several evacuations from high water were required, even a few by boat. Chickamauga Creek rose well above its flood stage, causing flooding of nearby property. In addition, at least five intersections in Ringgold were completely submerged by flood waters.

White County

Countywide

16 1842EST 1 0 300K Flash Flood
17 0045EST

The Georgia Emergency Management Agency, along with local newspapers, reported extensive and widespread flooding across White county. A six-year old girl, was swept away in flood waters, while outside in the front yard of her mobile home. The mobile home park was flooded by the waters from a nearby small stream. In unrelated incidents, three other residents had to be rescued from high water elsewhere in the county. Several roads were washed out. A 20-foot portion of Black Road was washed away by flood waters. The Chattahoochee River in Helen also rose above its flood stage of 6 feet and crested near 7 feet around 1130 pm EDT. The Castle Inn of Helen experienced flooding up to the patio level, which affects the basement area of the facility. F6OU

Dawson County

Countywide

16 1845EST 0 0 250K Flash Flood
17 0045EST

The Georgia Emergency Management Agency reported that significant flooding was reported across many areas of Dawson County. Four mobile homes were flooded, two bridges were breached because of flood waters, six culverts were washed away or damaged, and one dam was breached. Several roads throughout the county were flooded and closed as well.

Gilmer County

Countywide

16 1846EST 0 0 2.8M Flash Flood
17 0045EST

The Gilmer County Emergency Manager, along with local newspapers and the public, reported extensive, and widespread to catastrophic flooding throughout much of the county. More than a foot of rain fell in parts of Gilmer county in association with the remnants of Hurricane Ivan during a six to eight hour period in the afternoon and evening hours of September 16th. Ten to 12 inches of rain was common across the county. Catastrophic flooding was reported along the Cartecay River, which in some areas exceeded the 500-year flood plain level. Several homes and vehicles were washed away when the river reached these levels. Major flooding was also reported on the Coosawattee River and Cox Creek as well. Several homes and vehicles along the banks of the Coosawattee River were also washed away. The Coosawattee River crested at 17.3 feet around midnight on the 17th, which is several feet above bankfull. All together across the county, 35 homes were flooded or destroyed, 12 to 18 mobile homes in the Maple Village Mobile Home Park were either destroyed or washed away by flooding, at least five recreational vehicles and several other vehicles were swept away by flood waters. Fourteen families in the county lost everything to the floods. Roads and bridges also suffered significant structural damage. Three bridges were washed away or suffered major damage, including Clear Creek Bridge which collapsed. A 25 foot section of the driveway leading from Georgia Highway 282 to the Courier Dye plant was washed away. Other buildings and locales suffered damage from the extensive flooding, including the Ellijay Lions Building, a Civil War Memorial, and another Veterans Memorial.

Lumpkin County

Countywide

16 1900EST 0 0 150K Flash Flood
17 0045EST

The Dahlonega Nugget reported that significant flooding was observed throughout the county causing damage to roads and other property. The most significant flooding occurred along the Chestatee River, which exceeded its banks by several feet and flooded Georgia Highway 52. A portion of Nimblewill Church Road and Sheep Wallow Road were washed out. Three other roads had to be closed because of flooding.

Banks County

Countywide

16 1930EST 0 0 50K Flash Flood
2130EST

The Banks County News of Homer reported significant flash flooding throughout the county, which flooded streets and bridges and washed out several roads. At least one mudslide was also reported. A five-foot cross section of a road along Wofford Creek was washed out and parts of the Banks County Recreation Park were completely under water.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Pickens County

Countywide

16	1930EST				0	0	100K		Flash Flood
17	0045EST								

The Georgia Emergency Management Agency and the Pickens County Progress of Jasper reported that flash flooding was widespread and extensive across the county. Several roads were washed out from flash flooding, including portions of Georgia Highway 136. Numerous other roads in the county were flooded and closed as well. Whole sections of pipeline along some roads were washed out, including about 100 feet of a water line. Around 12 bridges and culverts in the county were damaged from flood waters and had to be inspected. The public also reported significant flooding in many areas of the county as well.

Towns County

Countywide

16	1930EST				0	0	500K		Flash Flood
17	0045EST								

The Georgia Emergency Management Agency, along with local newspaper, reported major and extensive flooding throughout the county. The Hiawassee River flooded the Enchanted Valley Resort. Many residents in the area had water up to the doors of their homes. At least ten roads and ten bridges in the county were washed out by flood waters.

Union County

Countywide

16	1930EST				0	0	250K		Flash Flood
17	0045EST								

The Georgia Emergency Management Agency, and local newspapers, reported significant flooding across much of the county as anywhere from five to nine inches of rain fell during the afternoon and evening hours. Several roads were blocked from flooding and/or mudslides. Three bridges were washed out. Flash flooding forced the rescues of seven people and three animals from their homes in the Twin Pond and Pegasus Landing areas.

Whitfield County

Countywide

16	1930EST				0	0	26K		Flash Flood
17	1930EST								

A National Weather Service SkyWarn spotter and cooperative observer, along with the Georgia Emergency Management Agency, reported considerable flooding throughout the county. A number of creeks exceeded bank full and several roads were flooded. Several cars were abandoned in high water. A few roads were washed out, most notably Old Tilton Road which was completely washed out and expected to remain closed for at least two weeks.

Fannin County

Countywide

16	1949EST				0	0	150K		Flash Flood
17	0045EST								

The Georgia Emergency Management Agency and a storm spotter reported significant flooding across the county. Several roads were washed out, one bridge was damaged, and several mudslides were reported. Doublehead Gap Road was damaged when the Noontootla Creek flooded. Flooding also caused damage to some recreational vehicles in the Mineral Springs RV Park.

Chattooga County

Countywide

16	2000EST				0	0	25K		Flash Flood
17	0045EST								

The Summerville News reported that several county roads were submerged by flood waters. Water nearly a foot deep was reported on Reynolds Drive and several yards had up to a foot of water in them. Significant flooding was also reported along the Chattooga River and adjacent areas were flooded.

