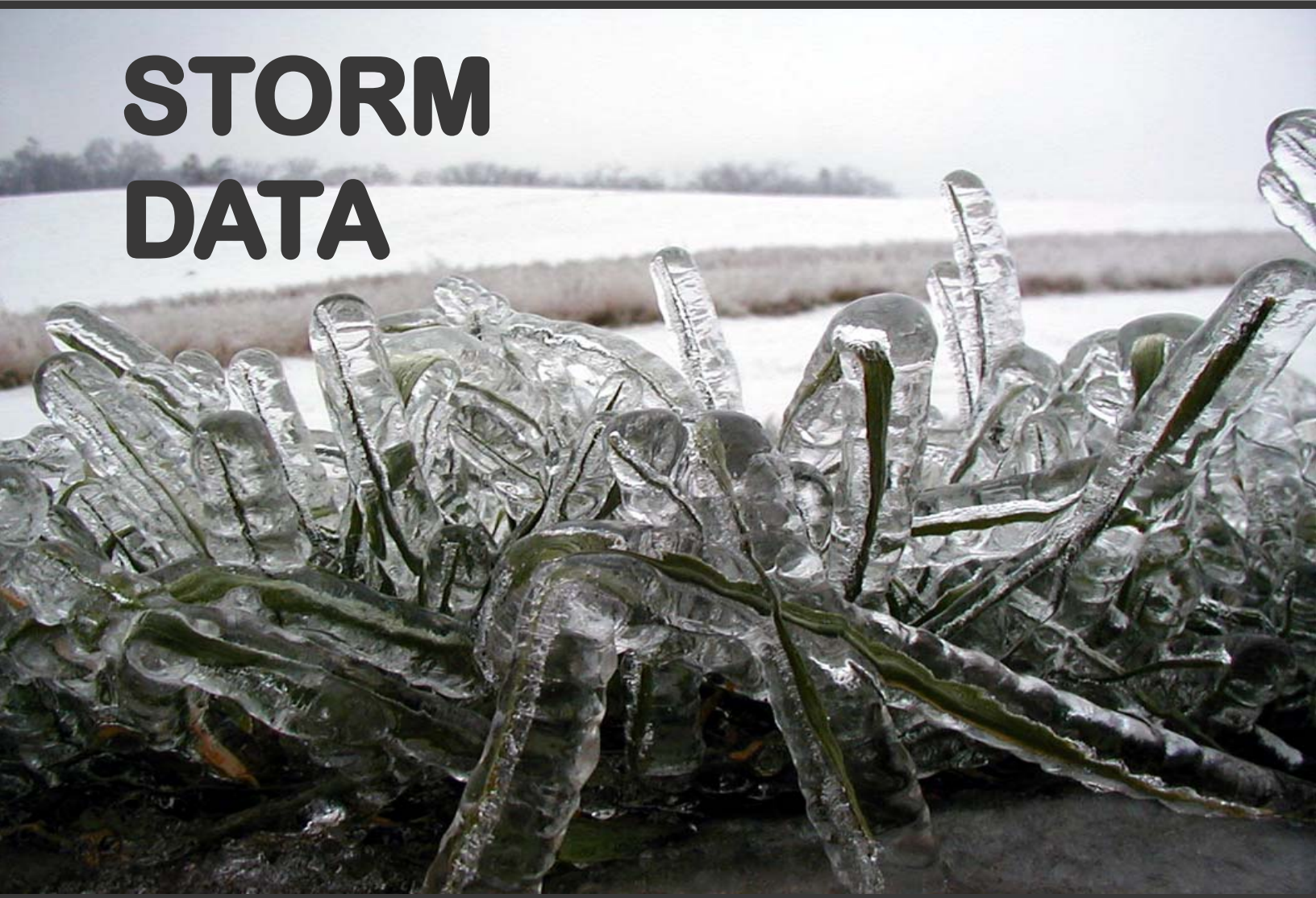


DECEMBER 2002
VOLUME 44
NUMBER 12

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: With ground temperatures below freezing and a low pressure system that produced between one and two inches of rainfall, ice accumulations from 1/4" inch to an inch across Western and North Central Maryland were common. Roads and sidewalks were treacherous as numerous people were treated for slip and fall injuries. Numerous trees and powerlines were also downed. (Photo courtesy: Rob Kookaby, NWS, Frederick County, Maryland.)

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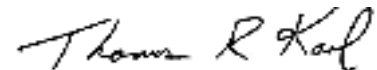
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The editor of **STORM DATA** solicit your help in acquiring photographs (prints or slides; black and white, or color), maps, clippings, etc. of significant or severe weather events (past or present) for use in the "Outstanding Storms of the Month"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

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National Climatic Data Center
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Asheville, NC 28801
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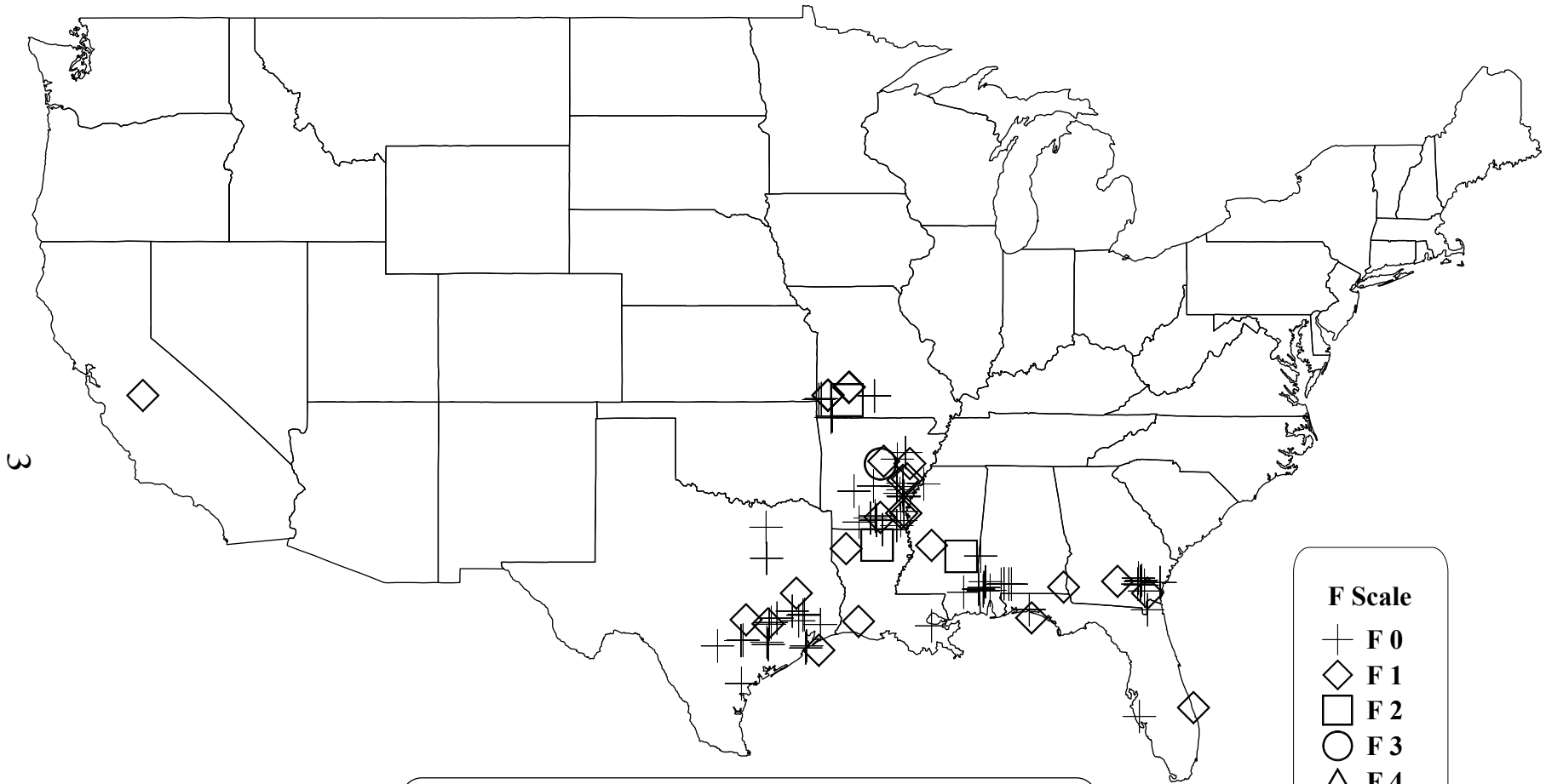
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Thomas R. Karl
Director,
National Climatic Data Center

December 2002 Confirmed Tornadoes



F Scale	F0	F1	F2	F3	F4	F5	Total
Number	68	24	3	1	0	0	96

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 DECEMBER 2002.**

Storm Data and Unusual Weather Phenomena

December 2002

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

ALZ001>002-011-014

Lauderdale - Colbert - Marion - Winston

12	2330CST				0	0	5K	0	High Wind (G40)
13	0232CST								

What appeared to be a gravity wave event produced sporadic wind gusts estimated at 35 to 45 mph. A few trees were blown down, a few power poles were blown down, and one tree landed on a carport in Marion County. A few trees were knocked down across Lauderdale, Winston, and Colbert counties.

Elmore County Central

19	1614CST				0	0	0	0	Funnel Cloud
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A funnel cloud was reported just north of Central.

Lee County Opelika

24	0415CST				0	0	7K	0	Lightning
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Lightning struck a communications tower owned by Lee County damaging public service radios operated by the county and the State of Alabama, computers, and telephone equipment. The tower is the site of the only EMWIN re-broadcast station in Alabama, and it was taken off the air by the lightning strike.

Pike County Spring Hill

24	0537CST				0	0	2K	0	Thunderstorm Wind (G50)
-----------	---------	--	--	--	----------	----------	-----------	----------	--------------------------------

Trees were blown down near Springhill on CR 6 and on CR 57.

ALABAMA, North

NOT RECEIVED.

ALABAMA, Southeast

Dale County Newton

19	2100EST				0	0	20K		Thunderstorm Wind (G50)
-----------	---------	--	--	--	----------	----------	------------	--	--------------------------------

Minor roof damage to a residence. Reported by the Dale County EMA.

Dale County Midland City

24	0740EST				0	0	5K		Thunderstorm Wind (G50)
-----------	---------	--	--	--	----------	----------	-----------	--	--------------------------------

Downed trees and power lines reported by the Dale County EMA.

Geneva County Countywide

24	0740EST 0745EST				0	0	10K		Thunderstorm Wind (G50)
-----------	--------------------	--	--	--	----------	----------	------------	--	--------------------------------

Downed trees and power lines reported by the Geneva County Sheriff.

Houston County Countywide

24	0750EST 0800EST				0	0	75K		Thunderstorm Wind (G55)
-----------	--------------------	--	--	--	----------	----------	------------	--	--------------------------------

Downed trees and power lines on Highway 123 in Wicksburg, as well as on Eddings and Bonham Roads, just west of Dothan. A trailer was overturned in Memphis. A few mobile homes were damaged in Ashford. Reported by the Houston County EMA.

Henry County Headland to 3 E Haleburg

24	0745EST 0755EST	18	150		0	8	2M		Tornado (F1)
-----------	--------------------	-----------	------------	--	----------	----------	-----------	--	---------------------

A tornado touched down in Headland, north of County Road 99 and U.S. Highway 431. The tornado caused extensive roof damage to several homes, businesses, and a school. It damaged six planes and a hanger at the Headland Airport. The tornado raced east-northeast, and destroyed a few barns and damaged a few mobile homes in the Tumbleton/Camp Springs area. The worst damage occurred in Haleburg where several mobile homes and barns were destroyed, with damage to a local church. Eight persons were injured, with six of them hospitalized. The tornado crossed the Chattahoochee River into Georgia. Reported by the Henry County EMA.

ALABAMA, Southwest

Washington County Fruitdale

19	1320CST 1321CST				0	0			Hail (0.75)
-----------	--------------------	--	--	--	----------	----------	--	--	--------------------

Washington County Malcolm

19	1525CST 1526CST	0.1	20		0	0	8K		Tornado (F0)
-----------	--------------------	------------	-----------	--	----------	----------	-----------	--	---------------------

A weak tornado briefly touched down near Malcolm. Several trees were blown down.

Monroe County Monroeville

19	1600CST 1601CST	0.1	20		0	0	10K		Tornado (F0)
-----------	--------------------	------------	-----------	--	----------	----------	------------	--	---------------------

A weak tornado briefly touched down just north of Monroeville. Several trees and power lines were blown down.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
ALABAMA, Southwest									
Monroe County									
Monroeville	19	1720CST 1721CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees just south of Monroeville.
Baldwin County									
Daphne	19	1800CST 1801CST			0	0	8K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down trees and power lines near Daphne.
Crenshaw County									
7.5 NW Highland Home	19	1905CST 1906CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees along State Highway 97 near Clearview.
Washington County									
Fruitdale	23	2200CST 2201CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Fruitdale. Several trees were blown down.
Clarke County									
Grove Hill	23	2240CST 2241CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees near Grove Hill.
Washington County									
Leroy	24	0235CST 0236CST	0.1	20	0	0	15K		Tornado (F0)
									A weak tornado briefly touched down near Leroy. A couple of outbuildings were damaged and tin was blown from some of the buildings. Several trees were also blown down.
Clarke County									
Carlton	24	0240CST 0241CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down a few trees near Carlton.
Monroe County									
Perdue Hill	24	0240CST 0241CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Perdue Hill. Several trees were blown down.
Washington County									
Millry	24	0305CST 0306CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Millry. Several trees were blown down and minor roof damage occurred to a building.
Clarke County									
Walker Spgs	24	0320CST 0321CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Walker Springs. Several trees were blown down.
Mobile County									
(Mob)Mobile Bates Fl	24	0343CST			0	0			Thunderstorm Wind (G55) ^M
Mobile County									
St Elmo	24	0345CST 0346CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down a few trees near St Elmo.
Washington County									
Chatom	24	0345CST 0346CST			0	0	80K		Thunderstorm Wind (G60)
									High winds from a thunderstorm caused roof damage to a couple of businesses in Chatom. The most significant damage occurred at an automobile dealership. Part of the roof at the dealership was peeled off and some of the debris damaged several new vehicles that were parked outside. The high winds also blew down a couple of trees and power lines.
Monroe County									
Tunnell Spgs	24	0405CST 0406CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees near Tunnel Springs.
Conecuh County									
Castleberry	24	0420CST 0421CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees north of Castleberry.

Storm Data and Unusual Weather Phenomena

December 2002

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

ALABAMA, Southwest

Butler County

Garland 24 0430CST 0431CST 0 0 5K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees near Garland.

Baldwin County

Summerdale 24 0430CST 0431CST 0 0 10K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees near Summerdale. A couple of outbuildings in the same location suffered minor damage.

Escambia County

Wallace 24 0435CST 0436CST 0 0 5K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees near Wallace.

Covington County

Opp 24 0630CST 0636CST 0 0 10K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees and power lines near Opp. An unoccupied older trailer was also damaged.

Crenshaw County

Luverne to Highland Home 24 0815CST 0930CST 0 0 **Flash Flood**

Heavy rains across the county caused several roads to flood between Luverne and Highland Home. Many side roads had to be closed for an hour to allow the water to drain.

Mobile County

4 W (Mob)Mobile Bates 31 0550CST 0551CST 0 0 **Thunderstorm Wind (G52)**

Mobile County

(Mob)Mobile Bates Fl 31 0637CST 0 0 **Thunderstorm Wind (G53) M**

Mobile County

Mt Vernon 31 0700CST 0701CST 0 0 20K **Thunderstorm Wind (G55)**

High winds from a thunderstorm blew down several trees near Mt Vernon. A fireworks stand was turned over by the winds and a tire store had some tin blown off of it.

Mobile County

Mobile 31 0740CST 0741CST 0 0 **Hail (0.75)**

Mobile County

Gulf Crest 31 0745CST 0746CST 0 0 5K **Thunderstorm Wind (G50)**

High winds from a thunderstorm blew down several trees near Gulf Crest.

Mobile County

Central Portion to South Portion 31 0815CST 1000CST 0 0 **Flash Flood**

Heavy rains caused several streets in the central and south part of the county to flood. Rainfall totals were between two and four inches in two hours. Several side streets had to be closed for about two hours. The water quickly receded after the rains had moved out of the area.

Baldwin County

Gulf Shrs 31 0840CST 0841CST 0 0 10K **Thunderstorm Wind (G55)**

High winds from a thunderstorm, moving in from the Gulf, caused minor roof damage to a condominium located near the water in Gulf Shores.

ALASKA, Northern

AKZ213

St Lawrence Is. Bering Strait

03 0435AST 0815AST 0 0 **Blizzard**

With an existing moderate easterly pressure gradient across the northern Bering Sea, a weather disturbance moved north over the area bringing blizzard conditions to Gambell on St. Lawrence Island.

AKZ201

Western Arctic Coast

04 2143AST 05 0242AST 0 0 **Blizzard**

Storm Data and Unusual Weather Phenomena

December 2002

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

ALASKA, Northern

With an existing moderate easterly pressure gradient over the Western Arctic Coast, an occlusion aloft moved over the area bringing a period of blizzard conditions to Point Lay and Wainwright.

AKZ207

Chukchi Sea Coast

12	1530AST				0	0			High Wind (G53) ^M
	1630AST								

With an existing moderate northeast pressure gradient over the Chukchi Sea, an upper level low pressure center drifted north into the area tightening the gradient further and causing wind gusts to reach 60 mph at the Point Hope AWOS briefly.

AKZ201-213>214

Western Arctic Coast - St Lawrence Is. Bering Strait - Yukon Delta

18	1655AST				0	0			Blizzard
	0753AST								

A strong storm reaching 946 mb moved slowly north over the southern Bering Sea and brought blizzard conditions to Gambell on St. Lawrence Island (zone 213), and blizzard conditions were also likely during this time at Cape Romanzof on zone 214. As the circulation from the low pressure center expanded north, blizzard conditions also occurred at Wainwright in zone 201 the morning of the 20th.

AKZ223

Deltana And Tanana

22	0953AST				0	0			High Wind (G49) ^M
	0053AST								

A low pressure center moved north over the western Gulf of Alaska and caused the pressure gradient across the Tanana River to increase while high pressure remained stationary over western Canada. This resulted in strong east winds at the Delta Junction ASOS, which gusted as high as 56 mph.

AKZ210

Nrn & Intr. Seward Peninsula

26	0253AST				0	0			Blizzard
	0353AST								

A small low pressure center that formed over northwest Alaska near Kotzebue drifted south a little ways while high pressure strengthened over Far East Russia. This caused west winds to increase over the Seward Peninsula and created local blizzard conditions as reported by the Deering ASOS.

ALASKA, Southeast

AKZ027

Southern Southeast Alaska Ernest Sound To Dixon Entrance

10	1700AST				0	0	5K		High Wind (G65) ^M
	2000AST								

An offshore Low resulted in a series of strong frontal passages in southern Southeast Alaska. On the roof of the Ketchikan Airport Terminal east-southeast wind gusts as high as 75 mph (65 knots) were measured. In the Ketchikan Harbor wind gusts to 62 mph (54 knots) occurred. Small tree and other minor damage was reported in the area.

AKZ027>028

Southern Southeast Alaska Ernest Sound To Dixon Entrance - Dixon Entrance To Cape Decision-Coastal Area

12	0000AST				0	0	10K		High Wind (G58) ^M
	0300AST								

An offshore 955 mb Low resulted in the next strong frontal passage in southern Southeast Alaska. On the roof of the Ketchikan Airport Terminal south-southeast wind gusts as high as 67 mph (58 knots) were measured. Spotters in Craig estimated 60 mph wind gusts and the Cape Decision AWOS measured a peak gust to 58 mph (50 knots). Once again no injuries and only minor damage was reported.

AKZ024

Northern Lynn Canal

12	0600AST				0	0			Heavy Snow
	1700AST								

The Alaska Department of Transportation (AKDOT) reported Heavy Snow along both the Haines and Klondike Highways. The U.S. Customs Office at Pleasant Camp, AK reported a storm total of 8 inches in this 11 hour period.

AKZ027>028

Southern Southeast Alaska Ernest Sound To Dixon Entrance - Dixon Entrance To Cape Decision-Coastal Area

15	0800AST				0	0	1K		High Wind (G57) ^M
	1400AST								

High winds occurred in the Southern Panhandle. Peak wind gusts were measured to 66 mph (57 knots) at the Hydaburg Airport. Winds were also estimated to reach 60 mph according to spotters in the Ketchikan area.

AKZ024

Northern Lynn Canal

22	0800AST				0	0			Heavy Snow
	2000AST								

Heavy Snow was reported by numerous trained spotters in the town of Haines. Overall, 14-16" of snow fell in this 12 hour period.

AKZ028

Dixon Entrance To Cape Decision-Coastal Area

22	1635AST				0	0			High Wind (G56) ^M
	2000AST								

High winds (those 60 mph or greater) occurred in Hydaburg along the extreme Southeast Coast of Alaska. The peak gust of 64 mph (56 knots) was measured at the airport. No damage nor injuries were reported.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>ALASKA, Southeast</u>									
AKZ028			Dixon Entrance To Cape Decision-Coastal Area						
	23	1500AST 2000AST			0	0			High Wind (G53) ^M
			A wind gust to 61 mph (53 knots) was measured at the Hydaburg airport. This was the only location that reported high winds (winds greater than 60 mph) in Southeast Alaska on this date.						
AKZ024			Northern Lynn Canal						
	24	0200AST 1100AST			0	0			Heavy Snow
			The U.S. Customs Office in Pleasant Camp, AK along the Haines Highway reported receiving 14 inches of snow during this time.						
AKZ025			Juneau Borough-Eastern Chichagof-Admiralty Island						
	28	0600AST 1800AST			0	0			Heavy Snow
			Heavy snow blanketed the Mendenhall Valley in the Juneau area. At the Juneau International Airport 6.5" of snow was measured. Higher amounts of 7-11 inches occurred in the back of the valley (northern most portion) including at the NWS Forecast Office.						
AKZ027>028			Southern Southeast Alaska Ernest Sound To Dixon Entrance - Dixon Entrance To Cape Decision-Coastal Area						
	29	2350AST 0400AST			0	0			High Wind (G56) ^M
			High winds were measured at the Ketchikan airport. Peak gusts to 64 mph (56 knots) occurred on the roof of the terminal building. Winds were also estimated to reach 60 mph by spotters in Craig and Hydaburg that morning.						
AKZ028			Dixon Entrance To Cape Decision-Coastal Area						
	31	0355AST 0500AST			0	0			High Wind (G53) ^M
			Wind gusts to 61 mph (53 knots) occurred at the Hydaburg airport.						
AKZ029			Misty Fjords						
	31	1030AST 2100AST			0	0			Heavy Snow
			Our Cooperative Observer/Weather Spotter in Hyder reported a total of 14 inches of snow during this time. During the early afternoon snowfall rates of 2" per hour were observed.						
<u>ALASKA, Southern</u>									
AKZ101-125			Anchorage Muni To Bird Creek - Wrn P.W. Snd & Kenai Mtns						
	03	0653AST 2330AST			0	0			High Wind (G88) ^M
			A 990 mb low along the southwest end of Shelikof Strait moved into Bristol Bay, pushing a warm front to an arc through Iliamna and into the southern Kenai Peninsula. Gusty east winds were channeled by terrain in both zones 101 and 125. Additionally, areas of freezing rain were reported in both zone 101 and zone 155, although reported amounts were generally very light.						
			Across zone 125, wind gusts as high as 64 mph were recorded at the Portage ASOS between 10 and 11 am Tuesday.						
			In zone 101, a triple digit gust of 101 mph was recorded by a system on Black Bear Circle, in Bear Valley, by Caryn Smith. Gusts of 86 mph were recorded at McHugh Creek at 5:05 pm Tuesday. Gusts the same day reached 67 mph (several times) at Glen Alps and 58 mph at Bird Point.						
AKZ101			Anchorage Muni To Bird Creek						
	05	1900AST 06 0100AST			0	0			High Wind (G54) ^M
			Pressure gradients briefly tightened enough to produce strong southeasterly winds across western Turnagain Arm and along the Upper Anchorage Hillside. Gusts of 62 mph were briefly reported at Glen Alps, while McHugh Creek peaked at 58 mph at 8:35 pm Thursday evening.						
AKZ101			Anchorage Muni To Bird Creek						
	10	1800AST 11 0900AST			0	0			Winter Storm
			After a prolonged dry spell, the Anchorage Municipality finally received its first significant winter snow as a re-energized cold front stalled across the area. Snow accumulations ranged from 9 to 24 inches around Girdwood, 9 to 14 inches along the Anchorage Hillside and generally 2 to 5 inches across the rest of Anchorage and Eagle River. From midnight through 10 am, there were 45 non-injury accidents, 4 injury accidents and 52 vehicle in the ditch reports.						
			Additionally, earlier in the morning Tuesday, freezing rain was reported in several areas of the Anchorage bowl...especially around the International Airport.						
AKZ125			Wrn P.W. Snd & Kenai Mtns						
	16	1200AST 2200AST			0	0			Blizzard

Storm Data and Unusual Weather Phenomena

December 2002

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

Strong westerly winds gusting near 60 mph in the Passage Canal area and around Whittier resulted in blizzard conditions, lasting from 9 am through 10 pm Tuesday. Visibilities improved to 1 mile or greater around midnight.