Dade County

Countywide

16	2000EST				0	0	350K		Flash Flood
17	0045EST								

The Dade County Sentinel and the Georgia Emergency Management Agency reported extensive and widespread flooding across the county. Fifteen to 20 residences from Rising Fawn to Lookout Mountain had to be evacuated because of flood waters, mostly from Lookout Creek and its tributaries. Several homes and business around the county suffered damage from flooding. Thirty-three roads were flooded around the county, several of which were either damaged or washed out. In addition, a bridge on Holder Loop Road was damaged from flood waters and had to be closed.

Murray County

Countywide

16	2000EST				0	0	25K		Flash Flood
17	0045EST								

The Chatsworth Times reported some flooding in various areas throughout the county. A 100-yard stretch of Carlton Petty Road was washed out and a four-foot culvert of McGill Road near Rock Creek Road was washed out. Several other minor road erosions were observed throughout the county.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

GEORGIA, North and Central

Walker County

Countywide

16	2000EST	0	0	300K	Flash Flood
17	0045EST				

The Walker County Messenger and the Georgia Emergency Management Agency reported extensive and widespread flooding across much of the county. Several homes in Rossville were flooded and several homes in the Rock Creek Community in the north part of the county had to be evacuated because of flood waters. Several propane tanks were observed to be floating in flood waters. All together, 37 roads in the county were flooded and rendered impassable. Several vehicles were abandoned on streets and left submerged in the flood waters.

Clayton County

North Portion to Countywide

16	2100EST	0	0	2.5M	Flash Flood
17	0000EST				

The Clayton County Emergency Manager reported major flooding occurred at the headwaters of the Flint River and various creeks which lead into the Flint river, all in far northern Clayton county near the Atlanta Hartsfield-Jackson International Airport. At least six homes in the Springs Subdivision just south of Jonesboro sustained extensive damage from flood waters. Over a dozen homes sustained major damage along the Roxbury Drive. In addition, The Tara Mobile Home Park and Edmonson Mobile Home Parks were flooded. Several businesses along Upper Riverdale and Arrowhead Boulevard were flooded and sustained significant damage. The County Emergency Management Office had to evacuate 37 people by boat in the area between Georgia Highway 138 and Upper Riverdale Road. Upper Riverdale Road was flooded with one to two feet of water flowing over the road, blocking an entrance to Southern Regional Hospital. In the southern end of the county, River's Edge Golf Course sustained significant damage from flood waters and several homes were flooded near Harbour Town Road and Place.

KANSAS, Southeast

Russell County

2 W Bunker Hill

17	0636CST	0	0		Hail (0.88)
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CO-OP observer.

Ellsworth County

4 ENE Wilson

17	0716CST	0	0		Hail (0.88)
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Ellsworth County

10 NE Ellsworth

17	0720CST	0	0		Hail (0.88)
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Reported on I-70, exit 216.

Ellsworth County

9 NE Ellsworth

17	0738CST	0	0		Hail (1.00)
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Reported 1 mile south of I-70, exit 216.

Ellsworth County

10 NE Ellsworth

17	0746CST	0	0		Hail (1.00)
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Reported on I-70, exit 216.

Lincoln County

5 S Beverly

17	0758CST	0	0		Hail (0.88)
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Ellsworth County

14 NE Ellsworth

17	0815CST	0	0		Hail (1.50)
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Reported on I-70, 3 miles east of exit 216.

Ellsworth County

7 NE Carneiro

17	0820CST	0	0		Hail (1.25)
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Reported 5 miles south-southwest of exit 233 on I-70.

Saline County

5 NNE Brookville

17	0833CST	0	0		Hail (0.88)
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Saline County

2 NNW Brookville

17	0839CST	0	0		Hail (0.75)
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Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

MICHIGAN, Upper

15th. Strong west winds developed behind this system in the early morning hours of the 16th. Sheriff's departments reported numerous trees and power lines down from this storm across Gogebic, Ontonagon, northern Houghton and Keweenaw counties. The automated observing site at Houghton County Airport reported a wind gust to 54 mph while an estimated wind gust to 55 mph was reported by the Ontonagon County Road Commission.

NORTH CAROLINA, Central Coastal

Martin County

4 NW Oak City 27 1900EST 0.2 100 0 0 100K Tornado (F1)

A house was partially destroyed with a back wall blown out and a porch removed. Four large storage bins were completely destroyed with debris strewn for one quarter mile to the northeast.

NORTH CAROLINA, Northwest and North Central

NCZ001>003-005-018 Ashe - Alleghany - Surry - Rockingham - Watauga

07 2015EST 0 0 2.7M 185K Flood
09 1145EST

The remnants of Tropical Depression Frances brought flooding rains to portions of Northwest North Carolina from late in the evening on the 7th through the 8th. Rainfall totals averaged 4 to 6 inches...with amounts higher in portions of the mountains.

In Watauga County, the Watauga River flooded, leading to evacuations of homes in the Foscoe area. The headwaters of the New River, including the Middle and East Fork also flooded. A mud slide destroyed one home in the Bamboo area.

In Ashe County, small streams and creeks flooded during the early morning of the 8th. Subsequently, the rainfall and runoff lead to the South Fork of the New River flooding later that morning. Several roads were flooded in the Fleetwood and Crumpler areas. Several homes along the South Fork of the New River were isolated as roads were flooded.

In Alleghany County, creeks and streams overflowed their banks and flooded 1150 acres of farmland resulting in crop damage.

Across Rockingham County, several creeks flooded their banks. Numerous roads were flooded and damaged. Some homes were evacuated.

In Surry County, Floodwaters from creeks and streams closed 20 roads.

NCZ001>003-018-018 Ashe - Alleghany - Surry - Watauga

18 0030EST 0 0 High Wind (G55)
0705EST

NCZ018

Watauga
18 0545EST 0 0 5M Flood

NCZ018

Watauga
18 0545EST 0 0 Landslide

Damaging gradient winds in the early morning hours of 18 Nov 2004 behind the exiting remnants of hurricane Ivan downed numerous trees and power lines. 2000 people were without power in Ashe Co. Locally heavy rain around the Foscoe area of Watauga Co. prompted flooding of small streams and mudslides...which caused damage to several homes.