AKZ191

Western Aleutians

16	1230AST 1700AST				0	0			Blizzard
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A complex 983 mb low, with one center northwest of Adak and the other southwest of Saint George Island, brought strong winds and blizzard conditions to the western Aleutians. Heavy snow with blizzard conditions in blowing snow was reported at Shemya between 11:49 am and 2:55 pm Monday. Precipitation changed to rain just before 4 pm, ending the blowing snow.

AKZ171

Kodiak Peninsula

16	1700AST 2120AST				0	0			High Wind (G52) ^M
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Brisk northwest winds developed across Kodiak Island Monday as pressure gradients increased between high pressure over southwest Alaska and the south-central interior and a low in the Gulf of Alaska. Gusty northwest winds briefly reached 60 mph between 1 and 2 pm, then peaked at 61 mph at 4 pm, diminishing below 60 mph after 6 pm Monday at Sitkinak. Winds at Kodiak City also peaked at 60 mph between 4 and 5 pm Monday.

AKZ121

Kenai Peninsula

17	0000AST 2200AST				0	0			Heavy Snow
----	--------------------	--	--	--	---	---	--	--	-------------------

AKZ125

Wrn P.W. Snd & Kenai Mtns

17	0000AST 2359AST				0	0			Ice Storm
----	--------------------	--	--	--	---	---	--	--	------------------

Overrunning across a modified arctic airmass resulted in areas of freezing rain around Girdwood and heavy snows across portions of the southern Kenai Peninsula on Tuesday.

Around Girdwood, spotter reports indicated about .2 inches of freezing rain in that area. Damage reports so far are unavailable.

Across the southern Kenai Peninsula, snowfall at midday around Homer ranged from 6 inches in town to 8 inches along the Bluff. Total snowfall on the Bluff reached 1 foot.

Elsewhere across the southern Kenai Peninsula, snowfall reached 16" at higher elevations around Seldovia with the community receiving 10 inches, 12 inches at Stariski Creek, 6 to 8 inches at Ninilchik, out along Oil Well Road and at the Anchor River Inn.

Snowfall became light and intermittent after 4 pm Tuesday, stopping just before 10 pm that same evening.

AKZ185-191-195

Eastern Aleutians - Western Aleutians - Pribilof Islands

17	1800AST				0	0			High Wind (G106) ^M
19	0600AST								

A very strong storm system moved northeast through the western Aleutians during midweek, preceded by a strong front.

Winds in advance of the front were southeasterly. Gusts around 60 mph were reported at Shemya, Dutch Harbor and at both reporting sites of the Pribilof Islands.

Around the storm center, along the south and southwest quadrants, extreme wind gusts were observed. Attu, along the western tip of the Aleutians, reported gusts of 122 mph on one of 3 wind systems there. Reportedly, the sensor that recorded the 122 mph typically reports wind speeds less than the one on the runway (which was unavailable for this event) with this particular wind direction. Sustained winds between 70 and 90 mph were reported for an extended 12 hour period on the back side of the storm at Attu. Shemya also recorded strong westerly gusts which peaked at 89 mph midday Wednesday.

AKZ155

Kuskokwim Delta

19	0200AST 0600AST				0	0			Blizzard
----	--------------------	--	--	--	---	---	--	--	-----------------

A strong front approaching the southwest coast of Alaska brought local blizzard conditions and wind gusts between 50 and 60 mph to local areas of the Kuskokwim Delta. Worst conditions were reported at Mekoryuk, on Nunivak Island.

AKZ131

Sern P.W. Snd

22	0100AST				0	0			Heavy Snow
23	1300AST								

Heavy snow fell in the Thompson Pass area of the zone from early Sunday through Monday afternoon. Snowfall totals reached 51 inches during this period.

AKZ125-135

Wrn P.W. Snd & Kenai Mtns - Sern P.W. Snd

22	0315AST 1200AST				0	0			High Wind (G64) ^M
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A strong low south of the Aleutians moved toward Kodiak Island over the weekend. The storm reached an intensity of 961 mbs at 9 am Sunday as it moved across Sitkinak Island. The front elongated northeast through the Gulf of Alaska, preceded and

Storm Data and Unusual Weather Phenomena

December 2002

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

ALASKA, Southern

accompanied by locally brisk east winds.

Wind gusts were estimated higher than 60 mph at the Prince William Sound Science Center Sunday morning...around the same time the Cape Suckling buoy recorded wind gusts of 63 mph.

Gusts at the Portage Glacier ASOS reached 74 mph from the east early Sunday, with winds diminishing below 60 mph by noon the same day.

AKZ191

Western Aleutians

29	2230AST	0	0	High Wind (G52)	M
30	0300AST				

A strong low developed near Shemya Sunday, moving to just south of Shemya Sunday evening. The system produced strong winds across the area...especially across the extreme western Aleutians.

AKZ191

Western Aleutians

31	0900AST	0	0	High Wind (G60)	M
	1800AST				

Strong pressure gradients between a 1039 mb high over far eastern Russia and a 966 mb low 150 miles southwest of Shemya produced strong westerly winds across much of the extreme western Aleutians. On Tuesday, gusts peaked at 69 mph just before noon AST at Shemya. Additionally, a ship in the area reported gusts of 60 mph at 3 pm Tuesday.

AMERICAN SAMOA

NONE REPORTED.

ARIZONA, Central and Northeast

AZZ015>016

Western Mogollon Rim - Eastern Mogollon Rim

18	0000MST	1	5	Winter Storm
	1800MST			

A winter storm moved across northern Arizona leaving a blanket of snow and dangerous road conditions. In an eighteen hour time period, the Department of Public Safety reported more than 15 slide offs and 15 accidents. Seven collisions involving 11 vehicles occurred just before 7:00 AM on I-17 near Twin Arrows. One person died and several others were injured in that pile-up. Flagstaff Police reported at least 8 accidents in town. New snowfall totals included: Happy Jack 8.5 inches, Kachina Village 7 inches, and Flagstaff Airport 6 inches. M?OU

ARIZONA, Northwest

AZZ003

Northwest Deserts

22	0730PST	0	0	Dense Fog
	1030PST			

Dense fog with visibilities lower than one quarter mile were reported in Kingman for 3 hours.

ARIZONA, South

AZZ030

Upper Gila River Valley

17	0500MST	0	0	0	0	Heavy Snow
18	1300MST					

Arizona department of transportation reported 4 to 6 inches of snow above 6000 feet on Mt Graham at 1100 am on the 17th. By the end of the event, Mt Graham received 12 to 14 inches of snow depending on location.

AZZ019

Northern Greenlee

17	0500MST	0	0	Heavy Snow
18	1400MST			

Hannagan Meadow recorded 20 inches of snow during the event period.

A strong storm system moved down along the Pacific coast and caused significant snow amounts within a 24 hour period on the 17th and 18th in the White Mountains and Mt Graham. Scattered showers developed early on the morning of the 17th, with reports of snow level initially at 7000 to 8000 feet. By the afternoon on the 17th, convective bands developed and moved over central and southern portions of Arizona. Although Graham and Northern Greenlee counties were impacted significantly by the heavy snow, other locations across southeast Arizona also received snow reports. Mt Lemmon reported 8 inches of snow and Santa Rita, Chiricahua, and Huachuca Mountains received 4 to 6 inches of snow. Cooperative stations like Sierra Vista, Bisbee, and Tombstone that are located around 4000 feet recorded a trace of snow.

AZZ033

Tucson Metro/Marana/Green Valley

22	1600MST	0	0	0	0	Heavy Snow
23	0800MST					

Palisades Ranger station on Mt Lemmon reported 12 inches of snow on the morning of the 23rd. Mt Lemmon Lodge also reported 10 inches of snow.

Storm Data and Unusual Weather Phenomena

December 2002

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

AZZ032

Tohono Oodham Nation

22	1600MST				0	0	0	0	Heavy Snow
23	0800MST								

Workers at Kitt Peak Observatory were initially snowed in during the event and could not estimate snow levels. Later on the 23rd, reports of 9 inches of snow were called in from Kitt Peak.

AZZ035

Cochise County

22	1600MST				0	0	0	0	Heavy Snow
23	0800MST								

A spotter in the Chiricahua Mountain reported 7 inches of snow during the event.

AZZ029

Southeast Pinal County

22	1800MST				0	0	0	0	Heavy Snow
23	0700MST								

Although a total snow amount of 2 inches was recorded at Oracle, at 4000 feet it met heavy snow criteria for the city. Another storm system dropped down along the Pacific coast with the center of circulation located off southern California on Saturday the 21st. Convection broke out across southeast Arizona by Sunday afternoon on the 22nd, with initial snow level reports at 6000 feet near Mt Lemmon. Storms continued to develop and move eastward across southeast Arizona, and became widespread by Sunday evening. The track of this storm system would cause heavy snow on the southern and eastern mountains located in central and eastern Pima, Pinal, and Cochise county. By the morning of the 23rd, flurries were being reported at the valley floor near Sells. However, most snow began to accumulate at 4000 feet. Although Hannagan Meadow Lodge only recorded 5 inches of snow, it was expected that the White Mountains would only meet snow advisory criteria due to the southern track of the system. Other area such as Sierra Vista, Hereford, Bisbee, Wilcox, Sonoita and Oracle received 1 to 2 inches of snow.

ARIZONA, Southwest

Maricopa County

Phoenix to Mesa	04	1400MST 1900MST			0	0			Heavy Rain
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Rain showers and isolated thunderstorms resulted in some street flooding through parts of the East Valley. The sudden rain may have contributed to vehicle accidents. One of the heaviest amounts was 1.22 inches in about an hour.

ARKANSAS, Central and North Central

ARZ003>007-012>016-023>025-033>034 Boone - Marion - Baxter - Fulton - Sharp - Newton - Searcy - Stone - Izard - Independence - Van Buren - Cleburne - Jackson - White - Woodruff

03	2200CST				0	0	3.7M		Winter Storm
04	1200CST								

A mixture of snow, sleet and freezing rain starting falling on the afternoon of the 3rd over parts of north-central Arkansas. The precipitation gradually overspread the rest of the area by that evening and continued through the morning hours of the 4th. Snowfall accumulations of 1 to 3 inches were common over north-central Arkansas, with locally higher amounts between 3 and 5 inches in the higher elevations. Farther to the south and east in northern Arkansas, snow became less common and freezing rain and sleet predominated. A major ice storm occurred with total ice accumulations ranging from 1/4 inch up to near 1 inch. Roads were snow and ice covered and hazardous during the event with numerous traffic accidents reported. Power outages were widespread due to the weight of snow and ice on tree limbs and power lines. Approximately 50,000 customers lost power at the height of the storm. Twelve counties in the Little Rock County Warning Area were declared disaster areas due to the ice, with the cleanup cost estimated around 4 million dollars.

Boone County

Harrison	18	0935CST			0	0			Hail (0.75)
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Marion County

3 S Peel	18	1420CST			0	0			Hail (0.75)
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Clark County

1 N Amity	18	1535CST			0	0			Hail (1.75)
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Storm Data and Unusual Weather Phenomena

December 2002

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

Faulkner County

**1 N Hamlet to
.8 ESE Enola** **18** **1535CST** **9.8** **150** **1** **13** **Tornado (F3)**



A house was destroyed by an F3 tornado between Hamlet and Enola (Faulkner County) along Highway 36 on 12/18/2002.

A strong tornado was spawned over Faulkner County about 1 mile north of Hamlet. The tornado moved to the northeast for approximately 9.8 miles before lifting 0.8 mile east-southeast of Enola. A number of homes, both permanent and mobile, were either damaged or destroyed along the path of the tornado. An 84 year-old woman was killed when her mobile home was destroyed. 13 others sustained injuries. Numerous trees and power lines were blown down. A power substation was also damaged. F84MH

Clark County

5 NE Amity **18** **1540CST** **0** **0** **Hail (1.00)**

Hot Spring County

Point Cedar **18** **1548CST** **0** **0** **Hail (1.00)**

Hot Spring County

1 NW Point Cedar **18** **1550CST** **0.1** **25** **0** **0** **Tornado (F0)**

A weak tornado touched down briefly 1 mile northwest of Point Cedar. Damage was limited to some trees being blown down.

Faulkner County

**2.1 SW Mt Vernon to
1 NE Mt Vernon** **18** **1550CST** **3.1** **100** **0** **0** **Tornado (F1)**

A weak tornado was spawned about 2.1 miles southwest of Mount Vernon. The tornado moved to the northeast and caused damage to several mobile homes to the west and north of Mount Vernon. A number of trees were also blown down. The tornado traveled about 3.1 miles before heading into White County.

White County

**3.5 W Romance to
3.5 NNE Romance** **18** **1554CST** **6** **100** **0** **0** **Tornado (F1)**

A weak tornado moved from eastern Faulkner County into western White County about 3.5 miles west of Romance. The tornado traveled to the northeast for 6 miles before lifting. Damage along the path of the tornado consisted of a small trailer and camping trailer being overturned. Some shingles and other minor damage occurred to the roofs of several homes. Numerous trees were also blown down.

White County

**.7 E Sidon to
1.2 NW Pickens** **18** **1605CST** **2.5** **25** **0** **0** **Tornado (F0)**

A weak tornado was spawned over northern White County about 0.7 of a mile east of Sidon. The only damage noted along the track of the tornado consisted of some trees being snapped off. The tornado traveled to the northeast for about 2.5 miles before heading into Cleburne County.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
ARKANSAS, Central and North Central									
Saline County									
Crows	18	1608CST 1609CST	0.5	25	0	0			Tornado (F0)
A weak tornado touched down briefly in the vicinity of Crows. The only damage noted were several trees that were twisted and broken off several feet above the ground along a small river that runs along Highway 9 just north of Crows. There were at least 2 people that witnessed the tornado.									
Cleburne County									
12 SSE Heber Spgs to 13 SE Heber Spgs	18	1609CST 1611CST	1.5	25	0	0			Tornado (F0)
A weak tornado moved from northern White County into southeast Cleburne County about 12 miles south-southeast of Heber Springs. The only damage noted were some snapped trees. The tornado traveled about 1.5 miles to the northeast before lifting.									
Faulkner County									
Mayflower	18	1615CST			0	0			Hail (0.88)
Garland County									
2 N Lonsdale	18	1630CST			0	0			Funnel Cloud
A trained weather spotter observed a funnel cloud 2 miles north of Lonsdale.									
Garland County									
Hot Springs Village	18	1630CST 1930CST			0	0			Flash Flood
Heavy rains caused flash flooding to occur in and around Hot Springs Village. A school bus was washed off a nearby road when the driver attempted to drive through the high water. No one else was aboard the bus at the time.									
Pulaski County									
Maumelle	18	1638CST			0	0			Hail (1.00)
Pulaski County									
Maumelle	18	1645CST			0	0			Hail (1.00)
Pulaski County									
Macon	18	1650CST			0	0			Hail (1.50)
White County									
Center Hill	18	1654CST			0	0			Hail (1.00)
Pulaski County									
Gibson	18	1655CST			0	0			Hail (1.00)
Pulaski County									
3 W Little Rock Afb to 1 W Little Rock Afb	18	1655CST 1705CST			0	0			Funnel Cloud
The weather observer at the Little Rock Air Force Base reported seeing a funnel cloud west of the base.									
Independence County									
2.8 E Newark to 4.5 NE Newark	18	1656CST 1659CST	2.2	30	0	0			Tornado (F0)
A weak tornado touched down briefly in eastern Independence County. The tornado caused minimal damage, with just a few trees snapped off.									
Pulaski County									
7 N Macon	18	1700CST			0	0			Hail (1.75)
Lonoke County									
Cabot	18	1700CST			0	0			Hail (1.00)
Lonoke County									
2.7 NE England to 8.2 NE England	18	1705CST 1713CST	5.5	40	0	0			Tornado (F0)
A weak tornado touched down over southern Lonoke County in areas just northeast of England. The only damage noted along the path of the tornado were some trees snapped off.									
Lonoke County									
Cabot	18	1710CST			0	0			Hail (0.75)
Lonoke County									
Cabot	18	1710CST			0	0			Hail (1.25)
Drew County									
8.2 WSW Collins to 7.2 WSW Collins	18	1723CST 1725CST	1	30	0	0			Tornado (F0)
An F0 tornado touched down briefly west-southwest of Collins. The tornado was on the ground for just a mile and snapped off several dozen small trees along it's path.									

Storm Data and Unusual Weather Phenomena

December 2002

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

1.2 SE Hazen to 2.5 ENE Hazen	18	1732CST 1735CST	2	75	0	0			Tornado (F0)
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A weak tornado touched down 1.2 miles southeast of Hazen and tracked to the northeast for 2 miles before lifting. Two residences suffered damage from fallen trees. A carport and a small shed were destroyed. Two mobile homes were damaged. A few trees were also blown down, as was a billboard.

White County

2 S Searcy	18	1733CST			0	0			Hail (0.75)
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Clark County

Alpine	18	1742CST			0	0			Hail (0.88)
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Ouachita County

7.4 WNW Camden to 6.5 NW Camden	18	1742CST 1745CST	1.8	30	0	0			Tornado (F0)
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A weak (F0) tornado touched down briefly to the northwest of Camden. The only damage noted along the track of the tornado were just a few trees snapped off.

Faulkner County

Conway	18	1745CST			0	0			Hail (0.75)
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Prairie County

3 W De Valls Bluff	18	1750CST			0	0			Thunderstorm Wind (G50)
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Thunderstorm winds downed some power lines.

Desha County

4 SSW Pea Ridge to 4 N Watson	18	1801CST 1813CST	9	50	0	0			Tornado (F1)
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An F1 tornado touched down 4 miles south-southwest of Pea Ridge and moved to the northeast for 9 miles before lifting. The first damage noted were several twisted trees and some large tree limbs that were knocked down. Just east of Highway 277, a house sustained minor roof and window damage. Further to the northeast, several buildings along Highway 1 were damaged. The roof of a church was damaged and a nearby house had some roof damage. Also, a storage garage was destroyed and several farm vehicles were damaged.

Storm Data and Unusual Weather Phenomena

December 2002

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

ARKANSAS, Central and North Central

Woodruff County

1.8 WSW Cotton Plant to 3.3 NE Cotton Plant	18	1808CST 1814CST	5	100	0	0			Tornado (F1)
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Several building facades collapsed in downtown Cotton Plant (Woodruff County) due to an F1 tornado on 12/18/2002.

A weak tornado initially touched down 1.8 miles west-southwest of Cotton Plant, tracked through the city of Cotton Plant, and lifted 3.3 miles northeast of Cotton Plant. The tornado damaged the roof of a cotton gin and a large nearby metal building was destroyed. A number of homes suffered damage, mainly due to shingles being blown off and trees falling onto them. Several mobile homes were damaged, including one that was overturned against a tree. The facade of several downtown buildings were torn off. A number of headstones on graves at a local cemetery were overturned.

Pulaski County

8 W Little Rock	18	1810CST			0	0			Hail (0.88)
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Ouachita County

2.7 E Stephens to 1.2 SW Buena Vista	18	1819CST 1826CST	5.7	30	0	0			Tornado (F0)
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A weak tornado (F0) touched down east of Stephens and tracked to the northeast for 5.7 miles before lifting. Damage along the path of the tornado consisted of a large tree blown down, with the tree knocking down a power pole. A number of trees were also downed in a nearby oil field.

Woodruff County

2 W Hilleman to 3.2 NNE Hilleman	18	1820CST 1825CST	4	100	0	0			Tornado (F1)
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A weak tornado (F1) touched down 2 miles west of Hilleman and tracked to the northeast for 4 miles before lifting. Several houses were damaged, mainly due to shingles being blown off. Two box trailers sitting on the ground at separate locations were overturned. Several trees were knocked down. Seven power poles were blown down and landed on U.S. Highway 49.

Ouachita County

Camden	18	1825CST			0	0			Funnel Cloud
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A funnel cloud was briefly observed just east of Camden.

Ouachita County

Kirkland	18	1830CST			0	0			Hail (1.00)
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Ouachita County

Frenchport	18	1830CST			0	0			Hail (0.88)
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Pulaski County

Jacksonville	18	1833CST			0	0			Hail (0.88)
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Pulaski County

Jacksonville	18	1835CST			0	0			Hail (1.75)
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Storm Data and Unusual Weather Phenomena

December 2002

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

Lonoke County									
Cabot	18	1840CST			0	0			Hail (1.00)
Lonoke County									
Ward	18	1845CST			0	0			Hail (0.75)
Lonoke County									
Cabot	18	1850CST			0	0			Hail (0.75)
Prairie County									
4.2 SW Des Arc to 3.6 NE Des Arc	18	1910CST 1921CST	8.8	100	0	0			Tornado (F1)



A school bus barn was destroyed by an F1 tornado at Des Arc (Prairie County) on 12/18/2002. No buses were in the barn at the time.

A weak tornado tracked from 4.2 miles southwest of Des Arc, through the city of Des Arc, to 3.6 miles northeast of Des Arc. The first damage noted along the track of the tornado was about 10 power poles that were downed to the southwest of Des Arc. In the city of Des Arc, the school bus barn was destroyed and the scoreboard at the local high school was damaged. A number of trees were blown down on houses, a church roof was damaged and some fences were knocked down. On the east side of the White River, shingles were blown off roofs and a garage suffered some damage.

Cleveland County									
Kingsland	18	1930CST			0	0			Hail (0.88)

Jefferson County									
.8 SE Cornerstone	18	1945CST	0.2	20	0	0			Tornado (F0)

A weak tornado (F0) touched down briefly in a farm field. There was no damage. The tornado was observed by a motorist driving on Highway 88 and a man whose house was on the edge of the field.