UTAH, West and Central

UTZ002-007

Northern Wasatch Front/Brigham City/Ogden Bountiful - Wasatch Mountains 180 North
18 1300MST 0 0 7K Strong Wind
1600MST

Strong southwest flow ahead of a vigorous upper level trough and its associated cold front located in central Nevada produced strong winds over the majority of Utah. Some of the strong wind gusts included 68 mph on Ogden Peak and 60 mph on Antelope Island. Strong southerly winds were also observed at the Salt Lake City International Airport with a gust to 51 mph.

Beaver County

Beaver 29 1230MST 0 0 0 Funnel Cloud
1235MST

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

UTAH, West and Central

produced a line of severe thunderstorms that moved through southwest Utah. These storms produced a flash flood 1 mile southeast of Big Water as well as multiple reports of two inches of accumulation of 0.75 inch hail in Kanab.

VIRGINIA, North

Albemarle County

Crozet

17	1721EST 2012EST	0	0	Flash Flood
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Several low lying roads under water.

Frederick County

Stephens City

17	1900EST 2030EST	0	0	Flash Flood
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A few roads impassable due to high water in Stephens City and Middletown.

Warren County

Front Royal

17	1915EST 2115EST	0	0	Flash Flood
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County Officials reported numerous roads closed due to high water.

Fauquier County

Warrenton

17	1930EST 2115EST	0	0	Flash Flood
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Several roads closed across the county due to high water.

Prince William County

Dumfries to Woodbridge

17	2059EST 2300EST	0	0	Flash Flood
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High water reported on roads in Dumfries and Woodbridge.

Loudoun County

Leesburg

17	2100EST 2300EST	0	0	Flash Flood
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Several roads across the county flooded due to high water.

Fairfax County

Annandale to Fairfax Park

17	2140EST 2300EST	0	0	Flash Flood
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High water on roads in west Annandale and west Fairfax.

The remnants of Hurricane Ivan affected the Mid Atlantic States on the 17th and 18th. Tornadoic thunderstorms produced widespread, significant damage across Northern Virginia. Flooding of small streams, creeks, primary and secondary roads were reported by emergency and rescue personnel. In response, many roads were closed through the late evening hours as flood waters were slow to recede. At least 10 homes were destroyed and around 300 sustained damage. Communities in Culpeper, Frederick, Greene, Orange Counties and Manassas Park City also reported some agricultural damage.

Harrisonburg (C)

Harrisonburg

28	1045EST 1645EST	0	0	Flash Flood
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Several roads flooded.

Staunton (C)

Staunton

28	1045EST 1645EST	0	0	Flash Flood
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Several roads flooded.

Waynesboro (C)

Waynesboro

28	1045EST 1645EST	0	0	Flash Flood
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Several roads flooded.

Page County

Luray

28	1120EST 1720EST	0	0	Flash Flood
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A few back roads under water.

Winchester (C)

Winchester

28	1120EST 1720EST	0	0	Flash Flood
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Several roads flooded. 3.18 inches of rain reported.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

VIRGINIA, North

Loudoun County

Middleburg	28	1230EST 1830EST			0	0			Flash Flood
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U.S. Route 50 closed due to flooding along the Middleburg to Aldie corridor. Many secondary roads in the area area partially flooded and reduced to one lane or less.

Clarke County

Berryville	28	1400EST 2000EST			0	0			Flash Flood
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Roads closed due to flooding.

Frederick County

Gore	28	1400EST 1700EST			0	0			Flash Flood
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U.S. Route 50 west of Winchester closed, 3 to 4 feet of standing water on the road. Interstate 81 was also blocked by high water.

Winchester (C)

Winchester	28	1400EST 1700EST			0	0			Flash Flood
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Water covered the roads in several locations around the city.

Fauquier County

Bealeton	28	1430EST 2000EST			0	0			Flash Flood
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Numerous primary and secondary roads closed due to high water. Two secondary roads washed out.

Shenandoah County

Woodstock	28	1445EST 1945EST			0	0			Flash Flood
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Several roads covered by water.

Warren County

Front Royal	28	1445EST 1945EST			0	0			Flash Flood
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Roads and side streets under water.

Greene County

Standardsville	28	1500EST 2000EST			0	0			Flash Flood
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Numerous roads closed due to high water.

Madison County

Madison	28	1500EST 2000EST			0	0			Flash Flood
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Many roads closures throughout the county due to flooding.

Rappahannock County

Sperryville	28	1500EST 2000EST			0	0			Flash Flood
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Several roads closed due to high water.

Prince William County

Gainesville	28	1530EST 2000EST			0	0			Flash Flood
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Numerous roads closed in the west and central sections of the county.

Fairfax County

Vienna	28	1600EST 2000EST			0	0			Flash Flood
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Roads closed due to high water, including three intersections along Lee Highway.

Manassas (C)

Manassas	28	1600EST 1930EST			0	0			Flash Flood
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Roads covered by water.

VAZ025>026-028>029-042 **Augusta - Rockingham - Frederick - Page - Loudoun**

	28	1645EST 2230EST			0	0			Flood
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Several primary and secondary roads under water.

Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

VIRGINIA, North

some sites through the late evening hours. Numerous primary and secondary roads were washed out. Three to four feet of standing water was observed by law enforcement personnel in inundated areas. Augusta and Fauquier Counties reported the highest rainfall totals, 7 inches and 6 to 8 inches respectively.

VIRGINIA, Southwest

Henry County

1 N Fieldale to 1 W Oak Level	17	1104EST 1114EST	7.1	440	0	4	53.8M	Tornado (F2)
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A tornado touched down near Fieldale at 1104 EST. The F1 tornado crossed U.S. Highway 220 turning over 2 tractor-trailer trucks and 2 passenger vehicles. All 4 drivers suffered minor injuries. The tornado damage patch widened to a quarter mile, and strengthened to F2 as it approached and struck a factory. At this location, around 40 vehicles were severely damaged or destroyed. The factory experienced significant damage. The tornado then proceeded north and entered a residential subdivision, but only minor roof and tree damage occurred here. The tornado path became intermittent as it continued north and the damage was limited to trees. The tornado crossed into Franklin County at 1114 EST.

Franklin County

2.8 ENE Henry to 2.5 NE Henry	17	1114EST 1117EST	1.7	25	0	0		Tornado (F0)
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The remnants of the Henry County tornado briefly touched down at F0 strength as it crossed into Franklin County. Damage was restricted to several large trees, one of which landed on a residential garage.

Bedford County

1.5 SE Stewartville to 2 NE Stewartville	17	1212EST 1217EST	3	300	0	0		Tornado (F2)
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At 1212 EST, an F0 tornado touched down near Dickerson Road, and the width was less than 50 yards. The tornado damage path widened and varied from 100 yards to as much as 300 yards, as it did moderate to strong F1 damage to trees. A few homes suffered only minor damage to shingles and roofs, mainly due to trees falling on them. As the F1 tornado crossed Highway 24 at 1215 EST, it continued to damage trees, and was about 75 yards wide. A poorly constructed building was demolished. As the tornado moved north, it continued to down trees. Also, a car was pivoted in a driveway but undamaged. Minor structural and roof damage to homes occurred, as the tornado increased to a weak F2. The tornado weakened to F0 by 1217 EST, downing more trees along County Road 619.

Pittsylvania County

.5 WNW Straightstone to .5 NW Straightstone	17	1324EST 1326EST	0.3	25	0	0		Tornado (F0)
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A short lived F0 tornado touched down 1/2 mile WNW of Straightstone, in a hay field. About a quarter mile path was found. No damage occurred.

Campbell County

3 ENE Rustburg to 3.5 NE Rustburg	17	1354EST 1358EST	1.9	100	0	0		Tornado (F1)
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At 1354 EST, a tornado touched down along Bear Creek Road, 3 miles ENE of Rustburg, causing minor damage. At 1356 EST, the tornado crossed Highway 24, causing extensive tree damage. One tree crushed a small car in a driveway. Minor damage to homes, mainly shingles and eaves. On the north side of Highway 24, the tornado blew the roof off of a detached garage.

Campbell County

3.5 WSW Concord to 2.5 NW Concord	17	1359EST 1405EST	3	75	0	0		Tornado (F1)
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A tornado touched down on the east edge of Long Mountain just before crossing County Road 660. Fairly large trees were snapped off or uprooted, but only minor damage occurred to sheds. The tornado proceeded to cross County Road 757, when the damage path became narrower. An aluminum roof of a medium sized shed was torn off and blown about 200 yards. A trampoline was blown up across the roof of a two story house and dropped about 200 yards away. From that point the tornado tracked NNE and produced tree damage, before lifting as it crossed U.S. Highway 460.

A 77 year old man succumbed to a heart attack while cleaning his yard of debris after the storm.

Patrick County

Stuart	28	0025EST 0515EST			0	0		Flash Flood
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Floyd County

Floyd	28	0220EST 0800EST			0	0		Flash Flood
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Storm Data and Unusual Weather Phenomena

September 2004

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

Additions/Corrections

VIRGINIA, Southwest

Franklin County

Boones Mill	28	0510EST			0	0			Flash Flood
		0800EST							

Roanoke County

Countywide	28	0640EST			0	0			Flash Flood
		0930EST							

Patrick County

Woolwine	28	0645EST			0	0			Flash Flood
		0800EST							

Salem (C)

Salem (C)	28	0730EST			0	0			Flash Flood
		0900EST							

Patrick County

Stuart	28	0750EST			0	0			Flash Flood
		0800EST							

Patrick County

7 SW Stuart	28	0750EST			1	0			Flash Flood
		0800EST							
		F51MH							

Bedford County

Countywide	28	0818EST			0	0			Flash Flood
		1115EST							

The Remnants of Hurricane Jeanne resulted in heavy rains which created widespread flash flooding on 28th of September in Floyd, Franklin, Patrick, Bedford and Roanoke counties and the City of Salem. One Fatality occurred 7 miles southwest of Stuart in Patrick county at Dry Pond near the North Carolina border. A Mobile home washed off it foundation, one building washed about 150 yards downstream and vehicles washed away. Several roads were closed due to flooding in Floyd, Franklin, Patrick, Bedford and Roanoke counties. Numerous creeks and rivers out of their banks. Mudslides were reported in Boone Mill, Franklin county where southbound Route 220 closed from Magoddee Creek.

VAZ014-019-022>023-035-044>047-058>059 **Montgomery - Alleghany - Roanoke - Botetourt - Amherst - Pittsylvania - Campbell - Appomattox - Buckingham - Halifax - Charlotte**

28	0815EST			0	0			Flood
30	2359EST							

The remnants of Hurricane Jeanne brought torrential rains to Southwest Virginia during the 28th and 29th. This brought minor to major flooding to rivers in the area from late September into early October.

On the James River, Buchanan, Holcomb Rock and Brems Bluff had moderate flooding, while Covington, Lick Run, Lynchburg, Bent Creek and Scottsville experienced minor flooding. At Buchanan in Botetourt County, the river crested at 25.67 feet, where the flood stage is 17 feet. At Holcomb Rock in Amherst County, the river crested at 24.33 feet, where the flood stage is 22 feet. At Brems Bluff in Buckingham County, the river crested at 26 feet, where the flood stage is 19 feet.

The New River at Radford experienced minor flooding for about 6 hours during the evening of the 28th into early morning of the 29th. At Radford, the river crested at 14.95 feet, where the flood stage is 14 feet.