Cleveland County									
Woodlawn	18	1955CST			0	0			Hail (0.75)

Lincoln County									
Glendale	18	2000CST			0	0			Hail (0.75)

Ouachita County									
2.7 WSW Bearden to 2.9 NNE Bearden	18	2010CST 2018CST	5.1	40	0	0			Tornado (F0)

A weak tornado (F0) touched down 2.7 miles west-southwest of Bearden and tracked to the northeast for 5.1 miles before lifting. The only damage noted along the path of the tornado were some trees that were snapped off and minor damage to the tin roof of a barn.

Arkansas County									
Lodges Corners	18	2030CST			0	0			Hail (1.00)

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>ARKANSAS, Central and North Central</u>									
Jefferson County									
5 SSE Reidell to 4.9 SE Reidell	18	2033CST 2034CST	1.2	25	0	0			Tornado (F0)
									A weak tornado (F0) touched down briefly southeast of Reidell. The only damage noted were the tops of several trees that were twisted out and a large tree limb that fell onto a mobile home.
Jefferson County									
5.4 SE Reidell to 5.7 SE Reidell	18	2036CST	0.3	20	0	0			Tornado (F0)
									A weak tornado touched down briefly to the southeast of Reidell. Several dozen trees were blown down at Farelly Lake.
Calhoun County									
5.5 SE Locust Bayou to 5.7 SE Locust Bayou	18	2044CST 2045CST	0.2	25	0	0			Tornado (F0)
									An F0 tornado touched down briefly to the southeast of Locust Bayou. The tin roof of an old house was damaged, a couple of TV antennas were blown off houses and a few pines trees were snapped off.
Arkansas County									
5.5 S Stuttgart to 4 SSE Stuttgart	18	2045CST 2050CST	3	50	0	0			Tornado (F0)
									A weak tornado (F0) touched down 5.5 miles south of Stuttgart and moved to the northeast for 3 miles before lifting. Damage along the track of the tornado consisted of a carport blown into a field, some shingles taken off several roofs and pieces of tin peeled off a few barns.
Calhoun County									
5.2 WSW Hampton to 4 WSW Hampton	18	2048CST 2050CST	1.2	40	0	0			Tornado (F0)
									A weak tornado (F0) touched down briefly to the west-southwest of Hampton. The roof of a house sustained damage. A person living next door to the home that was damaged witnessed the tornado. Several pine trees were also snapped off.
Cleveland County									
Kingsland	18	2125CST			0	0			Hail (0.75)
Prairie County									
Countywide	18	2130CST 2215CST			0	0			Flash Flood
									Heavy rains caused flash flooding to occur over parts of Prairie County. Several county roads were covered by high water for a short period of time.
Dallas County									
Southeast Portion	18 19	2130CST 0400CST			0	0			Flash Flood
Ouachita County									
Countywide	18 19	2130CST 0400CST			0	0			Flash Flood
Arkansas County									
Countywide	18 19	2215CST 0800CST			0	0			Flash Flood
Calhoun County									
Countywide	18 19	2215CST 0800CST			0	0			Flash Flood
Cleveland County									
Countywide	18 19	2215CST 0400CST			0	0			Flash Flood
Jefferson County									
Countywide	18 19	2215CST 0400CST			0	0			Flash Flood
Monroe County									
Countywide	18 19	2215CST 0400CST			0	0			Flash Flood
Lincoln County									
Countywide	18 19	2315CST 0400CST			0	0			Flash Flood
Bradley County									
Countywide	18 19	2330CST 0800CST			0	0			Flash Flood

Storm Data and Unusual Weather Phenomena

December 2002

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

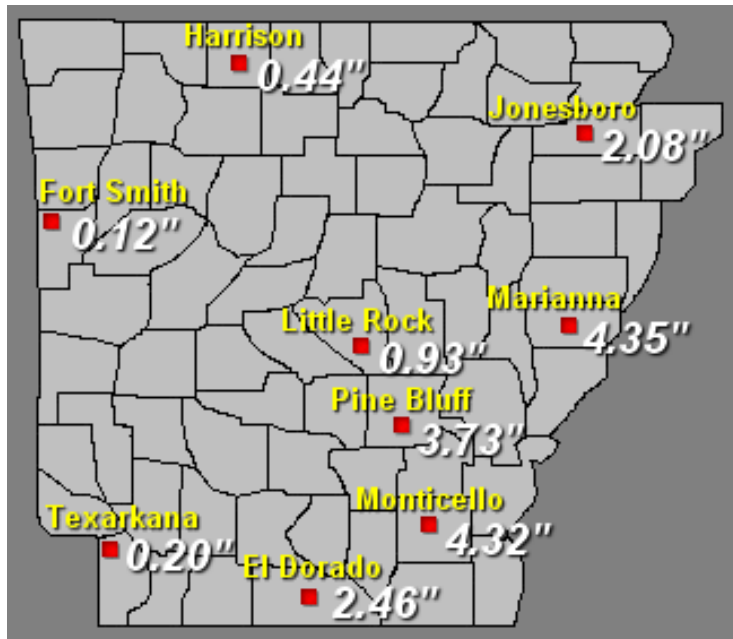
ARKANSAS, Central and North Central

Drew County

Countywide	19	0015CST 0800CST			0	0			Flash Flood
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Desha County

Countywide	19	0030CST 0800CST			0	0			Flash Flood
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Rainfall in the 24 hour period ending at 700 am CST on 12/19/2002 exceeded 4 inches in parts of southern and eastern Arkansas. Heavy rains fell across a large portion of southeast Arkansas starting on the evening of the 18th and continuing through the morning hours of the 19th. Rainfall amounts between 2 and 5 inches were common across the area, with some locations seeing totals of 5 to 7 inches. The rainfall resulted in widespread flash flooding over the region with numerous county roads covered by high water. There were also a number of reports of homes and businesses sustaining flood damage as well.

Storm Data and Unusual Weather Phenomena

December 2002

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

Bradley County

6.5 NNW Banks to 6.7 N Banks	18	2157CST 2202CST	3.1	125	0	0			Tornado (F1)
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A garage collapsed due to an F1 tornado about 7 miles north of Banks (Bradley County) on 12/18/2002.

An F1 tornado touched down 6.5 miles north-northwest of Banks and tracked to the northeast for 3.1 miles before lifting. The tornado caused a small garage to collapse. Several large trees were blown down. One of the trees damaged the roof of a mobile home and another tree collapsed the porch roof of a hunting lodge. There were also quite a few trees that were snapped off.

Lincoln County

5.8 NE Gould to 6.2 NE Gould	18	2220CST 2221CST	0.5	25	0	0			Tornado (F0)
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A weak tornado touched down briefly near the Arkansas River levee. A number of trees in the area had their tops twisted off.

Storm Data and Unusual Weather Phenomena

December 2002

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

Lincoln County

.5 NE Garrett Bridge to 1.3 NE Garrett Bridge	18	2253CST 2254CST	0.8	75	0	2			Tornado (F1)
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A mobile home was destroyed by an F1 tornado off of Highway 54 near Garrett Bridge (Lincoln County) on 12/18/2002. The occupants (2) were injured.

An F1 tornado touched down briefly just to the northeast of Garrett Bridge. The first noted damage was at a church on Highway 54 where several flag poles were bent over and some tree limbs were downed. More significant damage was noted about 1/2 mile to the northeast where a mobile home was flipped over and destroyed. Two people inside the mobile home were injured and hospitalized. The tornado lifted shortly thereafter with no other damage noted.

Desha County

Mitchellville	18	2305CST	0.2	20	0	0			Tornado (F0)
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A weak tornado (F0) touched down briefly along Highway 65. The only damage noted were several trees that were twisted several feet above the ground.

Desha County

Pendleton	18	2315CST			0	0			Thunderstorm Wind (G50)
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Thunderstorm winds knocked a few trailers off their foundations.

Arkansas County

Countywide	23	2020CST			0	0			Flash Flood
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24	0230CST								
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Desha County

Countywide	23	2130CST			0	0			Flash Flood
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24	0300CST								
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Heavy rains fell over parts of southeast Arkansas and produced flash flooding. Rainfall amounts of 1 to 3 inches were common, with the ground already saturated from precipitation earlier in the month. A number of roads throughout Arkansas and Desha Counties were covered by high water for several hours. Portions of some roadways were also washed out.

ARZ003>005

Boone - Marion - Baxter

23	2100CST				0	2			Winter Storm
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24	0400CST								
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Snow starting falling over parts of north-central Arkansas during the afternoon hours on the 23rd. The snow gradually overspread the rest of the area by the early evening hours. Snow accumulations from 3 to 6 inches were common in the counties along the Arkansas/Missouri border. Lesser amounts were reported farther south, with 1 to 3 inches of snow common. Some sleet and freezing rain mixed with the snow before the precipitation ended by early afternoon on the 24th. Roads were snow covered and hazardous with numerous traffic accidents reported. One accident occurred in Baxter County along Highway 101. A car flipped over with two people injured. Sporadic power outages were also reported due to the weight of snow and ice on tree limbs and power lines.

Storm Data and Unusual Weather Phenomena

December 2002

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, East

ARZ008>009-017>018- Randolph - Clay - Lawrence - Greene - Craighead - Poinsett - Mississippi 026>028

03	2000CST				1	0	10.0M	Ice Storm
04	0700CST							

A mix of freezing rain and sleet fell on much of northeast Arkansas. The icy conditions brought down many trees, power poles and power lines. One man was killed in Lawrence county when a power line fell on him. In Greene county, a church in Paragould was damaged by a fire that was caused when a tree limb fell on a nearby power line, causing a short in the church's electricity. The ice storm left thousands of residents without power. Some residents went more than a week without power. M48OU

Mississippi County

Osceola	18	1800CST			0	0	5K	Thunderstorm Wind
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A roof was blown off of a trailer home.

Randolph County

O Kean	18	1800CST			0	0	5K	Thunderstorm Wind
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A few power lines were blown down.

Clay County

Piggott	18	1825CST			0	0	0.50K	Urban/Sml Stream Fld
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Some minor street flooding occurred in Piggott.

Greene County

Paragould	18	1835CST			0	0	0.50K	Urban/Sml Stream Fld
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Some minor street flooding occurred in Paragould.

Phillips County

Helena	18	1910CST			0	0	0.50K	Urban/Sml Stream Fld
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Some minor street flooding occurred in Helena.

Poinsett County

Harrisburg	18	2000CST			0	0	10K	Flash Flood
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Two homes were flooded near Harrisburg.

Cross County

Wynne	18	2020CST			0	2	750K	Thunderstorm Wind (G80)
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Three mobile homes were overturned. The roof was blown off of a restaurant.

Crittenden County

Countywide	18	2100CST			0	0	10K	Flash Flood
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Flood water reached up to several houses. Several roads were flooded.

Crittenden County

West Memphis	18	2115CST			0	0	5K	Thunderstorm Wind
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Some power lines were blown down.

Lee County

Aubrey	18	2130CST	1	25	0	0	10K	Tornado (F0)
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A tornado briefly touched down in Aubrey which produced some property damage.

ARKANSAS, Northwest

ARZ001>002-010>011 Benton - Carroll - Washington - Madison

03	2030CST				0	0		Ice Storm
04	0600CST							

An upper level system moving out of the desert southwest interacted with cold air in place across northwest Arkansas to produce freezing rain from the evening hours of December 3rd into the morning hours of December 4th. While roads remained mainly wet and few accidents occurred until the afternoon of the 4th when snow fell, ice formed on power lines and trees. This ice resulted in 14,400 homes and businesses to be without power at one time or another. The outages were less numerous across the western parts of Washington and Benton counties but became more widespread to the east near and into Carroll and Madison counties. A few of the communities hit the hardest were Bethel Heights, Lowell, Elkins, Wesley, Hindsville and Eureka Springs. The inclement weather caused school closings in Eureka Springs, Huntsville and Green Forrest.

Storm Data and Unusual Weather Phenomena

December 2002

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, Northwest

ARZ001>002-010>011 Benton - Carroll - Washington - Madison

23	1200CST				0	0			Heavy Snow
24	1000CST								

Heavy snow began to fall across northwest Arkansas during the early afternoon hours of the 23rd in response to the approach of an upper level system moving out of the southern rockies into the southern plains. The snow fell at a rate of one to two inches an hour across Benton and Carroll counties and the northern part of Washington and Madison counties. The heavy snow caused roads to become slick and hazardous and several automobiles slid into ditches or into each other. The heavy snow also caused a few power outages including one that halted service to two hundred customers between Fayetteville and Elkins. The snow let up and stopped accumulating during the early evening hours with several location reporting 4 to 8 inches of snow. The snow started accumulating again during the early morning hours of the 24th before finally letting up for good later that morning. Another two to four inches accumulated during that time span. Some total snowfall reports for the 23rd and 24th included: 15 inches at Rockhouse, 12 inches at Berryville, 10 inches at Eureka Springs, 7 inches at Rogers, 7 inches at Bentonville, 6 inches at Huntsville, 6 inches at Springdale and 5 inches at Fayetteville.

Crawford County

Van Buren	30	1227CST			0	0			Hail (0.75)
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Crawford County

Rudy	30	1235CST			0	0			Hail (0.75)
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ARKANSAS, Southeast

Ashley County

5 N North Crossett	18	1655CST 1656CST	1	50	0	0	25K		Tornado (F0)
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A tornado briefly touched down 5 miles north of North Crossett, toppling several trees along State Road 133. In addition, a shed was destroyed and the roof was removed from a barn. Producing no injuries, the tornado traveled about one mile before lifting.

Chicot County

Dermott	24	0015CST 0200CST			0	0	10K		Flash Flood
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Heavy rainfall from showers and thunderstorms placed numerous streets under water in the city.

ARKANSAS, Southwest

Union County

4.5 SSW Strong to 8 SW Strong	18	1611CST 1618CST	4	50	0	0	0		Tornado (F1)
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A strong tornado developed under a supercell moving northeast across the county. As the tornado developed in Union Parish, Louisiana, eyewitness reports described the tornado as resembling a stove pipe with screaming winds sounding like a banshee. Where the tornado originally touched down, a bowl like appearance was carved into the woods when viewing the impact point horizontally. The tornado then continued northeast across a combination of farmland and wooded region destroying 2 mobile homes and severely damaging 6 wooden houses. As the tornado moved into Union County, Arkansas, the tornado moved across only heavily wooded area void of structures.

Union County

1.8 SW Huttig to .9 S Huttig	18	1710CST 1712CST	1.1	25	0	0			Tornado (F0)
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A weak supercell developed within a multicellular squall line which moved east northeast across the area. Damage path consisted of numerous snapped and fallen small trees. The tornado moved through a heavily wooded region with no structures.

Howard County

Nashville	18	1710CST			0	0			Hail (0.75)
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Columbia County

Emerson	18	2110CST			0	0			Hail (0.88)
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Columbia County

Emerson	18	2220CST			0	0			Flash Flood
	19	0115CST							

Highway 79 closed due to flash flooding. Several other roads in the region were also closed due to high waters.

Lafayette County

Bradley	18	2320CST			0	0			Flash Flood
	19	0115CST							

Several county roads under water.

Union County

El Dorado	19	0025CST			0	0			Hail (0.75)
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Union County

8 SW El Dorado	19	0430CST 0515CST			0	0			Flash Flood
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Flooding closed Parkers Chapel Road near the Parkers Chapel community.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>ARKANSAS, Southwest</u>									
Columbia County									
Walkerville	19	2020CST			0	0			Hail (1.00)
Lafayette County									
Lewisville	23	1711CST 2130CST			0	0			Flash Flood
Numerous county roads under water.									
Miller County									
Texarkana	30	1819CST			0	0			Funnel Cloud
Funnel never touched down.									
Howard County									
Dierks	30	1820CST			0	0			Thunderstorm Wind (G60)
Several large trees down.									
Miller County									
Fouke	30	1845CST			0	0	78K		Thunderstorm Wind (G52)
Severe damage to two home roofs.									
<u>ATLANTIC OCEAN</u>									
De Bay Waters S Of E Pt Nj To Slaughter Beach De									
5 NW North Cape May	20	1154EST			0	0	0		Marine Tstm Wind
A line of showers and thunderstorms produced a wind gust to 63 knots (72 mph) at the Brandywine Shoal Lighthouse.									
De Bay Waters S Of E Pt Nj To Slaughter Beach De									
5 SW North Cape May	20	1225EST			0	0	0		Marine Tstm Wind
A line of showers and thunderstorms produced a wind gust to 55 knots (63 mph) as the Cape May/Lewes Ferry was crossing Lower Delaware Bay. A peak wind gust to 48 knots (55 mph) and pea size hail occurred at the Pilot Tower in Lewes, Delaware.									
Little Egg Inlet To Great Egg Inlet Nj Out 20Nm									
Atlantic City	20	1230EST			0	0	0		Marine Tstm Wind
A line of showers and thunderstorms produced a wind gust to 35 knots (40 mph) at the Atlantic City State Marina.									
Sandy Hook To Manasquan Inlet Nj Out 20Nm									
Sandy Hook Bay	20	1300EST			0	0	0		Marine Tstm Wind
A line of showers and thunderstorms produced a wind gust to 36 knots (41 mph) at the Sandy Hook Coast Guard station.									
Manasquan Inlet To Little Egg Inlet Nj Out 20Nm									
Pt. Pleasant to Barnegat Inlet	20	1300EST			0	0	0		Marine Tstm Wind
A line of showers and thunderstorms produced strong wind gusts along coastal Ocean County and the adjacent coastal waters in Barnegat Bay and the Atlantic Ocean. Peak wind gusts to 47 knots (54 mph) and 43 knots (49 mph) were measured respectively at Point Pleasant and the Barnegat Inlet.									
Cp Henlopen To Fenwick Is De Out 20Nm									
19 E Fenwick Island	20	1300EST			0	0			Marine Tstm Wind
A line of showers and thunderstorms produced a wind gust to 41 knots (47 mph) at the Delaware Bay Buoy.									
Provincetown Ma To Chatham Ma To Nantucket Ma Out 20Nm									
Chatham Light	20	1450EST Buoy 44017			0	0			Marine Tstm Wind
Buzzards Bay									
Bzzrds Bay Ent Tower	20	1500EST			0	0			Marine Tstm Wind

Storm Data and Unusual Weather Phenomena

December 2002

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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ATLANTIC OCEAN

Narragansett Bay

Greenwich Bay 20 1551EST 0 0 Marine Tstm Wind

Boston Harbor

Boston Light 20 1616EST 0 0 Marine Tstm Wind

Block Island Sound

Charlestown Breachway 20 1653EST
2153EST 0 0 Marine Tstm Wind

Nantucket To

Martha'S Vineyard Ma

To Block Island Ri To

Montauk Ny And Se

20Nm

Wasque Pt Mrths Vnyrd 20 1653EST 0 0 Marine Tstm Wind

Rhode Island Sound

Newport 20 1653EST 0 0 Marine Tstm Wind

Vineyard Sound

Woods Hole 20 1653EST 0 0 Marine Tstm Wind

Merrimack River Ma

And Out 20Nm To

Plymouth Ma And Out

40Nm

Stellwagen Bank 20 1750EST
Buoy 44013 0 0 Marine Tstm Wind

Merrimack River Ma

To Watch Hill Ri 25 To

40Nm

Surfside Nantucket 20 1900EST
Buoy 44008 0 0 Marine Tstm Wind

CALIFORNIA, Extreme Southeast

NONE REPORTED.

CALIFORNIA, North Central

NONE REPORTED.

CALIFORNIA, Northeast

Sierra County

Sattley 13 0300PST
2100PST 0 0 Heavy Rain

Report of 3.37 inches of rain in 18 hours.

Lassen County

Janesville 13 0850PST
14 0850PST 0 0 Heavy Rain

Report of 1.73 inches of rain in 24 hours.

Plumas County

Sloat 13 1400PST
14 0930PST 0 0 Heavy Rain

Report of 2.5 inches of rain in 24 hours.

CAZ071-071-071-071-

071-071-071-071>072-

072-072-072>073-073-

073-073-073-073

Lassen/Eastern Plumas/Eastern Sierra - Greater Lake Tahoe Area - Mono

14 0942PST
1647PST 0 0 4.0M High Wind (G100)

A strong cold front moving through northern California on December 14 brought near-record high winds to northeast California and western Nevada. Wind gust reports in the 60-80 mph range were common throughout the day across the entire region, with a few gusts near 100 mph. Remote wind sensors along the Sierra Crest measured wind gusts in excess of 130 mph. Strongest winds occurred just before the cold front moved into the area at about 5:30 p.m. Literally hundreds of trees and thousands of tree limbs were blown down across the region. In addition, there was widespread damage to roofs, fences, commercial billboards and signs, and power lines. Numerous power outages occurred, some lasting for several days after the event in rural areas. Across much of

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, Northeast

western Nevada, blowing dust and debris created near zero visibilities at times, resulting in temporary closures of highways in Mineral, Lyon, Pershing and Churchill counties. A few relatively minor traffic accidents resulted from the low visibilities. From these, a few minor injuries were reported but fortunately no serious injuries or deaths were reported. The regional electric utility lost 140 power poles and 18 transmission line due to the strong winds, with damages and repair costs estimated at over \$3M. Total regional wind damage costs were estimated at nearly \$10M.

CAZ071-071>073-073-073 Lassen/Eastern Plumas/Eastern Sierra - Greater Lake Tahoe Area - Mono

14	1600PST				0	0			
15	1800PST								Heavy Snow

Following high winds that plagued the region on December 14, a strong cold front brought heavy snow to northeast California and the Sierra Nevada overnight and into Sunday, December 15. About 6 inches of new snow fell in the Lake Tahoe basin and valleys of northeast California. At higher elevations, over a foot of snow fell at the 7000 foot elevations, while over 2 feet was reported in most locations at the 8000 foot level.

CAZ071>073 Lassen/Eastern Plumas/Eastern Sierra - Greater Lake Tahoe Area - Mono

15	2100PST				0	0			
16	1800PST								Heavy Snow

Another strong low pressure system brought heavy snow to northeast California and the eastern Sierra Nevada from the evening of December 15 to the evening of December 16. Snowfall rates of over 1 inch per hour were reported. By Monday evening, December 16, over 4 feet of new snow fell above the 8000 foot elevation as reported by most ski areas in the region. At lower elevations, over 3 feet fell above 7000 feet, with one to two feet of new snow falling above 6000 feet. In the valleys of northeast California and the eastern Sierra, from 6 to 8 inches of new snow fell.

CAZ071 Lassen/Eastern Plumas/Eastern Sierra

16	0042PST				0	0			High Wind (G70)
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CAZ071 Lassen/Eastern Plumas/Eastern Sierra

16	0200PST				0	0			High Wind (G52)
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CAZ072 Greater Lake Tahoe Area

16	0400PST				0	0			High Wind (G120)
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Recorded by automated weather station along Sierra crest near Lake Tahoe.

CAZ070 Surprise Valley

27	1415PST				0	0			High Wind (G71)
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Recorded at the Eagleville airport.

CAZ072>073 Greater Lake Tahoe Area - Mono

28	1700PST				0	0			
29	0700PST								Heavy Snow

A strong, fast moving cold front brought heavy snow to the eastern Sierra from the evening of December 28 to the morning of December 29. Several locations in the Lake Tahoe reported snowfall rates over 3 inches per hour for several hours during the evening of December 28. By the morning of December 29, over 2 feet of new snow had fallen in only about 12 hours above 8000 feet, with over a foot at many locations above 7000 feet.

CAZ071>072 Lassen/Eastern Plumas/Eastern Sierra - Greater Lake Tahoe Area

30	1800PST				0	0			
31	1000PST								Heavy Snow

Another strong Pacific low pressure system brought heavy snow to the mountains of northeast California and the Lake Tahoe area. Over a foot of new snow fell above 5000 feet in Lassen County, with up to 2 feet above 6000 feet. Farther south, most ski areas reported a foot of new snow in 12 hours at the 7000 foot elevation, with up to 2 feet of new snow in 12 hours above 8000 feet. Interstate 80 was closed for 5 hours overnight between the Nevada State Line and Applegate, CA, due to the heavy snow.

CAZ072 Greater Lake Tahoe Area

31	0520PST				0	0			High Wind (G57)
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Recorded by automated sensor near Stateline, NV.

CALIFORNIA, Northwest

CAZ002-076 Mendocino Coast - Mendocino Interior

14	0100PST				0	0			
15	0030PST								Flood

The Navarro River flooded the western end of state highway 128.

CAZ001>003 Redwood Coast - Mendocino Coast - North Coast Interior

14	0230PST				0	0			High Wind (G65) ^M
	1700PST								

Humboldt County

Eureka	14 1100PST				0	0			Urban/Sml Stream Fld
	15 0200PST								

Small stream flooding occurred in a wide swath across central Humboldt County.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
CALIFORNIA, Northwest									
A powerful Pacific storm swept across Northwest California with strong winds and heavy rain.									
CAZ001>003			Redwood Coast - Mendocino Coast - North Coast Interior						
	15	1000PST			0	0			High Wind (G84) ^M
	16	0300PST							
CAZ001>002-076			Redwood Coast - Mendocino Coast - Mendocino Interior						
	16	0030PST			0	0			Flood
	17	0030PST							
	Eel River at Fernbridge crested at 22.2 feet - flood stage 20 feet.								
CAZ001>002			Redwood Coast - Mendocino Coast						
	16	0700PST			0	0			Coastal Flooding
		1100PST							
	High astronomic tides combined with large swell to cause minor coastal flooding.								
CAZ001-003			Redwood Coast - North Coast Interior						
	19	0200PST			1	0			High Wind (G69) ^M
		0930PST							
	M38OT								
CAZ003>004-076			North Coast Interior - Upper Trinity River - Mendocino Interior						
	19	0800PST			0	0			Heavy Snow
	20	1000PST							
	Snow depth - 8 inches								
CAZ076			Mendocino Interior						
	20	2130PST			0	0			Flood
	21	0730PST							
	Russian River at Hopland flooded state highway 128.								
Humboldt County									
Eureka	27	0600PST			0	0			Heavy Rain
		1600PST							
	Eureka set an all time daily rainfall record of 6.79 inches. Nearby Honeydew reported 11.24 inches.								
Humboldt County									
Eureka	27	1230PST			0	0			Urban/Sml Stream Fld
	28	2000PST							
	Widespread urban and small stream flooding in Eureka and around Humboldt Bay.								
CAZ001-001>002-076			Redwood Coast - Mendocino Coast - Mendocino Interior						
	28	0130PST			0	0			Flood
	29	0400PST							
	Mad River at Arcata crested at 22.4 feet - flood stage 22 feet.								
CAZ003>004-076			North Coast Interior - Upper Trinity River - Mendocino Interior						
	28	1400PST			0	0			Heavy Snow
	29	1000PST							
	Eight inches of snow fell.								
Humboldt County									
18 N Arcata	30	1925PST			0	0			Thunderstorm Wind (G61) ^M
	Thunderstorm embedded in a strong cold front.								
CAZ004			Upper Trinity River						
	31	0000PST			0	0			Heavy Snow
		0700PST							
	12 inches of snow was generally reported with a peak amount of 30 inches.								
CAZ001>002-076			Redwood Coast - Mendocino Coast - Mendocino Interior						
	31	0130PST			0	0			Flood
		2030PST							
	Eel River at Fernbridge crested at 20.3 feet - Flood stage 20 feet.								
CAZ001>002			Redwood Coast - Mendocino Coast						
	31	0700PST			0	0			Coastal Flooding
		1100PST							
	Minor coastal flooding around Humboldt Bay and near Crescent City.								
Del Norte County									
5 S Crescent City	31	1700PST			0	0			Funnel Cloud
		1800PST							
	Spotters reported numerous cold air funnels over the Pacific Ocean near Crescent City.								

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, South Central

CAZ089>092

W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - Se S.J. Valley

01	0000PST				1	0	100K		Fog
09	0900PST								

Despite indications of much above normal rainfall for the month of November 2002, the rainfall only occurred in a single 3-day rain event from the 7th through the 9th of November. Strong, blocking high pressure then kept any further significant late Fall accumulation of rain/snow for Interior Central California into mid-December. With the large rainfall amounts on the San Joaquin Valley floor by November 9th, haze and fog prevailed subsequently for a 30+-day period while the adjacent foothills, mountains, and Kern Desert dried again in rainless conditions. Widespread dense fog from mid to late-November ceased by the morning of the 1st of December on the Valley floor. But patchy dense fog and haze prevailed from the 1st of the month through the 9th before the major precipitation in December began on the 13th. The morning of the 5th had some very dense, but again patchy fog. A 9-vehicle pile-up occurred near Los Banos in Merced County (CAZ89) on Highway 152 around 8:35 AM PST that killed one and injured 3 others. M40VE

CAZ089>092

W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - Se S.J. Valley

10	0515PST				0	0	200K		Fog
12	2200PST								

Dense fog, more widespread, again returned to the South San Joaquin Valley early on the morning of the 10th, extended to the Central Valley on the mornings of the 11th and 12th, and occurred briefly on the evening of the 12th. Driving visibilities on the 11th and 12th were particularly low with less than 100 feet reported by law enforcement in several locations. There were at least 7 vehicle collisions around the Visalia area of Tulare County on the morning of the 11th. The unusual disruption of the fog after its formation during the evening hours on the 12th was due to an oncoming frontal system. There were five accidents indirectly caused by the fog on the morning of the 10th in Tulare and Kings Counties leaving 8 injured.

Merced County

Merced Arpt

13	1800PST				0	0			Heavy Rain
17	0400PST								

Merced County

**4 N Merced Arpt to
5.2 NNE Merced Arpt**

16	1240PST	1.2	45		0	0	400K		Tornado (F1)
	1245PST								

From low-topped convection, a short duration tornado touched down northwest of Merced California on the 16th and had a discernible damage track of 1.25 miles. At its most intense, it was an F1 Tornado for 3/8-mile when it lifted a roof from a house and carport and caused damage to various light structures along its path. There were no injuries or fatalities despite residents at home when the roof lifted from a house along Highway 59 near mid-day. Additionally, locally heavy rain occurred over a 3-day period accumulating a 1.87" precipitation total causing local urban flooding problems due to clogged storm drains in the city of Merced (16th Street west of 'V' and 18th and Canal Streets).

CAZ089>091

W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley

14	1404PST				0	0	15K		Strong Wind
	2339PST								

Winds at the Los Banos RAWS Meso-net gusted to 57 MPH from the WSW at 1704 PST on the 14th with numerous locations around the Central and South San Joaquin Valley reporting downed trees and powerlines. Sustained winds were noted at Mendota in the 25-29 MPH range around the same time. And while the east side of the San Joaquin Valley was recording steady wind of 30 MPH with gusts to 36 MPH, the west side near Kettleman Hills reached gusts of 55 MPH. Wind gusts exceeded 40 MPH from the middle of the afternoon of the 14th until just before midnight. Navy Lemoore had sustained winds of 33 MPH at 1958 PST.

CAZ096>097

S Sierra Mtns - Tulare Cty Mtns

14	1730PST				0	0			Winter Storm
15	0335PST								

The first significant storm to again hit the higher elevations of Interior Central California since November 9th spread relatively light snow amounts around 8 inches but were accompanied by high wind. Gusts to 64 MPH were observed at Bear Peak in the Tulare County Mountains late on the 14th. Snow initially began to fall on the afternoon of the 13th but strong wind did not occur until the 14th with the event.

CAZ089>090

W Central S.J. Valley - E Central S.J. Valley

16	0150PST				0	0	10K		Strong Wind
	1000PST								

CAZ091>092

Sw S.J. Valley - Se S.J. Valley

16	1000PST				0	0	800K		High Wind (G91)
	1200PST								

Strong southeast wind was observed in the San Joaquin Valley in the early morning hours of the 16th. Wind gusts to 41 MPH were observed around Los Banos around 0300 PST; 38 MPH at Merced at 0520 PST; and, 36 MPH at Kettleman Hills at 0509 PST. Some minor power line and fallen trees occurred on the Central Valley floor. In the South Valley in Kern County blowing dust was reported on Interstate-5 at the base of the Grapevine with 3 overturned trucks due to the strong wind at that location, and 2 others along Highway 166 just east of Taft to Mettler at I-5. The city of Taft reported snapped powerlines leaving 6,000 PG&E customers (almost all the town) without power. The strongest wind was short-lived at only about an hour according to law enforcement. A barn estimated at \$500K was destroyed approximately 5 miles west of I-5 due to the strong wind.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	
CALIFORNIA, South Central									
CAZ096>097		S Sierra Mtns - Tulare Cty Mtns							
		16			0	0			Winter Storm
		17							
		Significant snows occurred through the high elevations of the Southern Sierra Nevada from Yosemite south through the Tulare County Mountains: Chickroot Meadow 42 inches of snow, Huntington Lake 32", Volcanic Knob 39", Sierra Summit 18", Quaking Aspen 31", Chagoopa Plateau 26", and Casa Vieja Meadows 26". A water equivalent for precipitation at Mammoth Pass was 4.12" over the weekend prior to the 17th.							
Tulare County									
Ducor		17			0	0			Hail (0.75)
		1345PST							
		1346PST							
CAZ089-092-095		W Central S.J. Valley - Se S.J. Valley - Kern Cty Mtns							
		19			0	0	11K		Strong Wind
		20							
		Wind reports showed strong southeast wind ahead of frontal passage in Interior Central California during the afternoon and early evening of the 19th. Observed wind included: gusts to 37 MPH at Los Banos at 1104 PST, sustained 45 MPH with gusts to 53 at Hilmar in the Central San Joaquin Valley, 45 MPH near Lamont on the South Valley floor, and 50 MPH gust in Frazier Park and 50 MPH sustained wind in the Kern Mountains.							
CAZ095>097		Kern Cty Mtns - S Sierra Mtns - Tulare Cty Mtns							
		19			0	0			Winter Storm
		21							
		While snow fell to an elevation of 2500 feet Mean Sea Level, larger amounts of snow fell at high elevations of the S.Sierra Nevada and Kern County Mountains. Observed snowfall included: 13 inches at Volcanic Knob and Charlotte Lake, 12" at Crane Flat and Hume Lake, 24" at Quaking Aspen, 20" at Lodgepole, 16" at Ponderosa Lodge, 13" at Chagoopa Plateau, and 7" at Mountain Valley Airport on the Tehachapi Valley floor.							
CAZ089>090		W Central S.J. Valley - E Central S.J. Valley							
		19			0	0			Flood
		20							
		Heavy rainfall measured 1.73" in 2 hours at Chowchilla in the East-Central San Joaquin Valley and 1.57" in 2 hours at Mendota in the West-Central Valley. Intersections were reported flooded in the smaller, rural towns of these zones. On the San Joaquin Valley floor at Porterville, the city received 1.05" in 24-hours on the 19th which was common for Valley locations for this event.							
CAZ089>092		W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - Se S.J. Valley							
		22			0	0			Frost/Freeze
		25							
		Temperatures dropped to 32 degrees F. or lower over a 3-morning period just before Christmas. While only the very coldest locations reached the critical 27F, the colder air was easily mitigated by citrus concerns. The colder readings in the South San Joaquin Valley occurred on the morning of the 24th when Delano dropped to 27F, Wasco to 30F, and Porterville to 32F. Generally minimum temperature readings were in the 29-34F range for the period.							
CAZ089>092		W Central S.J. Valley - E Central S.J. Valley - Sw S.J. Valley - Se S.J. Valley							
		25			0	0			Dense Fog
		0300PST							
		1200PST							
		Visibilities around the Central and Southern San Joaquin Valley on the morning of the 25th dropped to less than 500 feet in widespread locations.							
CAZ089>090		W Central S.J. Valley - E Central S.J. Valley							
		28			0	0	4K		Strong Wind
		1352PST							
		1900PST							
		Strong winds from the southeast in a pre-frontal environment caused minor damage from downed power lines and fallen trees in the Central San Joaquin Valley on the 28th. The wind subsided by 7:00 PM PST with frontal passage. Reported winds included: gusts to 35 MPH at San Luis RAWS, 34 knots at Coalinga and Merced, 29 knots at Fresno, and 28 knots at Madera.							
CAZ096>097		S Sierra Mtns - Tulare Cty Mtns							
		28			0	0			Winter Storm
		29							
		Observed snow totals with this storm included: 24 inches at Tuolumne Meadows, Horse Meadow 33", Yosemite Valley 9", Big Meadows 13", and Lodgepole 11".							
CAZ096		S Sierra Mtns							
		30			0	0			Winter Storm
		31							
		New Snow totals in the Southern Sierra Nevada from Yosemite south through Fresno County included: Bishop Pass and Paradise Meadows with 24", Agnew Pass 18", Gin Flat 15", Kaiser Point 13", Tenaya Lake 12", and Shaver Lake 9".							

Storm Data and Unusual Weather Phenomena

December 2002

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									
CAZ095-098			Kern Cty Mtns - Indian Wells Vly						
	31	1040PST 1800PST			1	0	205K		High Wind (G73)
		M76UT							
CAZ099			Se Kern Cty Desert						
	31	1040PST 1800PST			0	0	1K		Strong Wind
			Wind likely associated with a mountain wave reached high wind criteria in the Kern County Mountains and Deserts during the afternoon of the 31st. In the vicinity of Inyokern winds spiked at 73 knots at a nearby low-elevation mountain meso-net site and a falling tree resulted in a fatality from the wind in Inyokern.						
CALIFORNIA, Southeast									
CAZ026			Owens Valley						
	16	0030PST 1930PST			0	0			Heavy Snow
			Thirteen inches of snow was recorded in the town of Aspendell, CA.						
CALIFORNIA, Southwest									
CAZ049			Riverside County Valley/The Inland Empire						
	01	0436PST 0800PST			0	0			Fog
			Visibility was less than 10 feet between Perris and Sun City.						
Orange County									
Huntington Beach to San Clemente	15 16	1500PST 1800PST			0	5	20K		Rip Currents
San Diego County									
San Onofre to Imperial Beach	15 16	1500PST 1800PST			0	12	80K		Rip Currents
			Surf breaking between 10 and 15 feet caused strong rip currents and about three feet of beach erosion along Orange and San Diego County Beaches. Lifeguards had to rescue several surfers from the rip currents. Sand berms constructed to block wave runup, were overtopped and eroded during the high tides.						
CAZ043-055-060			San Diego County Coasts - San Bernardino County Mountains - Apple And Yucca Valleys						
	16	0710PST 2130PST			0	2	750K		High Wind (G68) ^M
CAZ060			Apple And Yucca Valleys						
	16	1240PST			0	0	25K		Dust Storm
			Windows of car were blown out at Cajon Pass, and power lines and trees were blown down at Lake Arrowhead and Big Bear City. A tractor-trailer was blown over west of Phelan and a motorhome was blown over in Hesperia. Visibility was reduced to zero in blowing dust in Phelan. Power poles and trees were blown down between Oceanside and San Diego.						
San Bernardino County									
Chino to Redlands	16	1330PST 1900PST			0	0	500K		Urban/Sml Stream Fld
Orange County									
Fountain Vly to San Clemente	16	1506PST 1708PST			0	0	150K		Urban/Sml Stream Fld
Riverside County									
Murrieta to Sun City	16	1530PST 1900PST			0	0	150K		Urban/Sml Stream Fld
San Diego County									
Fallbrook to Lakeside	16	1730PST 2230PST			3	2	60K		Urban/Sml Stream Fld
			F40VE, F21VE, F24VE Almost two inches of rain fell in a two hour period, causing low lying roads and most creeks to flood. In Carlsbad, 5 women tried to cross a flooded bridge in a car, which stalled midway then floated downstream and overturned. Two women escaped, the other three drowned. Mudslides closed roads in Fallbrook and Lakeside. The Pacific Coast Highway was flooded in Huntington Beach for three hours. Many roads along the south slopes and foothills of the San Bernardino Mountains were closed for most of the afternoon and evening due to flooding and mudslides. In Riverside County, the worst flooding of roads occurred between Murrieta and Sun City.						
San Diego County									
Oceanside to Ocean Beach	19	0600PST 1100PST			0	0	500K		Storm Surge

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, Southwest

CAZ055>058 San Bernardino County Mountains - Riverside County Mountains - Santa Ana Mountains And Foothills - San Diego County Mountains

	19	2306PST			0	0			Heavy Snow
	20	1200PST							

San Bernardino County

	20	0547PST 1020PST			0	0			Urban/Sml Stream Fld
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Riverside County

	20	0600PST 1030PST			0	0			Urban/Sml Stream Fld
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San Diego County

	20	0707PST 1000PST			0	0			Urban/Sml Stream Fld
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A winter storm brought heavy snow to the mountains with 10 to 14 inches falling at elevations above 6000 feet and 2 to 8 inches falling at elevations between 4000 and 6000 feet. Fog and snow reduced visibility to less than 100 feet in the Cajon Pass. Light snow fell in the Apple Valley. Minor flooding occurred over the parts of the Inland Empire and the San Diego Coast and Valleys. Heavy surf combined with high astronomical tides caused 1 to 4 feet of coastal flooding and beach erosion between Oceanside and Del Mar, and major damage to the Ocean Beach Pier.

San Diego County

	20	0845PST			0	0			Funnel Cloud
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San Diego County

	23	1630PST			0	0			Funnel Cloud
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CALIFORNIA, Upper

CAZ081-083-085 Central Siskiyou County - North Central & Southeast Siskiyou County - Modoc County

	12	0526PST 1408PST			0	0			High Wind (G40)
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A High Wind Warning was issued for the above zones at the above times, but winds were not as strong as expected and the warning did not verify.

CAZ080-082

Western Siskiyou County - South Central Siskiyou County

	12	0526PST 1408PST			0	0			Winter Storm
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A Winter Storm Warning was issued for the above zones above 5500 feet effective at the above times. However, this warning did not verify.

CAZ084>085

Northeast Siskiyou And Northwest Modoc Counties - Modoc County

	14	0115PST 1500PST			0	0			High Wind (G58)
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Spotter SY57 2 miles south of MacDoel reported south to southeast winds 40 mph gusting to 52 mph.

A High Wind Warning was issued for California zones CAZ084/085 at 2125 PST on 12/13 and expired at 1900 on 12/14. The report above observations verified the warning for each zone.

CAZ080-082

Western Siskiyou County - South Central Siskiyou County

	14	0320PST			0	0			Winter Storm
	15	0305PST							

A Winter Storm Warning was issued for zones CAZ080/082 effective at the above times. No verifying reports were received. However, Sand Flat at 6750 feet recorded 10 inches between 1500 PST and 2200 PST, so it is likely that snow was sufficient to verify a warning in parts of the warning area.

CAZ081-081-081

Central Siskiyou County

	14	0945PST 1045PST			0	0			High Wind (G69) ^M
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Weed RAWs recorded a sustained wind of 44 mph.

A High Wind Warning was issued for the above zone at 2200 PST on 12/13/02 and expired around 1900 PST on 12/14/02. The above spotter report and observations at Weed verified the warning; the highest sustained wind and peak gust are recorded there.

CAZ081-081

Central Siskiyou County

	15	1745PST			0	0			High Wind (G64) ^M
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Weed RAWs reported a peak gust of 64 mph.

A High Wind Warning was issued for the above zone at 2054 PST on 12/15/02 and expired at 0433 PST on 12/16/02. The above observations at Weed verified the warning; the highest sustained wind and peak gust are recorded there.

CAZ081

Central Siskiyou County

	19	0825PST			0	0			High Wind (G60) ^M
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Spotter SY12 8N Weed reported wind gusts into the 60s.

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, Upper

A Wind Advisory was in effect for this area, however, winds met High Wind Warning criteria at least in the area of this spotter.

CAZ080>081-081>082-082-082-082-082-082 **Western Siskiyou County - Central Siskiyou County - South Central Siskiyou County**

19	1316PST								
21	1400PST				0	0			Winter Storm

Spotter in Etna recorded 12-14 inches of new snow since 0600 PST.

A Winter Storm Warning was issued for zones CAZ080/082 above 3000 feet at 1500 PST on 12/18. The altitude of the warning was raised to 3500 feet at 0445 PST on 12/20. The warning was not officially cancelled, but expired at 1506 PST on 12/20. From the above reports, it is apparent that the warning should have included zone CAZ081 and should have been extended into 12/21.

CAZ080-082 **Western Siskiyou County - South Central Siskiyou County**

25	0510PST								
26	0500PST				0	0			Winter Storm

A Winter Storm Warning was issued for CAZ080/082 above 2500 feet effective at the above times. However, this warning did not verify.

CAZ081 **Central Siskiyou County**

26	1503PST								
27	1002PST				0	0			High Wind (G40) ^M

A High Wind Warning was issued for zone CAZ081 effective at the above times, but no verifying observations were saved. It is not known for certain if this warning verified or not.

CAZ080-082>083 **Western Siskiyou County - South Central Siskiyou County - North Central & Southeast Siskiyou County**

27	0615PST								
29	0345PST				0	0			Winter Storm

A Winter Storm Warning was issued for California zones CAZ080/082/083 at 0615 PST on 12/27. CAZ083 was downgraded to a Snow Advisory at 1525 PST on 12/27. The warning remained in effect for CAZ080/082 until 0345 PST on 12/29. Initially, the warning was for terrain above 5500 feet. It was lowered to 2500 feet at 2100 PST on 12/27, raised to 3000 feet at 0415 PST on 12/28, and raised to 3500 feet at 1550 PST on 12/28. This warning did not verify.

Siskiyou County
Countywide

27	2330PST								
28	1549PST				0	0			Urban/Sml Stream Fld

Numerous spotter reports of rainfall totals in the 2 to 4 inch range were received. It would appear that this warning verified.

CAZ082 **South Central Siskiyou County**

29	0000PST								
					0	0			Winter Storm

Mt. Shasta Ski Bowl reported a 24 hour snow total of 19 inches.

A Winter Storm Warning was issued for California zones CAZ080/082/083 at 0615 PST on 12/27. CAZ083 was downgraded to a Snow Advisory at 1525 PST on 12/27. The warning remained in effect for CAZ080/082 until 0345 PST on 12/29. Initially, the warning was for terrain above 5500 feet. It was lowered to 2500 feet at 2100 PST on 12/27, raised to 3000 feet at 0415 PST on 12/28, and raised to 3500 feet at 1550 PST on 12/28. The observation above was the only verifying observation.

CAZ081 **Central Siskiyou County**

30	0700PST								
					0	0			High Wind (G59)

The Weed RAWS recorded a gust to 59 mph.

A High Wind Warning was issued for zone CAZ081 at 1459 PST on 12/29/02 and expired at 0500 PST on 12/31/02. The above observation verified the warning.

CAZ081>082-082-082-082 **Central Siskiyou County - South Central Siskiyou County**

30	1700PST								
31	1700PST				0	0			Winter Storm

Spotter SY05 2S Weed reported 16 inches of snow between 0100 PST on 12/30 and 0700 PST on 12/31.