Flooding on the headwaters of the Roanoke River was major. The city of Salem reported that all bridges over the Roanoke River were closed. An apartment complex was evacuated, and subsequently received significant damage to all ground level apartments. In Roanoke, numerous residential areas were evacuated. The Roanoke River crested near 17.9 feet in Roanoke at 1530 on the 28th. This flood ranks as 7th highest flood on record, with records beginning in 1877. It is the highest the river has been since April 1992. The only other flooding which occurred on the Roanoke River was at Randolph in Charlotte County. The flooding in Randolph was minor, and occurred from late morning on the 29th, into early October.

On the Dan River, moderate flooding occurred in Danville. The river rose above flood stage on the afternoon of the 28th, crested early in the morning on the 30th, then fell below flood stage on the afternoon of the 30th. Minor flooding occurred at Paces in

Reference Notes:

Storm Data Disclosure

Storm Data is an official publication of the National Oceanic and Atmospheric Administration (NOAA) which documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce. In addition, it is a partial record of other significant meteorological events, such as record maximum or minimum temperatures or precipitation that occurs in connection with another event.

Some of the information appearing in Storm Data may have been provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals, etc. An effort is made to use the best available information, but because of time and resource constraints, information from these sources may be unverified by the NWS. Therefore, when using information from Storm Data, customers should be cautious as the NWS does not guarantee the accuracy or validity of the information. Further, when it is apparent information appearing in Storm Data originated from a source outside the National Weather Service (frequently credit is provided), Storm Data customers requiring additional information should contact that source directly. In most cases, NWS employees will not have the knowledge to respond to such requests. In cases of legal proceedings, under Department of Commerce regulations and/or rules of the court, NWS employees are not legally obligated to provide written or verbal testimony.

Fatality Codes: For events that include a fatality, there is a code containing the gender, age and fatality location at the end of the event narrative.

1st letter: Gender (M/F) – 2nd numbers: Age – 3rd letters Fatality location (see table below)

Example: M51IW – Male, 51 years of age, fatality occurred In Water.

Fatality Location Abbreviations:

BF	Ball Field	MH	Mobile Home
BO	Boating	OT	Other
BU	Business	OU	Outside/Open Areas
CA	Camping	PH	Permanent Home
EQ	Heavy Equipment/Construction	SC	School
GF	Golfing	TE	Telephone
IW	In Water	UT	Under Tree
LS	Long Span Roof	VE	Vehicle

List of Acronyms:

NWS	- National Weather Service
NOAA	- National Oceanic and Atmospheric Administration
WCM	- Warning Coordination Meteorologist – The meteorologist at each NWS Office responsible for reporting severe weather events
LST	- Local Standard Time Storm Data attempts to always use “Standard Time”
EST	- Eastern Standard Time
EDT	- Eastern Daylight Time

CST	- Central Standard Time
CDT	- Central Daylight Time
PST	- Pacific Standard Time
PDT	- Pacific Daylight Time

Other Notes:

An “Episode” is an entire storm system and can contain many different types of events.

An “Event” is an individual type of storm event.

When listing wind speed values under “Character of Storm”, ex. High Wind (G81), the G indicates a “Gust” which is a peak 5-second averaged wind speed in Knots (kts). 1 kt. = 1.152 mph. This number can be either E (estimated) by damage caused, or M (measured) by known calibrated anemometers. Ex. (M61) = measured 61 knots or E(75) = estimated at 75 knots.

All wind speeds listed are estimated by NWS personnel by the amount and type of damage unless otherwise noted with an “M” which represents an actual wind speed as measured by official NWS approved anemometer.

When listing hail size under “Character of Storm”, ex. Hail (2.25), the hail size is given in inches and hundredths of inches.

When listing property and crop damage, the figures indicated are the best guess made by the NWS from the available sources of information at the time of the printing.

The fatalities, injuries, and damage amounts appearing in tropical cyclone events are attributed only to wind damage experienced in the coastal counties/parishes listed. Other tropical cyclone related events such as tornadoes and flooding are listed within their separate event types.

The Saffir-Simpson Scale

Category One Hurricane:

Winds 74-95 mph (64-82 kt or 119-153 kph). Storm surge generally 4-5 ft above normal. No real damage to building structures. Damage primarily to unanchored mobile homes, shrubbery, and trees. Some damage to poorly constructed signs. Also, some coastal road flooding and minor pier damage.

Category Two Hurricane:

Winds 96-110 mph (83-95 kt or 154-177 kph). Storm surge generally 6-8 feet above normal. Some roofing material, door, and window damage of buildings. Considerable damage to shrubbery and trees with some trees blown down. Considerable damage to mobile homes, poorly constructed signs, and piers. Coastal and low-lying escape routes flood 2-4 hours before arrival of the hurricane center. Small craft in unprotected anchorages break moorings.

Category Three Hurricane:

Winds 111-130 mph (96-113 kt or 178-209 kph). Storm surge generally 9-12 ft above normal. Some structural damage to small residences and utility buildings with a minor amount of curtainwall failures. Damage to shrubbery and trees with foliage blown off trees and large trees blown down. Mobile homes and poorly constructed signs are destroyed. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Flooding near the coast destroys smaller structures with larger structures damaged by battering of floating debris. Terrain continuously lower than 5 ft above mean sea level may be flooded inland 8 miles (13 km) or more. Evacuation of low-lying residences with several blocks of the shoreline may be required.

Category Four Hurricane:

Winds 131-155 mph (114-135 kt or 210-249 kph). Storm surge generally 13-18 ft above normal. More extensive curtainwall failures with some complete roof structure failures on small residences. Shrubs, trees, and all signs are blown down. Complete destruction of mobile homes. Extensive damage to doors and windows. Low-lying escape routes may be cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of structures near the shore. Terrain lower than 10 ft above sea level may be flooded requiring massive evacuation of residential areas as far inland as 6 miles (10 km).

Category Five Hurricane:

Winds greater than 155 mph (135 kt or 249 kph). Storm surge generally greater than 18 ft above normal. Complete roof failure on many residences and industrial buildings. Some complete building failures with small utility buildings blown over or away. All shrubs, trees, and signs blown down. Complete destruction of mobile homes. Severe and extensive window and door damage. Low-lying escape routes are cut by rising water 3-5 hours before arrival of the hurricane center. Major damage to lower floors of all structures located less than 15 ft above sea level and within 500 yards of the shoreline. Massive evacuation of residential areas on low ground within 5-10 miles (8-16 km) of the shoreline may be required.