A Winter Storm Warning was issued for California zones CAZ080/081/082/083 above 3500 feet at 1459 PST on 12/29 and expired at 1040 PST 12/31. The warning level was lowered to 2500 feet in CAZ082 at 0537 PST on 12/31.

CALIFORNIA, West South Central

CAZ039>040 **Santa Barbara County South Coast - Ventura County Coast**

17	0945PST								
	1000PST				0	0			Coastal Flooding

The combination of large westerly swell and high astronomical tides produced coastal flooding along the coasts of Ventura and southern Santa Barbara counties. In Santa Barbara, a parking lot at Rincon Beach was flooded. In Ventura county, several boulders from the surfline littered driving areas along Oxnard Beach.

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, West South Central

CAZ034>035-051 San Luis Obispo County Central Coast - Santa Barbara County Central Coast - San Luis Obispo County Mountains

	19	1800PST 2059PST			0	0			High Wind (G55) ^M
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Santa Barbara County

	19	1941PST			0	0			Thunderstorm Wind (G52) ^M
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CAZ053>054

Ventura County Mountains - Los Angeles County Mountains Excluding The Santa Monica Range

	20	0600PST			0	0			Winter Storm
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A powerful early season storm brought high wind, heavy snow and severe thunderstorms to Southern California. Across San Luis Obispo and Santa Barbara counties, southeast winds gusting to 60 mph knocked down numerous power lines and small trees. In Santa Barbara county, thunderstorm winds to 58 MPH were recorded at Vandenberg Air Force Base. In the mountains of Ventura and Los Angeles counties, the combination of gusty winds and snowfall accumulations between 8 and 14 inches produced hazardous winter storm conditions.

CALIFORNIA, Western

Marin County

	13	0900PST 1200PST			0	0			Urban/Sml Stream Fld
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Alameda County

	13	1000PST 1300PST			0	0			Urban/Sml Stream Fld
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San Francisco County

	13	1000PST 1400PST			0	0			Urban/Sml Stream Fld
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Napa County

	13	2120PST 2330PST			0	0			Flash Flood
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Contra Costa County

	14	0900PST 1200PST			0	0			Urban/Sml Stream Fld
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Marin County

	14	1815PST 1915PST			0	0			Flash Flood
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CAZ006-006>007-075 San Francisco County - Alameda / Contra Costa Counties - San Mateo Co.

	15	1055PST			0	0			High Wind (G80) ^M
	16	0200PST							

Marin County

	15	1400PST 1700PST			0	0			Urban/Sml Stream Fld
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Monterey County

	15	2000PST			0	0			Heavy Rain
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Napa County

	15	2000PST			0	0			Heavy Rain
	16	0800PST							

San Francisco County

	15	2000PST			0	0			Heavy Rain
	16	0900PST							

San Mateo County

	15	2000PST			0	0			Heavy Rain
	16	0800PST							

Santa Clara County

	15	2000PST			0	0			Heavy Rain
	16	0800PST							

Santa Clara County

	15	2000PST			0	0			Heavy Rain
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Sonoma County

	15	2000PST			0	0			Heavy Rain
	16	0800PST							

Storm Data and Unusual Weather Phenomena

December 2002

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

CAZ005-005

Sonoma / Marin Counties

16	0200PST 1600PST				0	0			Flood
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Napa County

Southeast Portion

16	0333PST 0500PST				0	0			Flash Flood
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December turned out to be one of the wettest on record at many locations throughout theCWA. There were three primary episodes of precipitation in December, the first a two-day storm on the 9th and 10th. With less than an inch and a half accumulation at any one location over the period, flooding problems were not an issue. However, the rainfall totals helped to further saturate the soil. The next and by far most serious storm episode begin on the 13th of the month and lasted on and off through the 21st. A very strong and moist jet stream developed across the Pacific Ocean and brought a series of storms into California. Wave after wave of locally heavy rain pounded the north bay counties for days. Flooding became a serious issue, not just for urban and small stream flooding, but for mainstem flooding as well. Flood warnings were issued for the Russian and Napa rivers and the forecast points along these rivers reached flood stage on the 16th and 17th of the month. With a flood stage of 19 feet, the Healdsburg gauge on the Russian River crested at 19.56 feet. With a flood stage of 32 feet, the Guerneville gauge on the Russian River crested at 33.57 feet. With a flood stage of 13 feet, the St. Helena gauge on the Napa River crested at 15.47 feet. With a flood stage of 25 feet, the Napa gauge on the Napa River crested at 26.44 feet. Most of the mainstem flooding was minor in nature but there were areas of moderate flooding, mostly agricultural land. The last storm episode occurred from the 28th to the 31st. These storms appeared to have the development to create serious flooding problems and because of that flood warnings were issued for the mainstems of the Russian and Napa rivers. The jet stream that set up actually drove these storms further north than expected and the possible flooding over the north bay counties never materialized as serious as believed. A good 2 to 4 inches of rain did fall over the area during that time with the most significant amounts over the coastal mountains. Urban and small stream flooding did occur and there was great concern for possible mudslides due to the saturation of the soil.

Historically, December 2002 became the 6th wettest in downtown San Francisco, our most well known location, since records began in 1849. The total of 12.03 inches was 378% of normal and accounted for 54% of the total seasonal rainfall for that location. Across the HSA at the end of December seasonal rainfall totals averaged 150 to 200 percent of normal for San Francisco and the north bay, and 125 to 175 percent of normal for the south bay and Monterey/San Benito counties.

Some 24 hour rain falls are as follows:

DEC 13-18/2002	Storm Total 4pm to 4pm				
Location	12/13	12/14	12/15	12/16	
San Francisco Bay Area					
Richmond	2	1.9	0.51	1.63	
Concord	0.9	0.5	0.45	0.85	
Fremont	0.39	0.97	0.22	1.14	
Kentfield	5.5	4.17	0.91	2.26	
Livermore	0.38	0.94	0.56	2.66	
San Rafael	4.51	2.98	1.16	2.72	
Moffett Field		0.34	1.01	0.73	1.36
Napa		1.82.7	0.55	2.27	
Oakland Musm		2.69	2.09	0.19	2.04
Oakland AP		1.17	1.88	0.2	1.27
Pacifica		2.11	2.55	0.17	2.05
Redwood City		1.35	2.58	0.34	1.94
San Jose AP		0.15	1.08	0.58	1.08
San Jose	0.15	0.72	0.63	1.05	
SFO		1.04	1.6	0.22	2.23
San Francisco DT	1.14	1.89	0.29	1.88	
Santa Rosa	2.15	3.12	0.85	1.98	
Monterey Bay Area					
Big Sur Station		0.89	2.06	1.01	2.52
Carmel Valley		0.09	0.43	0.81	1.73
Gilroy		0.36	0.31	0.98	1.95
Hollister		0.05	0.38	0.44	1.94
King City	0.11	0.09	0.26	1.14	
Mntry NWSFO		0.15	0.38	0.7	1.14
Morgan Hill		T	1.22	0.87	2.75
Salinas		0.24	0.64	0.09	0.68
Santa Cruz	2.88	3.59	0.46	1.24	
Watsonville		1.45	2.35	0.6	1.1

Storm Data and Unusual Weather Phenomena

December 2002

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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CALIFORNIA, Western

Marin County

South Portion

	19	1120PST 1200PST			0	0			Flash Flood
DEC 19-21/2002 Storm Total 4pm to 4pm									
Location Thu. 12/19 Fri. 12/20									
San Francisco Bay Area									
Richmond	1.45		1.97	1.32					
Concord	1		0.4	0.5					
Fremont	1.15		1.62	0.15					
Kentfield	1.75		2.11	0.41					
Livermore	0.88		0.32	0.23					
San Rafael	1.47		1.23	0.13					
Moffett Field			0.96	0.48	0.08				
Napa	1.43		0.92	0.08					
Oakland Musm			1.21	0.78	0.19				
Oakland AP			1.21	0.81	0.24				
Pacifica	1.8		0.39	0.46					
Redwood City			1.03	0.52	0.16				
San Jose AP			0.96	0.6	0.13				
San Jose	1.01		0.63	0.15					
SFO			1.34	0.46	0.3				
San Francisco			1.35	0.7	0.23				
2.28									
Santa Rosa	1.56		0.81	0.66					
Big Sur Station			1.1	0.96	m				
Carmel Valley			0.73	0.49	0.08				
Gilroy	0.87		0.9	0.51					
Hollister	0.33		0.4	0.13					
King City	0.47		0.82	0.51					
Mntry NWSFO			0.87	0.48	0.04				
Morgan Hill			0.43	0.96	0.59				
Salinas	0.75		0.44	0.04					
Santa Cruz	0.78		2.05	0.89					
Watsonville			0.91	0.43	0.93				

Marin County

South Portion

	19	1120PST 1500PST			0	0			Flash Flood
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CAZ005-005-005-007-007-075-075 Sonoma / Marin Counties - Alameda / Contra Costa Counties - San Mateo Co.

	30	2321PST			0	0	600K		High Wind (G63) ^M
	31	0234PST							

Large Redwood tree was blown onto house in Sebastopol causing major damage.
Wind damage metal roofing on the road, large trees downed, power lines down.

CARIBBEAN SEA AND TROPICAL ATLANTIC

Cocoa Beach To

Jupiter Inlet Fl Out

20Nm

Vero Beach

	02	2030EST			0	0	0	0	Marine Tstm Wind
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Vero Beach Airport recorded a gust to 37 knots in a thunderstorm.

Storm Data and Unusual Weather Phenomena

December 2002

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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CARIBBEAN SEA AND TROPICAL ATLANTIC

Jupiter Inlet To

Deerfield Beach Fl 20

To 60Nm

15 SE Jupiter Inlet	03	1322EST			0	0	Waterspout
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A SKYWARN spotter sighted a waterspout in the Atlantic about 10 miles offshore Slnger Island.

Lake Okeechobee

15 N Kreamer Island	13	1240EST			0	0	Marine Tstm Wind
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The Handar at Port Mayaca reported a wind gust to 36 knots.

Jupiter Inlet To

Deerfield Beach Fl 20

To 60Nm

15 S Jupiter Inlet	13	1354EST			0	0	Marine Tstm Wind
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The ASOS at West Palm Beach International Airport measured a wind gust of 36 knot.s

Jupiter Inlet To

Deerfield Beach Fl 20

To 60Nm

5 E Jupiter Inlet	19	1030EST			0	0	Waterspout
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A pilot sighted a waterspout 15 miles northeast of West Palm Beach International Airport.

Charleston Harbor

The Charleston Battry

Savannah Ga To

Altamaha Sd Ga 20 To

60Nm

45 SE Tybee Island	20	0745EST			0	0	Marine Tstm Wind
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S Santee R Sc To

Savannah Ga 20 To

40Nm

38 E Port Royal Sound	20	0750EST			0	0	Marine Tstm Wind
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Savannah Ga To

Altamaha Sd Ga Out

20Nm

20 SE Tybee Island	24	1233EST			0	0	Marine Tstm Wind
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Savannah Ga To

Altamaha Sd Ga 20 To

60Nm

45 SE Tybee Island to Tybee Island	24	1300EST			0	0	Marine Tstm Wind
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Charleston Harbor

The Charleston Battry

24	24	1415EST			0	0	Marine Tstm Wind
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Charleston Harbor

Charleston Hrbr Ent

25	25	0545EST			0	0	Marine Tstm Wind
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COLORADO, Central and Northeast

NONE REPORTED.

COLORADO, East Central

NONE REPORTED.

COLORADO, South Central and Southeast

COZ088-094-099

Trinidad Vicinity / Lower Huerfano River Basin & Western Las Animas County Below 7500 Ft - Eastern Las Animas County - Springfield Vicinity / Baca County

03	03	0900MST			0	0	Heavy Snow
04	04	0900MST					

An upper level low pressure system moving across northern New Mexico brought snow to portions of extreme southeast Colorado near the New Mexico border. Some of the higher snow amounts include around 6 inches near Trinidad in western Las Animas county...8 inches at Kim in eastern Las Animas county and 8 inches 7 miles south of Campo in far southern Baca county.

Storm Data and Unusual Weather Phenomena

December 2002

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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COLORADO, South Central and Southeast

COZ060-068 Eastern Sawatch Mountains Above 11000 Ft - Eastern San Juan Mountains Above 10000 Ft

16	1700MST				0	0			Heavy Snow
17	1700MST								

A strong upper level system and abundant moisture produced copious amounts of snow over the southwest and the southern part of the central mountains southern Colorado. The highest snow totals reported include...24 inches at the summit of Monarch Pass in southwest Chaffee county and 25 inches at the summit of Wolf Creek Pass in Mineral county.

COZ074-087>088-099 Southern Sangre De Cristo Mountains Between 7500 & 11000 Ft - Walsenburg Vicinity / Upper Huerfano River Basin Below 7500 Ft - Trinidad Vicinity / Lower Huerfano River Basin & Western Las Animas County Below 7500 Ft - Springfield Vicinity / Baca County

23	0400MST				0	0			Heavy Snow
	1600MST								

An upper level storm system moved through central New Mexico producing areas of heavy snow over mainly far southern Colorado. A general two to five inch snowfall occurred from Huerfano county through southern Pueblo county and Las Animas county through Baca county. Some of the heavier snow totals include 6 inches at Cuchara in Huerfano county...6 inches 13 miles southeast of Walsenburg in Huerfano county...8 inches at La Veta...also in Huerfano county...and 9 inches 6 miles south of Campo in Baca county.

COZ058-060 Eastern Lake County / Western Mosquito Range Above 11000 Ft - Eastern Sawatch Mountains Above 11000 Ft

31	1500MST				0	0			Heavy Snow
	2359MST								

A vigorous upper level system dumped heavy snow over the higher elevations of the eastern Sawatch Range and eastern Lake county. Six inches of snow fell near the summit of Monarch Pass...and 10 inches fell at Climax. The snowfall persisted a few hours into the new year...so this entry will appear in January 2003 Storm Data, as well.

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								

Occasional storms brought precipitation to western Colorado during the month. However, precipitation amounts were not significant enough to have a major impact on the extreme drought conditions that persisted. See the January 2003 Storm Data publication for a continuation on this drought situation for western Colorado.

COZ007 Debeque To Silt Corridor

02	0000MST				0	0			Fog
	0500MST								

The Garfield County sheriff's office reported widespread dense fog reducing visibility to less than 200 feet along the Interstate 70 corridor.

COZ002>005-009>010-012>014-017>019-022>023 Central Yampa River Basin - Roan And Tavaputs Plateaus - Elkhead And Park Mountains - Upper Yampa River Basin - Grand And Battlement Mesas - Gore And Elk Mountains/Central Mountain Valleys - West Elk And Sawatch Mountains - Flattop Mountains - Upper Gunnison River Valley - Uncompahgre Plateau And Dallas Divide - Northwestern San Juan Mountains - Southwestern San Juan Mountains - Animas River Basin - San Juan River Basin

16	1600MST				0	0			Winter Storm
18	2300MST								

An upper trough followed by a moist northwest flow produced the heaviest and most widespread snowfall of the season so far in western Colorado. Snowfall amounts in the mountains generally ranged from one to two feet. Over four feet of new snow was indicated by some SNOTEL monitors in the Elkhead and Park Mountains. Valley locations generally received 6 to 12 inches of new snow. Some of the heaviest reported valley snowfall amounts included 18 inches at Clark and also in parts of Steamboat Springs. Winds gusting 40 to 50 MPH accompanied the snow in the higher elevations, resulting in blowing and drifting of snow.

COZ001>002 Lower Yampa River Basin - Central Yampa River Basin

30	0300MST				0	0			Fog
	0900MST								

Widespread dense fog developed across the lower and central Yampa River Basin. Colorado State Patrol officers indicated visibility of a few hundred feet in the Maybell and Rangely areas, while the Meeker ASOS indicated visibility at or below 1/4 mile.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>COLORADO, West</u>									
COZ006			Grand Valley						
	30	0300MST 1130MST			0	0			Fog
			Widespread dense fog developed across the Grand Valley, including the Interstate 70 corridor. Spotter reports and the Grand Junction ASOS indicated visibilities were reduced to 1/4 mile or less.						
COZ007			Debeque To Silt Corridor						
	30	0330MST 0900MST			0	0			Fog
			Widespread dense fog developed along the Interstate 70 corridor from De Beque southwest to Palisade. Spotter reports indicated visibilities were reduced to 1/4 mile or less across the area.						
COZ023			San Juan River Basin						
	30	0500MST 0900MST			0	0			Fog
			Widespread dense fog developed across the San Juan River Basin. Reports from the Archuleta County sheriff's office indicated visibilities of less than 1/4 mile.						
COZ022			Animas River Basin						
	30	0740MST 0900MST			0	0			Fog
			Widespread dense fog developed across the Animas River Basin. La Plata County dispatch and the Durango ASOS reported visibilities at or below 1/4 mile.						
COZ002-004>005-013			Central Yampa River Basin - Elkhead And Park Mountains - Upper Yampa River Basin - Flattop Mountains						
	31	0500MST 2359MST			0	0			Winter Storm
			A moist Pacific storm system produced heavy snow along with strong winds across the mountains and high valleys of northwest Colorado. Snowfall amounts ranged from 12 to 22 inches across the Elkhead, Park, and Flattops Mountains. Accumulations from 9 to 16 inches occurred across the central and upper Yampa River basin.						
COZ009>010-012-017>019			Grand And Battlement Mesas - Gore And Elk Mountains/Central Mountain Valleys - West Elk And Sawatch Mountains - Uncompahgre Plateau And Dallas Divide - Northwestern San Juan Mountains - Southwestern San Juan Mountains						
	31	0500MST 2359MST			0	0			Heavy Snow
			A moist Pacific storm system produced heavy snow across the central and southern mountains of western Colorado. Snowfall amounts ranged from 5 to 19 inches. Some of the heaviest snowfall was in the northwest San Juan Mountains where 18 inches accumulated at the El Diente SNOTEL site and also at the Silverton Mountain Ski Area. The heaviest accumulation was 19 inches at the Schofield Pass SNOTEL site in the Elk Mountains.						
<u>CONNECTICUT, Northeast</u>									
CTZ002>004			Hartford - Tolland - Windham						
	05	1000EST			0	0			Heavy Snow
	06	0700EST							
			A winter storm passing about 200 miles southeast of Nantucket brought heavy snow to north central and northeast Connecticut. Snowfall totals averaged 4 to 8 inches throughout Hartford, Tolland, and Windham Counties. No damage or injuries were reported from this storm.						
			Officially, the storm total at Bradley International Airport in Windsor Locks was 4.0 inches. Other snowfall totals included 8 inches in East Hartford, Burlington, Manchester, and Ashford; 7 inches in Glastonbury, Wethersfield, Ellington, and South Killingly; and 6 inches in Newington.						
CTZ002			Hartford						
	25	1300EST			0	0	15K		Winter Storm
	26	0900EST							
			A major winter storm impacted southern New England on Christmas Day, bringing heavy, wet snow to north central Connecticut. Rain fell through the morning, then by mid afternoon had changed to sleet and snow as far east as the Interstate 84 corridor. The greatest snowfall accumulations were reported in Hartford County, where totals of 5 to 10 inches were common. Amounts tapered off to between 4 and 6 inches across Tolland and Windham Counties, where the changeover occurred later.						
			Officially, the storm total at Bradley International Airport in Windsor Locks was 7.8 inches. Other snowfall totals included 10 inches in North Granby; 9 inches in Burlington; 8 inches in Avon, Granby, and Collinsville; and 6 inches in East Hartford, Simsbury, Vernon, and Woodstock.						

Storm Data and Unusual Weather Phenomena

December 2002

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

CONNECTICUT, Northwest

CTZ001

Litchfield

25 1400EST

0 0

Winter Storm

26 0400EST

A low pressure area from the Mississippi Valley rapidly redeveloped along the North Carolina coast, early on Christmas morning. The storm then tracked northeast, along the Atlantic coast, reaching just south of eastern Long Island by late Christmas night, while deepening dramatically. With plenty of cold polar air in place, the stage was set for a significant snowstorm across Litchfield County. The snow began in earnest around midday. Some sleet mixed in, but snow was the primary precipitation type. During the late day and evening hours snowfall rates averaged 1-2 inches per hour. Six to 12 inches of snow fell throughout the county. A few selected sites included Thomaston Dam with 6.0 inches, Colebrook with 8, and Norfolk with 11.

CONNECTICUT, Southern

CTZ005>012

Northern Fairfield - Northern New Haven - Northern Middlesex - Northern New London - Southern Fairfield - Southern New Haven - Southern Middlesex - Southern New London

05 1530EST

0 0

Heavy Snow

1830EST

On Wednesday, December 4th, an area of low pressure started to develop along an old frontal boundary that snaked across the northwest Gulf of Mexico and the Gulf coast states. Meanwhile, high pressure stretched from the northern plains, across the Great Lakes, to the Mid-Atlantic coast. This high pressure locked in the cold air across the northeast. That night, the developing storm moved across the southeastern states to the North Carolina coast. On the morning of Thursday, December 5th, as the storm started to move off the coast near Cape Hatteras flurries and light snow started to move into southwest Connecticut. By late morning, snow had started to fall across southeast Connecticut, and bands of moderate to heavy snow had started to move across southwest Connecticut. By noon, a moderate to, at times, heavy snow had spread across the entire southern half of the state. The steady, moderate to heavy snow continued through the afternoon, and into the early evening, falling at times at rates over an inch per hour. As the storm sped off toward the North Atlantic waters, the heavy snow began to taper off to light snow around 5 pm over southwest Connecticut, and around 6:30 pm over southeast Connecticut. By this time, an average of 5 to 8 inches had fallen across the southern half of Connecticut. As moisture continued to "wrap around" the storm, light snow continued to fall through the evening before tapering off to flurries and finally ending by midnight. Final snowfall accumulations ranged from 6 to 10 inches across the southern half of Connecticut.

CTZ005>006-009

Northern Fairfield - Northern New Haven - Southern Fairfield

25 2100EST

0 0

Heavy Snow

26 0100EST

On Tuesday, December 24th, an area of low pressure began to develop over the Gulf coast states. That night, the storm intensified as it moved northeast, reaching the Virginia coastline by daybreak on December 25th. During the morning, as the center of low pressure started to track northeast over the Atlantic along a path that hugged the coast, spotty drizzle and light rain began to overspread southwestern Connecticut along with pockets of freezing light rain and freezing drizzle. By noon, a steady rain developed along the coast, while freezing rain fell across interior sections. As the storm started to move east of the tri-state area, winds shifted first from the east to the northeast and then eventually over to the northwest. This allowed colder air to slowly infiltrate southwestern Connecticut. The rain or freezing rain changed to snow during the mid afternoon and became heavy at times by late afternoon. As the center of the storm continued to move northeast away from the region, the snow then tapered off to light snow and flurries around midnight and ended between about 3 am and 5 am. Snowfall amounts ranged from 2 to 4 inches at the immediate coast to 3 to 6 inches just inland to 6 to 12 inches well inland, except for portions of western Fairfield County, where most areas received 6 to 12 inches of snow, including the immediate coastline. The combination of narrow banding of heavy snow and the timing of the change from rain to snow accounted for the pronounced differential of snow received.

DELAWARE

DEZ001

New Castle

05 0200EST

0 0

0 Heavy Snow

2230EST

DEZ002>003

Kent - Inland Sussex

05 0200EST

0 0

0 Winter Storm

2000EST

DEZ004

Delaware Beaches

05 0200EST

0 0

0 Winter Weather/Mix

0900EST

The first winter storm of the season dropped four to eight inches of snow across most of Delaware with slightly lower amounts across the immediate coast. In many places this was more snow than fell all of last winter. The snow began falling shortly after midnight on the 5th and fell at its heaviest during the first half of the morning in the southern half of the state and throughout the morning in the northern half of the state. Warmer air moving in from the Atlantic changed the snow to sleet and freezing rain during the morning in Sussex County and then to plain rain by the afternoon. In Kent County, the snow changed to sleet and freezing rain during the second half of the morning and a wintry mix persisted for the rest of the event. Precipitation fell as snow in New Castle County. Precipitation ended during the evening.

The first winter storm of the season which also coincided with a work day (Thursday) caused hundreds of accidents. In New Castle

Storm Data and Unusual Weather Phenomena

December 2002

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

DELAWARE

County, there were 110 accidents by 1230 p.m. EST on the 5th. Eight of them caused injuries. Another 40 vehicles were stuck in snow or ditches. The worst accident occurred about 800 a.m. EST when a 15 vehicle crash occurred on Mount Lebanon Road in Brandywine Hundred. A bus crashed into a wall and blocked the road. The crash then triggered a 14 vehicle chain reaction accident. The road was closed for six hours. The two largest employers in the county (Dupont and MBNA) let their employees leave early. Statewide many schools never opened. Schools along the shore were on two hour delayed openings. In Kent County, there were 59 reported accidents on state roads. Stores closed in Dover. The racing card at Dover Downs was canceled and the Salvation Army opened its shelters to the homeless. A few people were treated for slip and fall accidents around Dover. Non-essential state workers were permitted to stay home and did not have to report to work until 10 a.m. EST on the 6th. In Sussex County, there were 22 reported accidents and about 50 disabled (in ditches) vehicles.

Specific accumulations included 8 inches in Wilmington (New Castle County), 7 inches in Newark (New Castle County), 6.8 inches at the New Castle County Airport, 6.5 inches in Dover and Smyrna (Kent County), 6 inches in Georgetown (Sussex County), 5 inches in Blade (Sussex County), 4.5 inches in Seaford, Greenwood and Bridgeville (Sussex County) and 4 inches in Lincoln (Sussex County).

The low pressure system responsible for the winter storm formed over Texas on the 3rd and moved eastnortheast and reached Louisiana the morning of the 4th, Cape Hatteras the morning of the 5th and then accelerated quickly offshore during the day on the 5th.

DEZ001

New Castle

11	0400EST	0	0				Winter Weather/Mix
	0900EST						

Freezing rain fell during the early morning of the 11th across northern parts of New Castle County. While it was warm enough aloft for precipitation to fall as rain, enough cold air was left at the surface by a departing high pressure system for the rain to freeze on contact. Freezing rain began around 4 a.m. EST. As a low pressure system moved north along the Atlantic Seaboard, it pulled in warmer air and surface temperatures were above freezing by 9 a.m. EST. Ice accretions were generally between one-tenth and two-tenths of an inch. Untreated roads were hazardous. Because of the morning freezing rain all Brandywine Hundred schools and all Christina Hundred elementary and junior high schools were closed. Red Clay hundred school districts opened two hours late. About two dozen weather related accidents occurred on state and county police patrolled roads, two included school buses. No children were hurt.

New Castle County North Portion

11	1528EST	0	0				Flash Flood
	0015EST						

Heavy rain, which fell between 1 p.m. and 4 p.m. EST, caused flooding along the Christina River in New Castle County. There was also poor drainage flooding elsewhere across the county. Carpenter Station Road was closed in Brandywine Hundred. The Christina River at Coochs Bridge was above its 9 foot flood stage from 328 p.m. EST on the 11th through 1201 a.m. EST on the 12th. It crested at 11.49 feet at 630 p.m. EST on the 11th. At the New Castle County Airport 0.93 inches of rain fell between 1 p.m. and 4 p.m. EST on the 11th. The storm total was 1.39 inches. No serious injuries or property damage was reported.

New Castle County Coochs Bridge

13	2306EST	0	0				Flash Flood
	0128EST						

A very wet autumn left saturated soil conditions across northern Delaware and made the Christina River susceptible to flooding with any moderate or heavy rain. The river was already running high from the heavy rain on the 11th and even though storm totals were less than one inch during the evening of the 13th, it flooded again. The Christina River at Coochs Bridge reached its 9 foot flood stage at 1106 p.m. EST on the 13th, crested at 9.23 feet at 110 a.m. EST on the 14th and was back within bankfull at 128 a.m. EST on the 14th. The storm total was 0.75 inches in Wilmington and Newark and 0.61 inches at the New Castle County Airport.

New Castle County Coochs Bridge

20	1322EST	0	0				Flash Flood
	1534EST						

A very wet autumn left saturated soil conditions across northern Delaware and made the Christina River susceptible to flooding with any moderate or heavy rain. The river was already running high from precipitation events on the 11th and 13th and even though storm totals were less than one inch during the day of the 20th, it flooded again. The Christina River at Coochs Bridge was above its 9 foot flood stage from 122 p.m. through 334 p.m. EST on the 20th. It crested at 9.47 feet at 230 p.m. EST on the 20th. The storm total at the New Castle County Airport was 0.73 inches (0.30 inches fell between 10 and 11 a.m. EST) and in Wilmington was 1.04 inches.

DEZ004

Delaware Beaches

25	1100EST	0	0				Astronomical High Tide
	1300EST						

A strong onshore flow preceding a northeaster produced minor tidal flooding at the time of high tide around noon on Christmas Day. The tide at Breakwater Harbor reached 6.77 feet above mean lower low water. The northeaster that produced the tidal flooding moved from Mississippi the morning of the 24th to near Norfolk the morning of the 25th to just west of Atlantic City during the afternoon of the 25th to south of Nova Scotia the morning of the 26th.

Storm Data and Unusual Weather Phenomena

December 2002

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

DELAWARE

New Castle County

North Portion

25	1123EST 1859EST				0	0	0		Flash Flood
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A very wet autumn left saturated soil conditions across northern Delaware and made the Christina River susceptible to flooding with any moderate or heavy rain. The river was already running high from precipitation events on the 11th, 13th and 20th. A northeaster on Christmas day brought heavy rain into Delaware and caused flooding along the Christina River Basin. The Christina River at Coochs Bridge reached its 9 foot flood stage at 1123 a.m. EST on the 25th, crested at 11.03 feet at 230 p.m. EST and was back within bankfull at 659 p.m. EST that day. The storm totals at the New Castle County Airport (0.67 inches fell between 8 a.m. and Noon EST) and Wilmington were both 1.09 inches. No serious damage or injuries were reported.

DEZ004

Delaware Beaches

26	0100EST 0300EST				0	0			High Wind (G51)
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A very strong northwest flow prevailed behind the departing northeaster, especially along the immediate coast. A measured wind gust to 59 mph occurred at Breakwater Harbor at 2 a.m. EST on the 26th.

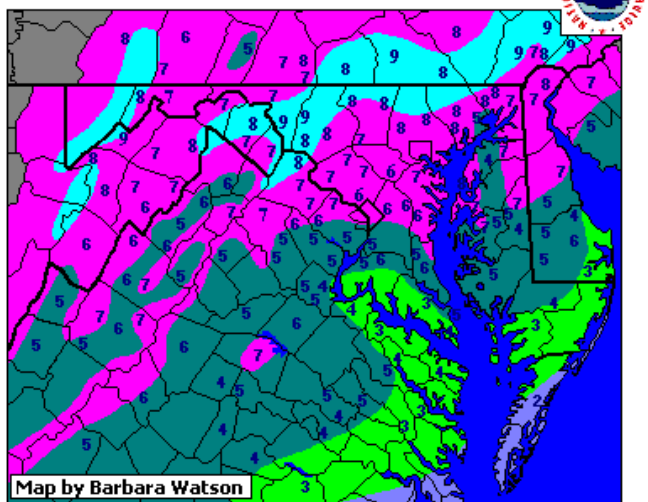
DISTRICT OF COLUMBIA

DCZ001

District Of Columbia

05	0000EST 1500EST				0	0			Winter Storm
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Storm Totals Dec. 5, 2002



0 - 2	2 - 4	4 - 6	6 - 8	8 - 10	10 - 12 inches
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Snow and sleet totals from December 5, 2003

Low pressure moved from North Carolina to the Delmarva Peninsula between midnight and 3 pm on the 5th. This storm produced accumulating snow across the region as it moved by. A total of 5 to 7 inches of snowfall was recorded across the Washington D.C. metropolitan area.

FLORIDA, East Central

Indian River County

Wabasso

13	1155EST 1200EST	1.2	60	0	1	110K	5K		Tornado (F1)
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An F-1 tornado dropped down in Wabasso about 1/4 mile south of SR 510 and 1.2 miles west of US Highway 1. The tornado moved east north east damaging trees in a citrus grove and overturning a large tractor trailer bed. It moved through a cluster of homes west of US Highway 1 where it destroyed an older wood house and a mobile home. It damaged seven other homes and an three vehicles. One person was hospitalized with heart problems due to the tornado.

Okeechobee County

Okeechobee

13	1230EST			0	0	0	0		Thunderstorm Wind (G50)
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Thunderstorm winds blew down a few trees and damaged tin roofs on Highway SR 78 near Okeechobee.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
<u>FLORIDA, Extreme Southern</u>							
Monroe County							
Key West Nas	09	0945EST			0 0	5K	Thunderstorm Wind (G55) Wind Damage to Key West Naval Air Station facilities. Several trees were downed, and three utility poles snapped above the ground. A dumpster and a small power boat on a trailer were overturned. Minor damage to wood fascia on building.
<u>FLORIDA, Northeastern</u>							
Hamilton County							
6 E Jasper	24	1125EST			0 0	5K	Thunderstorm Wind Numerous large trees and power lines down across road
Suwannee County							
Live Oak	24	1127EST 1400EST			0 0		Flash Flood Highways 90 and 129 flooded and impassable in the city of Live Oak.
Hamilton County							
Jasper	24	1130EST			0 0		Tstm Wind/Hail Tree down in city of Jasper.
Nassau County							
2 W Hilliard to 1 E Hilliard	24	1220EST			0 0	10K	Thunderstorm Wind Three mile wide swath of straight line winds with numerous trees and power lines down.
Duval County							
5 W Lake Shr	24	1245EST			0 0		Funnel Cloud Sighted near Lane Ave and Wilson Blvd. Two separate reports of event.
Duval County							
Countywide	24	1306EST 1315EST			0 0	10K	Thunderstorm Wind Trees and power lines down across the county. Reports of large trees down in Dupont, San Jose, Baymeadows. 12 inch in diameter oak tree down on house in Jacksonville west side. Reports both from Skywarn Spotters and media.
Clay County							
Keystone Hgts	24	1315EST			0 0		Tstm Wind/Hail Wind gusts to 55 mph.
Clay County							
5 S Keystone Hgts	24	1325EST			0 0		Funnel Cloud Skywarn spotter report.
Clay County							
Middleburg	24	1330EST			0 0	2K	Thunderstorm Wind Red Oaks 24 inches in diameter downed, broken off 4 feet above the ground. Black Creek area.
Clay County							
Keystone Hgts to Camp Bldg	24	1335EST 1600EST			0 0		Urban/Sml Stream Fld Flooding of roadways between Keystone Heights and Camp Blanding along State Road 21. Rainfall rates of one inch per hour occurring.
Alachua County							
Gainesville North	24	1630EST			0 0		Tstm Wind/Hail Dead pine tree blown on house at 1017 NW 16th Ave. Two other trees blown down on houses at 311 NW 16th Ave and also at 1107 NW 7th Ave. Wind Gusts of 39 mph at Airport.
Marion County							
Orange Lake	24	1700EST			0 0	5K	Thunderstorm Wind Large trees down north of Ocala near Orange Lake and near Marion Lakes Subdivision.
<u>FLORIDA, Northwest</u>							
Holmes County							
Countywide	24	0755EST 0800EST			0 0	10K	Thunderstorm Wind (G50) Downed trees and power lines on Highways 81 and 177. Reported by the Holmes County Sheriff.
Washington County							
Countywide	24	0755EST 0800EST			0 0	10K	Thunderstorm Wind (G50) Downed trees and power lines reported by the Washington County Sheriff.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
<u>FLORIDA, Southern</u>									
Miami - Dade County									
North Miami	09	0600EST 0800EST			0	0	50K		Flash Flood
Up to 7 inches of rain fell along the coastal areas from Miami Beach to Fort Lauderdale. Flooding in North Miami caused minor damage to houses and businesses.									
Miami - Dade County									
Key Biscayne	09	2020EST			0	0			Thunderstorm Wind (G50)
A tree was blown down on Harbor Drive.									
Miami - Dade County									
Miami Beach	09	2040EST			0	0			Thunderstorm Wind (G50)
Severe thunderstorm wind gusts blew down trees on Washington Avenue.									
Broward County									
Pompano Beach	09	2120EST			0	0	10K		Thunderstorm Wind (G55)
The top of an Australian pine snapped off and fell onto the roof of a house.									
Palm Beach County									
Lantana	12	1000EST			0	0	30K		Heavy Rain
The roof of a U.S. Food Mart collapsed under the weight of heavy rain.									
Glades County									
10 NE Lakeport	13	1145EST			0	0			Thunderstorm Wind (G55)
A coop observer reported trees blown down along Highway 78 on the Brighton Indian Reservation.									
<u>FLORIDA, West Central</u>									
FLZ039-042>043-048>049									
Levy - Citrus - Sumter - Hernando - Pasco									
	01	2200EST			0	0			Extreme Cold
	02	0900EST							
Temperatures in Levy county dropped below freezing for about 11 hours while the rest of these counties were below freezing for 4 to 5 hours.									
Hernando County									
Spring Hill to Brooksville	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Hillsborough County									
Tampa to Ruskin	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Manatee County									
Bradenton	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Pasco County									
New Port Richey to Zephyrhills	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Pinellas County									
Pinellas Park to St Petersburg	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Polk County									
Lakeland to Winter Haven	13	0800EST 1300EST			0	0			Urban/Sml Stream Fld
Two storm systems in less than a week combined to drop 7 to 11 inches of rain from Tampa Bay through northern Polk county, northward to Hernando and Sumter counties. Northwest Polk county reported six roads closed due to the rain. Despite the copious rainfall, few if any residences or businesses experienced freshwater flooding. Some rainfall reports for the week include: St. Pete/Clearwater International airport 10.80", Lakeland Linder airport 8.46", Tampa International airport 8.32", Land O Lakes 8.14", Spring Hill 7.00", and Bradenton 6.48".									
FLZ049-051									
Pasco - Hillsborough									
	14	0300EST			0	0			Flood
	16	1000EST							
The Little Manatee in Wimauma reached 14.51 feet on December 14th while the Alafia near Lithia (also in Hillsborough county) reached 17.16 feet on the 14th. The flood stage is 11 feet in Wimauma and 13 feet in Lithia. The Anclote river in Elfers reached 22.85 feet on the 14th and the flood stage is 20 feet. Elsewhere, the Peace, Hillsborough, and Cypress Creek all reached 1 to 2 feet above flood stage.									

Storm Data and Unusual Weather Phenomena

December 2002

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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FLORIDA, West Central

FLZ039-042>043-048>049 **Levy - Citrus - Sumter - Hernando - Pasco**

16	0300EST 0800EST				0	0			Extreme Cold
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Another round of cold air swept into the region. Clear skies and light winds allowed temperatures to drop into the upper 20s for three to five hours. Patchy wet frost was found south of this area along the Hillsborough/Polk county border into Hardee and DeSoto counties.

FLZ042>043-048 **Citrus - Sumter - Hernando**

17	0400EST 0800EST				0	0			Extreme Cold
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Temperatures from 29 to 32 degrees were found in the Withlacoochee river basin separating these counties.

Hillsborough County

	Tampa to Plant City	24	2100EST						
	Plant City	25	0200EST						Urban/Sml Stream Fld

Pinellas County

	St Petersburg	24	2100EST				25K		Urban/Sml Stream Fld
	St Petersburg	25	0200EST						

Polk County

	Lakeland	24	2200EST				150K		Flash Flood
	Lakeland	25	1200EST						

A strong cold front moved through the Gulf of Mexico and into Florida during the evening of the 24th. A squall line ahead of the front fell apart as it entered land and this produced bands of heavy rain. A 15 mile wide band of 4 to 6 inches of rain fell just to the south of a Tampa to Lakeland line. Other narrow bands of rain were observed on radar to the north of Tampa. The heavy rains washed out a portion of southbound Interstate 275 in Pinellas county and flooded seven homes in the southern part of Lakeland in Polk county. There were unofficial reports of 5 to 8 inches across this area. Official rainfall reports included: Saint Petersburg 4.01", Ruskin 3.93", and Lakeland 2.85". The heavy rain forced Cypress Creek, the Alafia, the Little Manatee, and the Peace rivers to zero to two feet above flood stage.

FLZ039-042>043-048>049-057 **Levy - Citrus - Sumter - Hernando - Pasco - Highlands**

29	0300EST 0800EST				0	0			Extreme Cold
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Two areas of cold temperatures formed overnight with mid 20s found in Citrus and Hernando counties and the upper 20s in Highlands county. Counties between these two areas had lows from 35 to 42 degrees. The coldest temperature was 25 degrees 3 miles southwest of Inverness.

Hillsborough County

	Brandon	31	1830EST			0	1		Lightning
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Firefighter was struck by lightning while responding to an overturned vehicle near Bloomingdale Avenue and Interstate 75. The 30 year old male briefly lost consciousness, suffered a ruptured eardrum in his left ear, and could not feel anything in his left forearm or hand. He was standing in waist deep water and was leaning against a guard rail when lightning struck a light pole nearby.

Hernando County

	Brooksville	31	1900EST 2200EST						Urban/Sml Stream Fld
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Hillsborough County

	South Portion to East Central Portion	31	1900EST 2200EST				100K		Flash Flood
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Manatee County

	Bradenton to Palmetto	31	1900EST 2300EST				30K		Flash Flood
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Pasco County

	Zephyrhills	31	1900EST 2200EST						Urban/Sml Stream Fld
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Pinellas County

	St Petersburg to Pinellas Park	31	1900EST 2200EST						Urban/Sml Stream Fld
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Polk County

	South Portion	31	2000EST 2359EST				90K		Flash Flood
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El Nino continued to keep the storm systems rolling through Florida in December. The New Year's Eve storm was almost a carbon copy of the storm system that occurred seven days earlier. A cold front moving through the Gulf of Mexico produced a long line of storms and brought heavy rainfall to the area. Numerous roads were closed and several homes were flooded in Lakeland due to the heavy rain. The combination of high tide and heavy rain put two feet of water over the roads near Bradenton Beach and 50 residents

Storm Data and Unusual Weather Phenomena

December 2002

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

FLORIDA, West Central

in an apartment complex in Palmetto were forced to evacuate due to the high water. Finally, the Bullfrog creek near Gibsonton damaged several homes and vehicles. Official rainfall reports included Saint Petersburg at 3.46" and Ruskin at 6.53". Radar and unofficial reports showed a band of 5 to 7 inch rainfall in less than six hours across the flash flood areas. Rainfall to the north ranged from 2 to 4 inches while further south generally it ranged from 1 to 3 inches.

Sarasota County 4 S Sarasota

31	2310EST 2315EST	2	30	0	0	15K		Tornado (F0)
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A tornado that began as a waterspout moved onshore near Tidewood Avenue and Southwood street in Sarasota, tearing shingles off roofs, breaking windows and tossing debris. Also, a furniture store received some roof and water damage.

FLORIDA, West Panhandle

Santa Rosa County Munson

24	0525CST 0526CST	0.3	30	0	0	142K		Tornado (F0)
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A weak tornado blew down several trees near Munson. The tornado also caused minor damage to several homes and outbuildings. Some of the trees fell onto houses and vehicles. A fire started as a result of downed power lines burnt down a small house. No injuries were reported.

Santa Rosa County Countywide

24	0730CST 0745CST			0	0	20K		Thunderstorm Wind (G55)
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Several trees were blown down across the county as a line of thunderstorms moved through the area.

Escambia County Warrington

31	0900CST 0902CST			0	0	15K		Thunderstorm Wind (G50)
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High winds from a thunderstorm blew down several trees near Warrington. A home in the same area also suffered minor roof damage caused by the high winds.

Escambia County Myrtle Grove

31	0940CST 0941CST			0	0	5K		Thunderstorm Wind (G50)
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High winds from a thunderstorm blew down several trees near Myrtle Grove.

Okaloosa County Florosa

31	0947CST 0948CST	0.5	40	0	0	600K		Tornado (F1)
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A tornado moved onshore near Florosa and caused damage as it moved northeast through a small subdivision. Two older manufactured homes were destroyed near the water as the tornado moved inland. The tornado moved across U. S. Highway 98 before dissipating. Several other homes suffered structural damage mostly to their roofs and siding. Some vehicles were also damaged by flying debris. No major injuries were reported.

GEORGIA, East Central

Richmond County Countywide

24	1005EST			0	0	0	0	Thunderstorm Wind (G50)
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Sheriff reported a few trees down around the county.

Columbia County Countywide

24	1030EST			0	0	0	0	Thunderstorm Wind (G50)
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Sheriff reported a few trees down around the county.

GEORGIA, Lower

Coffee County Broxton

20	1500EST			0	0	5K		Thunderstorm Wind
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Large trees down across power lines with power lines downed.

Wayne County Odum

24	1010EST			0	0			Tstm Wind/Hail
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Pine trees down across power lines. Time approximate.

Coffee County Nicholls

24	1015EST	0.1	10	0	0	5K		Tornado (F0)
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Brief touchdown. Trees and power poles snapped off with power lines downed.

Jeff Davis County 3 S Hazelhurst

24	1025EST	0.1	10	0	0	5K		Tornado (F0)
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Brief touchdown. Trees down on power lines with power lines down. Power poles snapped off above ground.

Atkinson County Pearson

24	1030EST			0	0	2K		Thunderstorm Wind
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Numerous trees down along Hwy 441 north and south of Pearson.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm	
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops		
GEORGIA, Lower										
Clinch County										
8 S Homerville	24	1033EST			0	0	20K		Thunderstorm Wind	
					Roof blown off of house at Hwy 441. Spotter reports of severe winds.					
Clinch County										
1 NW Homerville Arpt	24	1033EST			0	0			Funnel Cloud	
					Sheriff officer confirmed sighting.					
Echols County										
Needmore	24	1035EST			0	0	2K		Thunderstorm Wind	
					Several large Oak trees down in NWS Co-op Observer's yard.					
Atkinson County										
Willacochee	24	1035EST			0	0	5K		Thunderstorm Wind	
					Numerous trees and power lines downed. EMA reported event due to straight line winds.					
Bacon County										
Countywide	24	1040EST 1055EST			0	0	10K		Thunderstorm Wind (G58)	
					Numerous trees and power lines down across county. Several barns lost roofs due to straight line winds. Winds estimated by EMA.					
Clinch County										
Homerville Arpt	24	1045EST 1055EST			0	0			Funnel Cloud	
					Numerous funnel clouds reported near the airport.					
Bacon County										
Alma	24	1050EST			0	0	50K		Thunderstorm Wind	
					Several barns lost roofs.					
Bacon County										
6 S Alma	24	1055EST	2	100	0	0	40K		Tornado (F0)	
					House damaged by 16 inch diameter tree. Numerous trees down. 2 mile long path about 100 yards wide.					
Bacon County										
8 N Alma	24	1055EST	0.1	100	0	0	10K		Tornado (F0)	
					Numerous trees snapped off and down along Hwy 23.					
Clinch County										
15 SW Homerville	24	1100EST			0	0	10K		Thunderstorm Wind	
					Numerous large trees and power lines down along the Thelma Highway.					
Bacon County										
2 N Alma to 3 N Alma	24	1100EST			0	0	2K		Thunderstorm Wind	
					Large trees down across highway or damaged along Hwy 23 north of Alma					
Appling County										
Countywide	24	1100EST 1125EST			0	1	50K		Thunderstorm Wind	
					Numerous large trees down in town of Baxley. Mobile home on State Road 15 4 miles south of Baxley flipped with one injured. Edsel Lewis road, 6 miles south of Baxley, closed due to tree damage.					
Appling County										
Baxley Muni Arpt	24	1104EST	0.1	10	0	0			Tornado (F0)	
					Brief touchdown.					
Clinch County										
Homerville	24	1110EST			0	0	10K		Thunderstorm Wind	
					Multiple large trees down one on a house.					
Wayne County										
2 N Madray Spgs	24	1125EST			0	0	10K		Thunderstorm Wind	
					Two large Pecan trees down and portion of roof blown off. Possible tornado.					
Brantley County										
2 SW Schlatterville	24	1130EST	0.1	10	0	0			Tornado (F0)	
					Brief touchdown in Laura Walker State Park.					
Wayne County										
Jesup	24	1130EST	0.1	10	0	0			Tornado (F0)	
					Brief touchdown near Mallard Pie Road.					