The Fujita Scale

F-Scale	Intensity	Wind Speed (mph)	Typical Damage (Suggested)
F0	Gale Tornado	40 - 72	Tree branches broken, chimneys damaged, shallow-rooted trees pushed over; sign boards damaged or destroyed, outbuildings and sheds destroyed
F1	Moderate	73 - 112	Roof surfaces peeled off, mobile homes pushed off foundations or overturned, moving autos pushed off the roads, garages may be destroyed. Category 1-2 hurricane wind speed
F2	Significant	113 - 157	Roofs blown off frame houses; mobile homes rolled and/or destroyed, train boxcars pushed over; large trees snapped or uprooted; airborne debris can cause damage. Category 3-4 hurricane wind speed
F3	Severe	158 - 206	Roofs and walls torn off well constructed houses; trains overturned; large trees uprooted, can knock down entire forest of trees. Category 5 hurricane wind speed
F4	Devastating	207 - 260	Well-constructed frame houses leveled; structures with weak foundations blown off some distance; automobiles thrown, large airborne objects can cause significant damage.
F5	Incredible	261 - 318	Brick, stone and cinderblock buildings destroyed, most debris is carried away by tornadic winds, large and heavy objects can be hurled in excess of 100 meters, trees debarked, asphalt peeled off of roads, steel reinforced concrete structures badly damaged.
F6	Inconceivable	319 - 379	These winds are very unlikely. The small area of damage they might produce would probably not be recognizable along with the damage produced by F4 and F5 wind speeds that would surround the F6 winds.



Typical F0 Tornado Damage

Note the trees are stripped of leaves, but the trees remain standing. Only light roof damage and a few missing shingles.



Typical F1 Tornado Damage

Note the uprooted trees and missing shingles from the roof. There is significant roof damage.



Typical F2 Tornado Damage

This home is missing its entire roof but the exterior walls remain intact. Some of the stronger hardwood trees remain standing.



Typical F3 Tornado Damage

This home is missing the entire roof as well as some of the exterior walls. Trees are blown over or snapped near the base and outbuildings are destroyed.



Typical F4 Tornado Damage

This home is almost completely obliterated, with no walls standing. The debris from the home is where the house once stood.



Typical F5 Tornado Damage

These homes have been completely removed from their original locations. The debris field has been scattered some distance from their foundation.

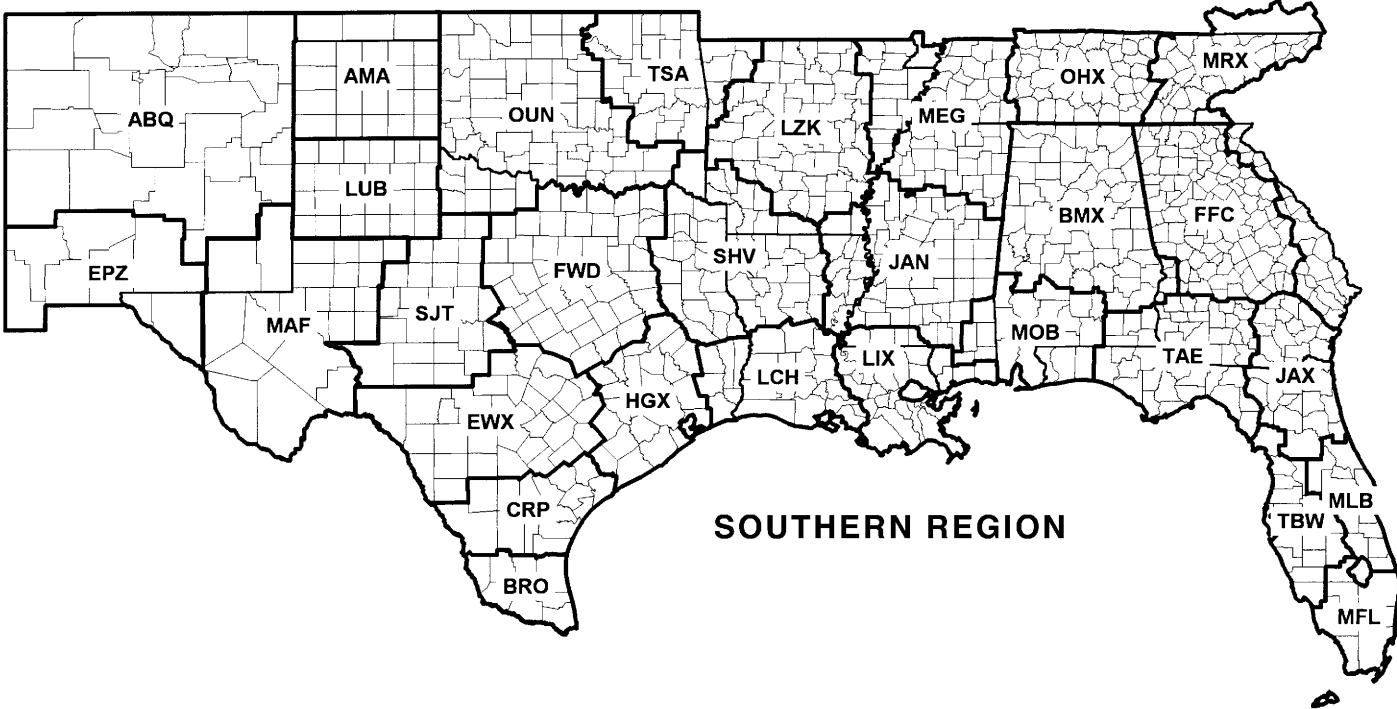


Typical F5 Tornado Damage

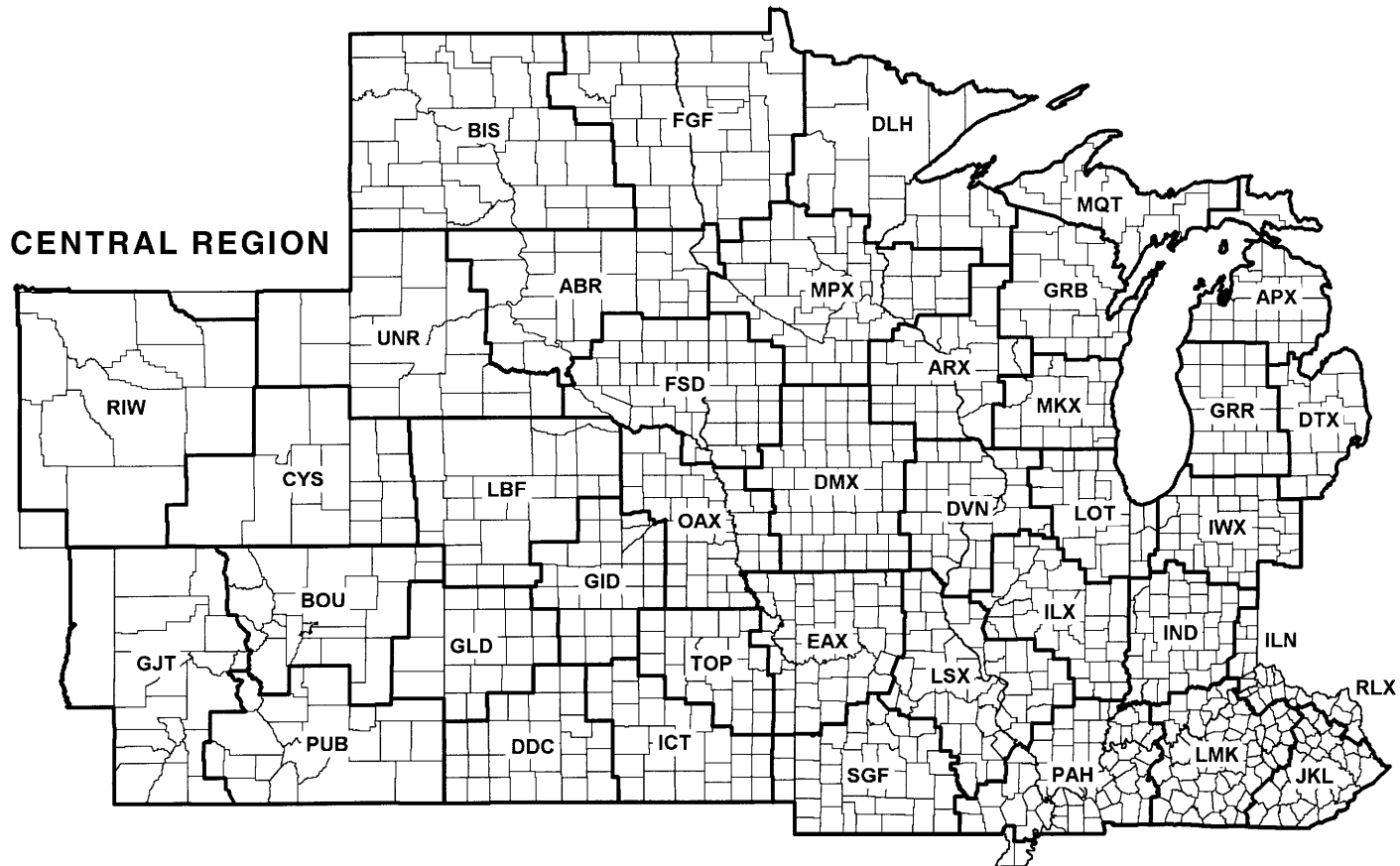
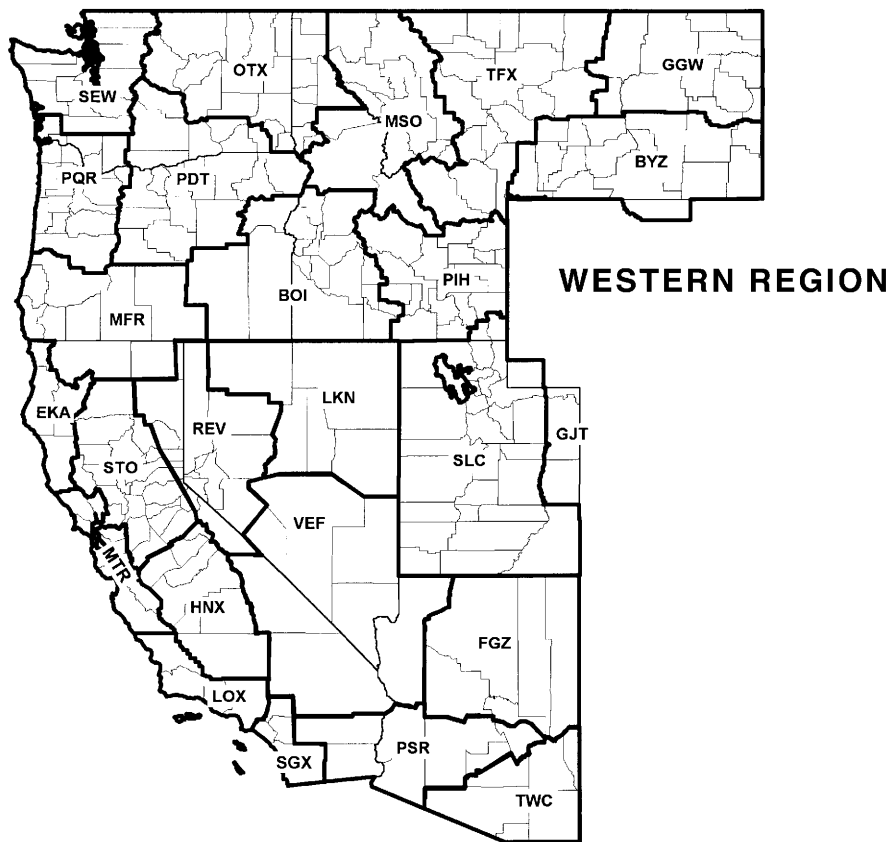
The asphalt surface has been peeled off of this road.