Storm Data and Unusual Weather Phenomena

December 2002

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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GEORGIA, Lower

Charlton County

Winokur 24 1143EST 0.5 30 0 0 100K **Tornado (F1)**
Structural damage to buildings in Homeland, Camp Pickney and Winokur. Shop roof off in Winokur. Numerous trees down with a .5 mile damage path.

Pierce County

Bristol 24 1145EST 0.2 20 0 0 10K **Tornado (F0)**
Trees and power poles snapped off near ground. Large trees down on power lines.

Charlton County

**Folkston to
4 E Folkston** 24 1150EST 4 50 0 0 50K **Tornado (F0)**
1200EST
Residents reported tornado on the ground. Two homes on Camp Pickney Road damaged. Right mover moving down State Road 40 into Camden County.

Camden County

St Marys 24 1155EST 0.2 50 0 0 50K **Tornado (F0)**
Same system as in Charlton County. Two roofs partially off homes near Colrane Road and 1/2 of a roof missing from house at Natures End near Point Peter. Large trees over in yard.

Brantley County

Lulaton 24 1155EST 0 0 2K **Thunderstorm Wind**
Large trees down near Satilla River.

Glynn County

St Simons Is 24 1208EST 0 0 **Tstm Wind/Hail**
50 mph winds reported by Skywarn Spotter.

Pierce County

2 S Bristol 24 1210EST 0 0 10K **Thunderstorm Wind**
Large trees down across two mobile homes. Some structural damage.

Glynn County

3 W Brunswick 24 1225EST 0 0 5K **Thunderstorm Wind**
Numerous trees down over roadway. 1 mile west of Interstate-95.

GEORGIA, North and Central

GAZ014>016-021-023>024-027-032-034>036-038>039-045>047-050>051 **Dawson - Lumpkin - White - Cherokee - Hall - Banks - Madison - Cobb - Gwinnett - Barrow - Clarke - Oglethorpe - Wilkes - De Kalb - Rockdale - Walton - Greene - Taliaferro**

04 1400EST 0 0 50K **Ice Storm**
05 0050EST

A wedge of cold air from the northeast and a strong upper-level disturbance with ample Gulf moisture combined to bring the north central, northeast, and east central portions of Georgia a minor ice storm. The area affected by the ice was generally northeast of a line from Blue Ridge, to Atlanta, to Athens, to Washington. Warm ground temperatures and surface temperatures of only 31 to 32 across the ice storm area prevented any major problems from occurring. Thus, ice accumulations were minimal with accumulations generally around 1/4 inch. Problems caused by the ice were minimal as well, with just a scattering of power outages caused by small tree limbs falling on power lines. The warm ground temperatures kept ice from forming on roads and bridges for the most part, although isolated patches of ice formed on bridges and overpasses in some northeastern counties.

GAZ041>043

Haralson - Carroll - Douglas
04 2000EST 0 0 **Ice Storm**
2200EST

Emergency Managers and the public reported that ice accumulations of 1/4 inch were noted on trees, power lines, and cars. The ice accumulation was brief and quickly alleviated as temperatures rose above freezing shortly after midnight.

GAZ023>024-034>037-047-049 **Hall - Banks - Gwinnett - Barrow - Clarke - Oconee - Walton - Morgan**

13 0630EST 0 0 554K **High Wind**
0830EST

Sustained winds at estimated speeds of 40 to 45 mph with gusts of 50 to 55 mph developed along the back edge of a northeastward moving area of rain as it intersected a cold air wedge or back door cold front that was in place across northeast Georgia. The high winds combined with the wet saturated soil from recent and ongoing rains, blew down hundreds of trees and power lines in several northeast Georgia counties. Some of the trees fell on homes and vehicles causing additional damage. Several roads were blocked as well. Banks, Barrow, and Hall counties seemed to receive the worst of the wind. In Banks county, 53 roads were blocked by downed trees and power or phone lines, of which 10 were state roads and 43 were county roads. At least seven homes in the county sustained damage from trees that fell on them. In addition, four vehicles were totaled by fallen trees, two of which involved entrapments, and a barn was completely blown away at one residence. In Hall county, in addition to numerous downed trees and power lines, the roof was blown off the McEver Elementary School gymnasium, which simultaneously damaged two heating/air

Storm Data and Unusual Weather Phenomena

December 2002

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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GEORGIA, North and Central

conditioning units and a gas line. Up to 22,700 homes and businesses in northeast Georgia were left without power during the event, well into the afternoon in some cases.

Carroll County **Carrollton**

24 0530EST 0 1 10K Thunderstorm Wind

A reporter with an Atlanta Television news station reported that numerous trees were blown down across the county. In Carrollton, one of the downed trees landed on a home causing damage to the structure and injuring a young girl that lived at the residence.

Gordon County **Plainville**

24 0710EST 0 0 Urban/Sml Stream Fld

The Gordon county 911 center reported flooding of Millers Ferry Road.

Pickens County **Countywide**

24 0712EST 0 0 Urban/Sml Stream Fld

The Pickens county 911 center reported that several roads around the county had standing water on them from heavy rain.

Cobb County **2 W Marietta to** **2 NE Marietta**

24 0800EST 0 0 Flash Flood
1200EST

National Weather Service official river gage readings showed a quick rise of Sope Creek near Marietta as the result of 2.5 inches of rain in six hours or less. The river crested at 13.1 feet. Flood stage is 12.0 ft. Only minor nuisance flooding of low lying streets and areas near the creek, namely near Cobb Parkway/U.S. Highway 41, was observed. No monetary damage was associated with the flooding.

Fulton County **5 NW Atlanta to** **4 NE Atlanta**

24 0830EST 0 0 Flash Flood
1130EST

National Weather Service official river gage readings showed a rise of Peachtree Creek at Northside Drive from less than 10 feet to 17.3 feet in a 1 to 2 hour time frame. Flood stage is 17.0 feet. This was the result of rainfall up to 2.5 inches in 6 hours or less. Only minor nuisance flooding of low lying streets and areas, such as the Cross Creek Golf Course, near the creek was observed, with no monetary damage reported.

Gwinnett County **Lawrenceville**

24 0856EST 0 0 25K Lightning

The Gwinnett Daily Post reported that lightning struck the rear of a home on Spring Rose Glen causing slight fire damage, but extensive wiring damage. The family had to be relocated because all power had to be shut off to the home until repairs were made. However, no injuries were reported as a result of the incident.

De Kalb County **2 NW North Decatur to** **North Decatur**

24 0900EST 0 0 Flash Flood
1100EST

National Weather Service official river gage readings showed a rise of Peachtree Creek at Northside Drive from less than 10 feet to 17 feet in a 1 to 2 hour time frame. Flood stage is 17.0 feet. This was the result of rainfall up to 2.5 inches in 6 hours or less throughout this general area. Only minor nuisance flooding of low lying areas near the creek were observed, with no monetary damage reported. Nuisance flooding in low lying areas was also observed on Nancy Creek, which flows through the same general area.

Oconee County **Watkinsville**

24 0900EST 0 0 5K Lightning

The Oconee Enterprise reported that lightning struck a home in the Baker's Acres subdivision. The lightning struck just outside the house, but the current ran in on a Christmas light cord. The lightning strike caused extensive damage to the floor and sheet rock walls of the home's carport. Although the residents were home at the time of the incident, no injuries were reported.

Crisp County **Cordele**

24 0939EST 0 0 Tstm Wind/Hail

The Crisp county 911 center reported that a lone tree was blown down.

Crisp County **Cordele**

24 0939EST 0 0 Urban/Sml Stream Fld
1022EST

The Crisp county 911 center reported that there was minor flooding of U.S. Highway 41/Georgia Highway 90 in low lying areas.

Telfair County **Mc Rae**

24 1030EST 0 0 1K Thunderstorm Wind

The Telfair county 911 center reported that one tree was blown down and a couple of power lines on County Road 91.

Oconee County **Watkinsville**

25 1100EST 0 0 0.50K Strong Wind
1230EST

The Oconee Enterprise reported that two trees were blown down, both on Mars Hill Road. The strong winds, of 25 mph or greater, were the result of a tight pressure gradient behind a departing strong surface low on the east coast and a cold surface high advancing southeast from the Midwest.

Storm Data and Unusual Weather Phenomena

December 2002

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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GEORGIA, Northeast

GAZ010-017>018-026-028>029 Rabun - Habersham - Stephens - Franklin - Hart - Elbert

04	1500EST				0	0	3M		Ice Storm
05	0500EST								

Freezing rain began over extreme northeast Georgia around noon on the 4th, and resultant tree and power line damage began during the mid afternoon. By dawn on the 5th, 1/4 to 1/2 inch of ice had accumulated. Power outages lasted for several days in some areas.

GAZ010-017>018-026-028 Rabun - Habersham - Stephens - Franklin - Hart

13	0645EST 0800EST				0	0	75K		High Wind (G70)
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Damaging winds were produced by a gravity wave as it propagated across northeast Georgia during the mid morning. In Royston, a mobile home was reportedly blown over. Numerous trees and power lines were downed. Some trees fell on structures.

Stephens County Countywide

24	1200EST				0	0			Flash Flood
25	0000EST								

Some creeks and streams flooded low lying areas.

GAZ028

Hart

24	1900EST 2300EST				0	0			Flood
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Flat Shoals Rd in Hartwell was barricaded due to a flooding creek.

GEORGIA, Southeast

Candler County

Aline	24 1100EST				0	0			Thunderstorm Wind (G50)
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Several trees were down.

Tattall County

5 W Glennville	24 1100EST				0	0			Thunderstorm Wind (G50)
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Several trees and power lines were down.

Bulloch County

Countywide	24 1115EST 1130EST				0	0			Thunderstorm Wind (G52)
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Numerous trees, large limbs, and power lines were down across the county.

Evans County

Claxton	24 1115EST				0	0			Thunderstorm Wind (G52)
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Several trees, large limbs and power lines were down.

Liberty County

Allenhurst	24 1140EST				0	0			Thunderstorm Wind (G50)
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Trees were downed by strong winds.

Liberty County

Walthourville	24 1140EST				0	0			Thunderstorm Wind (G50)
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Trees and power lines were down.

Long County

Ludowici	24 1145EST				0	0			Thunderstorm Wind (G50)
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Numerous trees down in and around the town of Ludowici

Bryan County

3 NE Pembroke	24 1155EST				0	0			Thunderstorm Wind (G50)
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Trees and large limbs were down.

Effingham County

Rincon	24 1200EST				0	0			Thunderstorm Wind (G50)
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Several trees and large limbs were down.

Mcintosh County

Countywide	24 1215EST 1225EST				0	0			Thunderstorm Wind (G52)
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Numerous trees, large limbs, and power lines were down across the county.

Chatham County

Savannah	24 1230EST				0	0			Thunderstorm Wind (G52)
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Several trees were down.

Liberty County

5 E Riceboro	24 1240EST				0	0			Thunderstorm Wind (G50)
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Several trees were down along I-95.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
GEORGIA, Southwest									
Early County									
9 WNW Blakely to Colomokee	24	0755EST 0810EST	15	150	0	2	750K		Tornado (F1)
The tornado crossed the state line from Henry County Alabama into Early County Georgia. Its damage path extended from the Chattahoochee River northeast through Colomokee on U.S. Highway 27. The tornado destroyed one mobile home and damaged thirty others. Two persons were injured when their mobile home collapsed on them. Numerous trees and power lines were down. A state of emergency was declared. Reported by GEMA.									
Terrell County									
Southeast Portion to Countywide	24	0845EST 0850EST			0	0	100K		Thunderstorm Wind (G60)
Straight-line winds inflicted minor roof damage to several homes. Numerous trees and power lines were toppled. Approximately 400 customers were without power, from the town of Sasser south to the county line. Reported by a SKYWARN spotter and GEMA.									
Lee County									
Southwest Portion	24	0855EST 0910EST			0	0	250K		Thunderstorm Wind (G60)
Six homes were heavily damaged and 20 homes received minor damage along a path from just southwest of Palmyra to Leesburg. A school and church also sustained damage. There were numerous downed trees and power lines. A state of emergency was declared. Reported by a SKYWARN spotter and GEMA.									
Mitchell County									
Countywide	24	0930EST 0935EST			0	0	10K		Thunderstorm Wind (G50)
Downed trees and power lines reported by the Mitchell County Sheriff.									
Colquitt County									
Countywide	24	0935EST 0940EST			0	0	25K		Thunderstorm Wind (G50)
Numerous trees and power lines were down. A church sustained minor roof damage. Reported by the Colquitt County Sheriff and the Moultrie Observer.									
Worth County									
Countywide	24	0935EST 0945EST			0	0	50K		Thunderstorm Wind (G55)
Straight-line winds knocked down numerous trees and power lines, and peeled the roof of a home. Many residents along the South Georgia Parkway and Cordele Highway were without power for several hours. Reported by the Worth County EMA.									
Tift County									
Tifton	24	0950EST			0	0	50K		Thunderstorm Wind (G55)
Numerous trees and power lines were down throughout the city. Several trees fell on houses near U.S. Highway 125 north of Tifton. A home lost part of its roof. Reported by Tift County 911.									
Thomas County									
Countywide	24	1000EST 1005EST			0	0	50K		Thunderstorm Wind (G50)
A home was damaged, as well as numerous downed trees and power lines. A large portion of Thomasville was without power for several hours. Reported by GEMA.									
Turner County									
Countywide	24	1000EST 1005EST			0	0	10K		Thunderstorm Wind (G50)
Downed trees and power lines reported by GEMA.									
Ben Hill County									
Countywide	24	1010EST 1015EST			0	0	10K		Thunderstorm Wind (G50)
Downed trees and power lines reported by the Ben Hill County Sheriff.									
Brooks County									
Countywide	24	1010EST 1015EST			0	0	10K		Thunderstorm Wind (G50)
Downed trees and power lines reported by the Brooks County Sheriff.									
Irwin County									
3 N Ocilla to 3.2 NNE Ocilla	24	1010EST	0.3	75	0	0	250K		Tornado (F1)
A small tornado briefly touched town which destroyed a mobile home, damaged several barns and uprooted trees. The tornado also hit a mobile home industrial park, where a dozen homes were severely damaged. Reported by the Irwin County Sheriff.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>GEORGIA, Southwest</u>									
Berrien County									
Countywide	24	1015EST 1020EST			0	0	5K		Thunderstorm Wind (G50)
			Numerous downed trees reported by GEMA.						
Cook County									
Countywide	24	1015EST 1020EST			0	0	5K		Thunderstorm Wind (G50)
			Numerous downed trees, with some blocking county roads. Reported by the Cook County Sheriff.						
Lanier County									
Countywide	24	1030EST 1035EST			0	0	10K		Thunderstorm Wind (G50)
			Public reported downed trees and power lines in the Mann Road area south of Lakeland and Empire Church area north of Lakeland.						
Lowndes County									
Countywide	24	1030EST 1040EST			0	0	10K		Thunderstorm Wind (G50)
			Numerous downed trees and power lines. Power was disrupted along the Inner Perimeter Road corridor for several hours. Reported by the Lowndes County EMA.						
Lowndes County									
(Vad)Moody Afb Valdo	24	1036EST			0	0			Thunderstorm Wind (G55)
			A 63-mph wind gust was recorded by an Air Force weather observer.						
Calhoun County									
Countywide	24	0845EST 0855EST			0	0	500K		Thunderstorm Wind (G55)
			Straight-line winds destroyed an irrigation system and severely damaged a few homes in Arlington, caused roof and carport damage in Morgan, and downed numerous trees and power lines in Edison and other areas in the northwest portion of the county. Reported by GEMA.						
Dougherty County									
Albany	24	0905EST 0915EST			0	1	250K		Thunderstorm Wind (G55)
			Straight-line winds damaged several homes, an apartment complex, and downed numerous trees and power lines. One person suffered minor injuries. Reported by GEMA and SKYWARN spotter.						
<u>GULF OF MEXICO</u>									
Galveston Bay									
South Jetty	04	0648CST			0	0			Marine Tstm Wind
			Measured at South Jetty.						
High Is To Freeport Tx									
Out 20Nm									
South Jetty	04	0648CST			0	0			Marine Tstm Wind
			Measured at South Jetty.						
Tampa Bay									
Lower Tampa Bay	05	0848EST 0854EST			0	0			Marine Tstm Wind
			Storm developed very close to shore and winds were measured by observation station at Port Manatee.						
Ocean Reef To Craig									
Key Fl Out 20Nm									
7 S Key Largo	09	0848EST			0	0			Marine Tstm Wind
			Wind gust 34 knots (39 mph) recorded at Molasses Reef CMAN station						
Florida Bay									
7 NE Duck Key	10	0114EST			0	0			Marine Tstm Wind
			Wind gust 34 knots (39 mph) recorded at Long Key CMAN station						
Ocean Reef To Craig									
Key Fl Out 20Nm									
7 S Key Largo	10	0303EST			0	0			Marine Tstm Wind
			Wind gust 39 knots (45 mph) recorded at Molasses Reef CMAN station						
Freeport To									
Matagorda Ship Chnl									
20 To 60Nm									
Buoy 42019	12	1300CST			0	0			Marine Tstm Wind
			Measured at Buoy 42019.						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	
<u>GULF OF MEXICO</u>									
Craig Key To The W End Of The 7 Mile Bridge Out 20Nm 6 S Marathon	13	1621EST			0	0			Marine Tstm Wind
					Wind gust 39 knots (45 mph) recorded at Sombero Key CMAN station				
Sw Pass Of The Ms R To Atchafalaya R La Out 20Nm 20 S Venice	19	1535CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm Biloxi	19	1559CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm 22 SSE Biloxi	19	1621CST			0	0			Marine Tstm Wind
Mobile Bay Point Clear	19	1720CST			0	0			Marine Tstm Wind
Pensacola Fl To Pascagoula Ms Out 20Nm 2 S Dauphin Island	19	1725CST			0	0			Marine Tstm Wind
Pensacola Fl To Pascagoula Ms Out 20Nm Perdido Key	19	1846CST			0	0			Marine Tstm Wind
Corpus Christi To Baffin Bay Corpus Christi	23	2235CST			0	0			Marine Tstm Wind
					Reported by N.A.S. Corpus Christi.				
Matagorda Ship Chnl To Pt Aransas Out 20Nm Pltfm 17Se Prt Arnsas	23	2235CST			0	0			Marine Tstm Wind
Corpus Christi To Baffin Bay South Bird Island	23	2245CST			0	0			Marine Tstm Wind
					Reported by TCOON.				
Pt Aransas To Baffin Bay Tx Out 20Nm Bob Hall Pier	23	2311CST			0	0			Marine Tstm Wind
Freeport To Matagorda Ship Chnl Out 20Nm Freeport	23	2236CST			0	0			Marine Tstm Wind
					Measured at TCOONs site (065).				
High Is To Freeport Tx Out 20Nm 13 W Galveston	23	2236CST			0	0			Marine Tstm Wind
					Measured at Jamaica Beach.				
Galveston Bay South Jetty	23	2254CST			0	0			Marine Tstm Wind
					Measured at South Jetty.				
Cameron La To High Is Tx 20 To 60Nm 22 SW Mouth Of Sabine	23	2315CST			0	0			Marine Tstm Wind
					Oil rig recorded 43 knot wind gust.				