(All photographs courtesy of Brian Smith, Meteorologist, National Weather Service, Valley NE.)

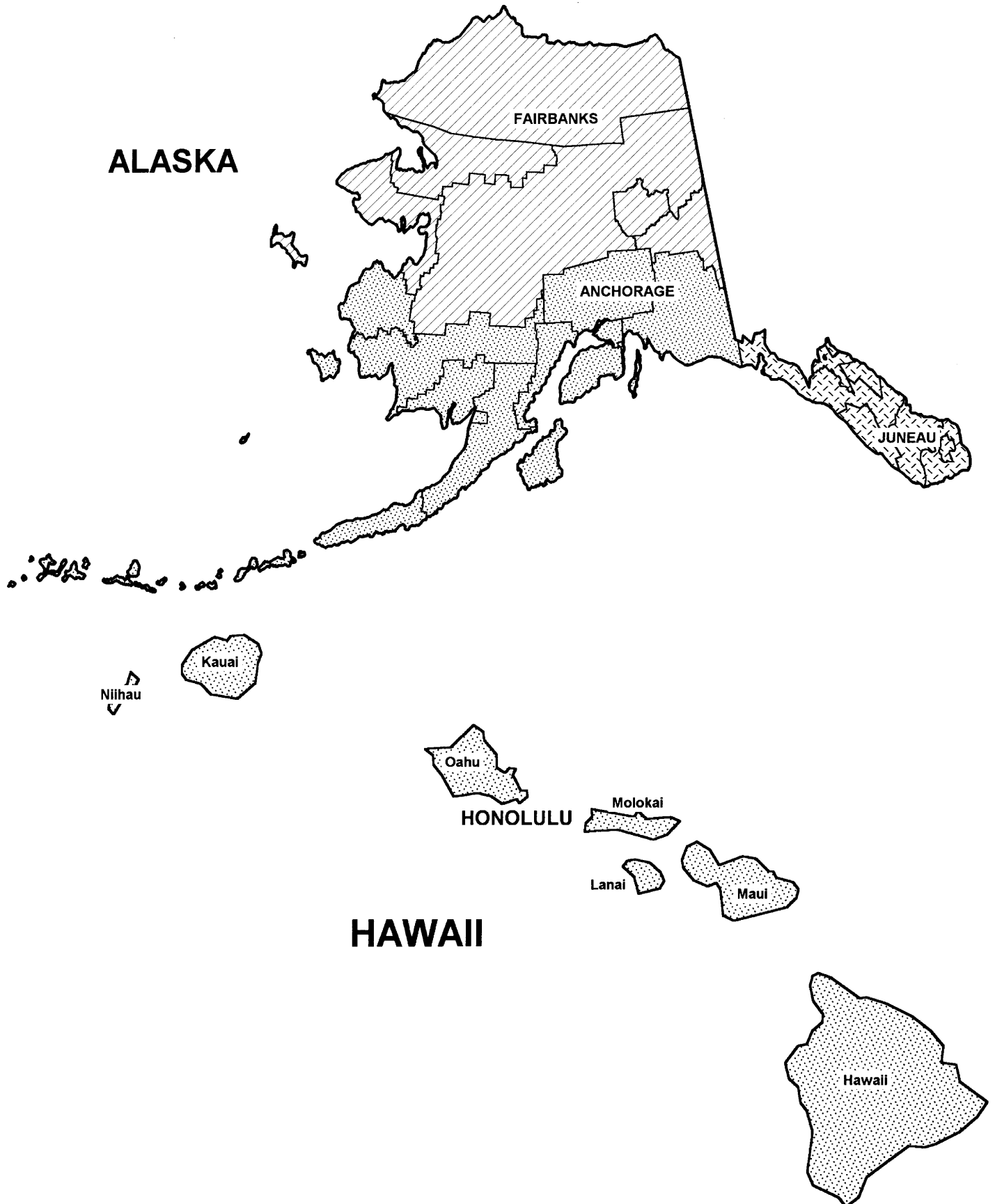
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MODERNIZED COUNTY WARNING AREAS



These and other publications are available from the National Climatic Data Center

Hourly Precipitation Data

This publication contains hourly precipitation amounts obtained from recording rain gages located at National Weather Service, Federal Aviation Administration, and cooperative observer stations. Published data are displayed in inches and tenths or inches and hundredths at local standard time. **HPD** includes maximum precipitation for nine (9) time periods from 15 minutes to 24 hours, for selected stations.

Climatological Data

Monthly editions contain station daily maximum and minimum temperatures and precipitation. Some stations provide daily snowfall, snow depth, evaporation, and soil temperature data. Each edition also contains monthly summaries for heating and cooling degree days (65 degree F base). The July issue contains a recap of monthly heating degree days and snow data for the preceding July through June.

The Annual issue contains monthly and annual averages of temperature, precipitation, temperature extremes, freeze data, soil temperatures, evaporation, and a recap of monthly cooling degree days.

Storm Data

Monthly issues contain a chronological listing, by states, of occurrences of storms and unusual weather phenomena. Reports contain information on storm paths, deaths, injuries, and property damage. An "Outstanding storms of the month" section highlights severe weather events with photographs, illustrations, and narratives. The December issue includes annual tornado, lightning, flash flood, and tropical cyclone summaries.

Monthly Climatic Data for the World

This publication contains monthly means for temperature, pressure, precipitation, vapor pressure, and sunshine for approximately 2,000 surface data collection stations worldwide and monthly mean upper air temperatures, dew point depressions, and wind velocities for approximately 500 observing sites.

Local Climatological Data

LCD publications summarize temperature, relative humidity, precipitation, cloudiness, wind speed and direction observations for several hundred cities in the U.S. and its territories. Each monthly publication also contains the 3 hourly weather observations for that month and an hourly summary of precipitation. Annual **LCD** publications contain a summary of the past calendar year as well as historical averages and extremes.

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