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	
<u>GULF OF MEXICO</u>									
Atchafalaya R To Cameron La 20 To 60Nm									
50 S Cameron	24	0000CST			0	0			Marine Tstm Wind
									Oil rig recorded 35 knot wind gust.
Cameron La To High Is Tx 20 To 60Nm									
25 SE Mouth Of Sabine	24	0005CST			0	0			Marine Tstm Wind
									Oil platform recorded 39 knot wind gust.
Atchafalaya R To Cameron La 20 To 60Nm									
35 S Cameron	24	0030CST			0	0			Marine Tstm Wind
									Oil rig recorded 52 knot wind gust.
Atchafalaya R To Cameron La 20 To 60Nm									
31 S Cameron	24	0100CST			0	0			Marine Tstm Wind
									Oil rig recorded 35 knot wind.
Atchafalaya R To Cameron La 20 To 60Nm									
28 S Cameron	24	0130CST			0	0			Marine Tstm Wind
									Oil rig recorded 43 knot wind gust.
Sw Pass Of The Ms R To Atchafalaya R La Out 20Nm									
20 S Venice	24	0249CST			0	0			Marine Tstm Wind
Atchafalaya R To Cameron La 20 To 60Nm									
26 SE Marsh Island	24	0300CST			0	0			Marine Tstm Wind
									Oil rig recorded 48 knot wind gust.
Sw Pass Of The Ms R To Atchafalaya R La Out 20Nm									
20 S Venice	24	0312CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm									
22 SSE Biloxi	24	0336CST			0	0			Marine Tstm Wind
Lake Ponchartrain And Lake Maurepas Mid Lke Pontchartrain									
24	0420CST				0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm									
22 SSE Biloxi	24	0442CST			0	0			Marine Tstm Wind
Pensacola Fl To Pascagoula Ms Out 20Nm									
Perdido Key	24	0511CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm									
22 SSE Biloxi	24	0548CST			0	0			Marine Tstm Wind

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
<u>GULF OF MEXICO</u>									
Sw Pass Of The Ms R To Atchafalaya R La Out 20Nm									
20 S Venice	24	0556CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R Out 20Nm									
22 SSE Biloxi	24	0558CST			0	0			Marine Tstm Wind
Lake Ponchartrain And Lake Maurepas Mid Lke Pontchartrain									
24	24	0620CST			0	0			Marine Tstm Wind
Pascagoula Ms To Sw Pass Of Ms R 20 To 60Nm									
45 E Venice	24	0821CST			0	0			Marine Tstm Wind
Apalachicola To Destin Fl Out 20Nm									
18 S Miramar Beach	24	0825EST			0	0			Waterspout
A waterspout was reported by Walton County 911.									
Apalachicola To Destin Fl Out 20Nm									
Grayton Beach	24	0830EST			0	0			Waterspout
A waterspout was reported by Walton County 911.									
Corpus Christi To Baffin Bay South Bird Island									
30	30	1830CST			0	0			Marine Tstm Wind
Reported by TCOON marine observation site.									
Corpus Christi To Baffin Bay Rockport									
30	30	1838CST			0	0			Marine Tstm Wind
Corpus Christi To Baffin Bay Corpus Christi									
30	30	1840CST			0	0			Marine Tstm Wind
Reported by N.A.S. Corpus Christi.									
Matagorda Ship Chnl To Pt Aransas Out 20Nm									
Pltfm 17Se Prt Arnsas	30	1842CST			0	0			Marine Tstm Wind
Pt Aransas To Baffin Bay Tx Out 20Nm									
Bob Hall Pier	30	1911CST			0	0			Marine Tstm Wind
Pt Aransas To Baffin Bay Tx 20 To 60Nm									
45 SE Baffin Bay	30	2000CST			0	0			Marine Tstm Wind
Matagorda Ship Chnl To Pt Aransas Tx 20 To 60Nm									
90 E Port Aransas	30	2100CST			0	0			Marine Tstm Wind
Freeport To Matagorda Ship Chnl 20 To 60Nm									
Buoy 42019	30	2100CST			0	0			Marine Tstm Wind
Measured at Buoy 42019.									
Galveston Bay South Jetty									
30	30	2112CST			0	0			Marine Tstm Wind
Measured at South Jetty.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
GULF OF MEXICO									
High Is To Freeport Tx Out 20Nm									
South Jetty	30	2112CST			0	0			Marine Tstm Wind
		Measured at South Jetty.							
High Is To Freeport Tx Out 20Nm									
South Jetty	30	2136CST			0	0			Marine Tstm Wind
		Measured at South Jetty.							
Freeport To Matagorda Ship Chnl 20 To 60Nm									
Buoy 42019	30	2200CST			0	0			Marine Tstm Wind
		Measured at Buoy 42019.							
High Is To Freeport Tx Out 20Nm									
Pleasure Pier	30	2200CST			0	0			Marine Tstm Wind
		Measured at Pleasure Pier.							
High Is To Freeport Tx Out 20Nm									
South Jetty	30	2236CST			0	0			Marine Tstm Wind
		Measured at South Jetty.							
High Is To Freeport Tx Out 20Nm									
South Jetty	30	2242CST			0	0			Marine Tstm Wind
		Measured at South Jetty.							
Atchafalaya R To Cameron La Out 20Nm									
17 SE Cameron	30	2330CST			0	0			Marine Tstm Wind
		Oil rig recorded 43 knot wind gust.							
Atchafalaya R To Cameron La 20 To 60Nm									
39 SE Cameron	31	0000CST			0	0			Marine Tstm Wind
		Oil rig recorded 39 knot wind gust.							
Atchafalaya R To Cameron La 20 To 60Nm									
33 SW Marsh Island	31	0030CST			0	0			Marine Tstm Wind
		Oil rig recorded 52 knot wind gust.							
Atchafalaya R To Cameron La 20 To 60Nm									
52 SW Marsh Island	31	0130CST			0	0			Marine Tstm Wind
		Oil rig recorded 41 knot wind gust.							
Lake Ponchartrain And Lake Maurepas Lkfrnt Arpt New Pascagoula Ms To Sw Pass Of Ms R Out 20Nm									
22 SSE Biloxi	31	0411CST			0	0			Marine Tstm Wind
Sw Pass Of The Ms R To Atchafalaya R La Out 20Nm									
20 S Venice	31	0547CST			0	0			Marine Tstm Wind

Storm Data and Unusual Weather Phenomena

December 2002

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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GULF OF MEXICO

**Pascagoula Ms To Sw
Pass Of Ms R Out
20Nm**

22 SSE Biloxi 31 0622CST 0 0 Marine Tstm Wind

**Mobile Bay
Alabama Port** 31 0630CST 0 0 Marine Tstm Wind

**Pascagoula Ms To Sw
Pass Of Ms R 20 To
60Nm**

45 E Venice 31 0732CST 0 0 Marine Tstm Wind

**Destin To Pensacola Fl
Out 20Nm**

Destin 31 0952CST 0 0 Marine Tstm Wind

**Destin To Pensacola Fl
Out 20Nm**

Destin 31 0957CST 0 0 Marine Tstm Wind

**Bonita Beach To
Englewood Fl Out
20Nm**

35 NNW Gasparilla Pass 31 2305EST 0 0 Waterspout
2310EST

Waterspout came onshore near the intersection of Tidewood Avenue and Southwood Street in Sarasota.

HAWAII

HIZ001>003-005>007 Kauai - Oahu - Maui - Molokai - Lanai - West Hawaii Including Leeward Kohala And Kona
01 2000HST 0 0 High Surf
04 1800HST

A storm low far northwest of Hawaii generated surf of 10 to 20 feet along the northwest-facing shores of all the islands. There were no reports of serious injuries or property damage.

HIZ001>003-005>007 Kauai - Oahu - Maui - Molokai - Lanai - West Hawaii Including Leeward Kohala And Kona
06 1000HST 0 0 High Surf
07 2000HST

A storm low far west/northwest of the state produced surf of 10 to 20 feet along the northwest-facing shores of all isles and the west-facing shores of Oahu. No serious property damage or injuries were reported.

Hawaii County

Honokaa to 10 1700HST 0 0 Heavy Rain
Pahoa 11 2300HST

Heavy showers caused minor stream and drainage ditch flooding and ponding of roadways along the Hamakua coast and in the Hilo and Puna districts on the Big Island of Hawaii. No serious injuries or property damage were reported.

HIZ004 North And East Hawaii Including Windward Kohala / Hamakua / Hilo / Puna
10 1900HST 0 0 Winter Storm
11 0600HST

About an inch of snow fell on Mauna Kea on the Big Island of Hawaii above the 12,500-foot level. The resultant icy conditions caused officials to close the road that leads to the 13,796-foot summit for several hours on the 11th. The road was reopened by 10:15 AM later that day. There were no reports of serious injuries or property damage.

HIZ001>003-005>007 Kauai - Oahu - Maui - Molokai - Lanai - West Hawaii Including Leeward Kohala And Kona
14 0900HST 0 0 High Surf
16 0800HST

A deep storm low far northwest of the state produced surf of 12 to 25 feet along the west- and northwest-facing shores of all the Hawaiian Islands. However, no serious injuries or property damage were reported.

HIZ001>003-005>007 Kauai - Oahu - Maui - Molokai - Lanai - West Hawaii Including Leeward Kohala And Kona
21 0600HST 0 0 High Surf
22 1000HST

A storm low near the Aleutians generated surf of 10 to 20 feet along the northwest-facing shores of all the Hawaiian Islands. However, there were no reports of serious property damage or injuries.

HIZ007 West Hawaii Including Leeward Kohala And Kona
27 2200HST 0 0 High Wind (G50) ^M
28 1600HST

A strong high pressure cell to the north and northeast of the state produced enhanced trade winds over the Big Island of Hawaii. These winds especially impacted the South Kohala District, from Waimea to Kawaihae. Sustained winds were 30 to 40 mph, with gusts that occasionally approached 60 mph. No serious injuries or property damage were reported, however.

Storm Data and Unusual Weather Phenomena

December 2002

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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HAWAII

HIZ001>003-005

Kauai - Oahu - Maui - Molokai

30 2200HST

0 0

High Surf

31 1600HST

A storm low that had been near the Kamchatka Peninsula caused surf of 10 to 15 feet along the northwest-facing shores of Kauai, Oahu, Molokai and Maui. No serious property damage or injuries were reported.

IDAHO, Extreme Southeast

NONE REPORTED.

IDAHO, North

IDZ010

Eastern Lemhi County

16 1228MST

0 0

High Wind (G52)

IDZ007

Orofino / Grangeville Region

16 1320MST

0 0

10K

Strong Wind

Strong cold front brought damaging winds to north central Idaho during the early afternoon hours. In Idaho County, Sheriff reported roof damage and phone lines downed in Cottonwood. Tree limbs were broken in Grangeville where wind gusts to 56 mph were reported by automated weather station at the airport. In Lemhi County, RAWs station reported wind gusts to 60 mph.

IDZ005>006-010

Northern Clearwater Mountains - Southern Clearwater Mountains - Eastern Lemhi County

26 1500MST

0 0

Winter Storm

27 0900MST

IDZ007

Orofino / Grangeville Region

27 0920MST

0 0

High Wind (G52)

Strong winter storm hit north central Idaho during the late night and morning hours of 12/26 to 12/27. Strong gusty south winds of 20 to 40 mph were reported with local gusts to near 60 mph over the higher peaks. Automated weather station at Grangeville reported sustained south winds of 37 mph with gusts to 58 mph at 920 AM PST. Heavy snow fell above 4000 feet with 7 to 10 inches recorded by Snotel sites in Clearwater County, 7 inches at Dixie in Idaho County, and 6 inches at Gibbonsville and Moose Creek in Lemhi County.

IDZ005

Northern Clearwater Mountains

30 1000MST

0 0

Heavy Snow

31 1600MST

Winter storm brought heavy snow to the Clearwater Mountains of north central Idaho the last two days of December. Snotel sites recorded 7 to 8 inches above 4000 feet.

IDAHO, Northwest

IDZ001

Northern Panhandle

12 1800PST

0 0

Heavy Snow

13 0600PST

Heavy snow fell over the mountains of the northern Idaho panhandle, generally above 4000 feet. Snowfall totals include: Schweitzer Bowl SNOTEL...20", Hidden Lake SNOTEL...19", Bear Mountain SNOTEL...14", and the Mosquito Ridge SNOTEL...9".

IDZ001

Northern Panhandle

16 1800PST

0 0

Heavy Snow

17 0600PST

Heavy snow fell in the mountains of the northern Idaho panhandle. Eleven inches of snow fell at the Hidden Lake SNOTEL site.

IDZ001>002-004

Northern Panhandle - Coeur D'Alene Area - Central Panhandle Mountains

26 1000PST

0 0

Heavy Snow

27 1000PST

Heavy snow fell over the central and northern Idaho panhandle starting the day after Christmas. Snowfall totals include: Silver Mountain Ski Area...12", Lookout Pass Ski Area...12", Schweitzer Ski Area...10", Bonners Ferry...8", Rathdrum...7.5", Priest River...6.5", and Sandpoint...5.3".

IDZ001>002-004-027

Northern Panhandle - Coeur D'Alene Area - Central Panhandle Mountains - Lewis And Southern Nez Perce

28 1800PST

0 0

Heavy Snow

29 0600PST

Heavy snow fell over the Idaho panhandle. Snowfall totals include: Sunset SNOTEL...10", Humboldt Gulch SNOTEL...10", Silver Mountain Ski Area...9", Lookout Pass Ski Area...9", Winchester...6.1", Priest River...6", Sandpoint...5.8", Rathdrum...5", and Porthill...4.1".

IDZ001

Northern Panhandle

31 0000PST

0 0

Heavy Snow

1500PST

Heavy snow fell over the northern Idaho panhandle. Snowfall totals include: Porthill...10", Priest River...10", Bonners Ferry...8", Schweitzer Ski Area...8", and Sandpoint...6.5".

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
IDAHO, Southeast									
IDZ021			Lower Snake River Plain						
	01	0001MST			0	0			Extreme Cold
	31	0000MST							
	During calendar year 2002, the average temperature at the Pocatello Regional airport was 44.2 degrees. This made it the 5th coldest calendar year ever recorded in Pocatello. Outstanding "cold" highlights of the year were the 5th coldest February at 18.5 degrees, the 12th coldest March at 32.6 degrees, the 8th coldest August at 66.1 degrees, and the 2nd coldest October at 42.5 degrees. Records began being kept in Pocatello in 1899.								
IDZ031			Big And Little Wood River Region						
	13	0700MST			0	0			Heavy Snow
	14	0700MST							
	6 to 10 inches of snow fell at elevations above 8,000 feet.								
IDZ018-031>032			Sawtooth Mountains - Big And Little Wood River Region - Lost River / Pahsimeroi						
	15	0700MST			0	0			Heavy Snow
	16	1600MST							
	Heavy snow fell in the mountains of central Idaho. 6 inches fell in Hailey. 12 to 14 inches fell in Ketchum and 18 to 20 inches in the Sawtooth National Recreation Area. UP to a foot of snow was reported at SNOTEL sites above 8,000 feet.								
IDZ018>019-023-031>032			Sawtooth Mountains - Upper Snake Highlands - Caribou Highlands - Big And Little Wood River Region - Lost River / Pahsimeroi						
	16	1600MST			0	0			Heavy Snow
	17	1000MST							
	Heavy snow fell in the central and southeastern mountains of Idaho. 6 inches fell in Island Park. 14 to 20 inches fell at elevations above 6500 feet at Crab Creek SNOTEL, White Elephant SNOTEL and Hilts Creek SNOTEL.								
IDZ018>019-031>032			Sawtooth Mountains - Upper Snake Highlands - Big And Little Wood River Region - Lost River / Pahsimeroi						
	27	0100MST			0	0			Heavy Snow
	28	0600MST							
	Heavy snow fell in the central and eastern mountains of Idaho. 8 inches fell at Island Park. 10 inches fell at Macks Inn. 12 inches of snow fell in Ketchum. SNOTEL sites above 6500 feet recorded between 10 and 20 inches of snow in the Stanley and Sun Valley areas.								
IDZ018>019-022>023-031>032			Sawtooth Mountains - Upper Snake Highlands - South Central Highlands - Caribou Highlands - Big And Little Wood River Region - Lost River / Pahsimeroi						
	30	1200MST			0	0			Heavy Snow
	31	1500MST							
	Very heavy snow fell in the mountains of southeastern Idaho through the day on New Year's Eve. Heavier amounts were 6 inches in Carey, 6 inches at Mink's Creek, 6 inches at Macks Inn, 25 inches at Tamarack Lodge in Sun Valley, 27 inches at Galena Lodge, 12 to 15 inches in Hailey, 8 inches in Holbrook and 7 inches 10 miles northeast of Pocatello.								
IDZ017>023-031>032			Eastern Magic Valley - Sawtooth Mountains - Upper Snake Highlands - Upper Snake River Plain - Lower Snake River Plain - South Central Highlands - Caribou Highlands - Big And Little Wood River Region - Lost River / Pahsimeroi						
	31	2300MST			0	0			Drought
	Drought conditions remained severe to extreme throughout 2002 across southeastern Idaho. Pocatello received only 7.32 inches of precipitation for the year which made it the 5th driest year since 1900. This followed the second driest year ever in 2001 at 7.10 inches. The three year period from 2000 through 2002 is the driest three year period ever recorded in Pocatello...and 2002 was the 4th straight year with below normal precipitation for the city. Early winter snowfall was not extreme either and through the end of December mountain snowpacks were generally running about 60 to 80 percent of normal...not easing drought concerns in the region.								
IDAHO, Southwest									
IDZ011			West Central Mountains						
	26	1300MST			0	0			Heavy Snow
	27	2200MST							
	moderate winter storm dropped up to 10 inches of snow.								
IDZ011-013			West Central Mountains - Boise Mountains						
	30	0900MST			0	0			Heavy Snow
		2000MST							

Storm Data and Unusual Weather Phenomena

December 2002

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

ILLINOIS, Central

ILZ073

Lawrence

04 0900CST

0 0 0 0 Heavy Snow

05 0500CST

6.8 inches of snow was measured by a cooperative observe in Lawrenceville between 9 AM on 12/04/02 and 5 AM on 12/05/02. Between 6 and 7 inches of snow accumulated across the southeast quarter of Lawrence County from Lawrenceville southeast to the Wabash River. There was little to no blowing and drifting snow with this storm. This was the first heavy snow of the season for Lawrence County. This was also an unusually early heavy snowfall for Lawrenceville, as typically 3.5 inches of snow falls in December.

Scott County

Alsey

17 2345CST

0 0 0 0 Thunderstorm Wind (G70)

2355CST

Morgan County

1 SW Jacksonville to

Prentice

18 0000CST

0 0 100K 0 Thunderstorm Wind (G70)

0020CST

Cass County

Ashland

18 0020CST

0 0 0 0 Thunderstorm Wind (G60)

0025CST

Menard County

Greenview

18 0035CST

0 0 0 0 Thunderstorm Wind (G55)

0040CST

A line of severe thunderstorms moved northeast across Western Illinois causing sporadic wind damage. As the storms moved into Alsey (Scott Co.) a large power pole was snapped off and fell across Illinois Route 106 on the south side of town. Several other power poles were broken off about half a mile further northeast along the Alsey/Manchester Road. Also, numerous trees and tree limbs were blown down in this area. When the storms moved through Jacksonville (Morgan Co.), a three mile long path of damage was created. Numerous trees, tree limbs, power lines and power poles were blown down. Some of the fallen trees destroyed several garages, cars and the roof of one house. Also, a 35 foot by 40 foot section of roof was blown off of the Morgan County Courthouse and a 50 foot tall fire dispatch radio tower was blown down. In northeastern Morgan County, near Prentice, a tree and a grain bin were blown over onto power lines. As the storms moved through Ashland (Cass Co.), several trees were blown down but no structures were damaged. In Greenview (Menard Co.), a large tree was blown down onto a house causing minor damage.

ILZ056

Coles

18 1620CST

0 0 0 0 High Wind (G38) ^M

1625CST

In Mattoon, high gradient winds blew a 6 foot section of roof off of the high school gym. Several trees and power lines in the area were blown down as well. No injuries were reported.

ILZ041-043>044-

046>047-053>057-

061>063-066>068-071-

073

Mason - De Witt - Piatt - Vermilion - Cass - Macon - Moultrie - Douglas - Coles - Edgar - Shelby - Cumberland - Clark - Effingham - Jasper - Crawford - Clay - Lawrence

24 1200CST

0 0 0 0 Heavy Snow

25 0400CST

Heavy snow accumulations between 6 and 8 inches fell across a large part of Central and Southeast IL between noon on 12/24/02 and 4 AM on 12/25/02. The heavy snow accumulations generally occurred east of I-55 with another heavy snow band just east of the IL River across Mason and Cass Counties. There were local 9 inch amounts of snow in Effingham and Sidell (Southwest Vermilion county). The Christmas Eve snow caused numerous vehicle related accidents, especially during the afternoon and early evening of 12/24/02 when 35 to 40 accidents occurred in Champaign county. There were no deaths in Central and Southeast IL, but there were two minor vehicle related injuries in Springfield where snowfall amounts averaged 5 inches. There was only minor blowing and drifting snow with this winter storm. With the exception of Lawrence County, this was the first heavy snow of the season across Central and Southeast IL.

ILLINOIS, Northeast

ILZ023-032>033-039

Kankakee - Livingston - Iroquois - Ford

24 1800CST

0 0 0 0 Winter Storm

25 0400CST

Low pressure tracked across Kentucky, southern Indiana and Ohio during the evening of December 24th and the morning of December 25th 2002. The storm left a band of snowfall between 5 and 7 inches across east central Illinois. Several locations reported 6 inches of snow with the highest snowfall total of 7 inches reported in Chatsworth in Livingston county.

Storm Data and Unusual Weather Phenomena

December 2002

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

Mercer County

Countywide	18	1200CST 1230CST			0	0			Thunderstorm Wind (G70)
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Severe winds ripped through Mercer County producing scattered reports of damage. One residence in Aledo suffered damage when a metal porch roof struck the home and then an automobile. That same porch roof landed in the power lines in front of another residence a few blocks away. Nearby, a window was blown out of another residence. West of Aledo there was damage to a building at a shooting range. Also, large storage barrels were tossed across a field. Buildings were also damaged near the city of Reynolds.

ILLINOIS, South

ILZ075>078-080>094

Jefferson - Wayne - Edwards - Wabash - Perry - Franklin - Hamilton - White - Jackson - Williamson - Saline - Gallatin - Union - Johnson - Pope - Hardin - Alexander - Pulaski - Massac

04		0700CST			0	0			Winter Storm
05		0500CST							

A major winter storm brought significant snow and ice accumulations to all of southern Illinois. The precipitation was mostly snow, except in counties bordering the Ohio River, where the snow changed to an extended period of freezing rain. Ice accumulations were around one quarter inch from Cairo to Metropolis and Golconda. Snow accumulations across southern Illinois were generally six to eight inches. Freezing rain kept amounts down to near 4 inches in counties bordering the Ohio River. From Pinckneyville and Mount Vernon to the Wabash Valley, the snow fell in two distinct bursts, with two to three inches during the midday hours, followed by another two or three inches during the late night hours. The spotty 8-inch snowfall amounts were reported in a band between Illinois Route 13 and the Shawnee National Forest. Travel was heavily impacted by the winter storm. Numerous vehicle accidents occurred. Schools were closed for the remainder of the week in some counties. The winter storm began during the early morning hours and ended late the following night.

Alexander County

East Cape Girardeau	18	2000CST			0	0			Urban/Sml Stream Fld
	19	0200CST							

Perry County

Pinckneyville	18	2000CST			0	0			Urban/Sml Stream Fld
	19	0200CST							

Saline County

Harrisburg	18	2000CST			0	0			Urban/Sml Stream Fld
	19	0300CST							

A series of thunderstorms produced very heavy rainfall during the evening of the 18th. Minor flooding of poor drainage areas and flood-prone areas occurred. One lane of Illinois Route 146 was underwater in East Cape Girardeau near the Mississippi River bridge. Minor street and road flooding occurred, including numerous streets in Pinckneyville. Minor street flooding was reported in Harrisburg.

ILZ075>078-080>091

Jefferson - Wayne - Edwards - Wabash - Perry - Franklin - Hamilton - White - Jackson - Williamson - Saline - Gallatin - Union - Johnson - Pope - Hardin

23		2000CST			0	0			Winter Storm
24		1900CST							

A winter storm over parts of southern Illinois occurred in two parts. The first round consisted of a band of sleet and snow during the evening of the 23rd. Two to four inches of sleet and snow accumulated in a band from Carbondale to Harrisburg and Carmi. The precipitation was mainly sleet east of the Marion and Carbondale area, where amounts were close to two inches. The second part, on the afternoon of the 24th, consisted of several hours of heavy snow in much the same area. Three to six inches of snow fell along and north of a line from Carbondale to Harrisburg. This brought storm total accumulations to 7 inches in places such as Pinckneyville, Murphysboro, and West Frankfort. The snowfall diminished rapidly to the south, with only a dusting along the Ohio River between Cairo, IL and Paducah, KY. On the south side of the heavy snow area, significant ice accumulations occurred over much of the Shawnee National Forest region, roughly along the Illinois Route 146 corridor from Anna to Golconda. About one quarter inch of ice glazed trees, wires, and fences. Numerous accidents were reported throughout southern Illinois. Saline County officials received 32 calls for emergency assistance, mostly due to vehicles in ditches. A few serious accidents with injuries occurred. A rollover accident on Route 145 injured four people.

ILLINOIS, Southwest

ILZ079

Randolph

04		0400CST			0	0			Winter Storm
		2300CST							

The first winter storm of the season hit the area dropping 3 to 6 inches of snow. With temperatures in the middle 20s, the snow immediately began to accumulate on area roads as it started to fall about 4 am. Most area schools had to close as travel became very hazardous.

ILZ064>065-069>070-074-100>102

Bond - Fayette - Clinton - Marion - Washington - Madison - St. Clair - Monroe

04		0600CST			0	0			Winter Storm
		2200CST							

Storm Data and Unusual Weather Phenomena

December 2002

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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ILLINOIS, Southwest

It was a commuter's nightmare as the first winter storm of the season hit parts of Southwest Illinois. With temperatures in the middle 20's, the light snow immediately stuck to area roads as it started to fall around 6 am creating very slick conditions. With roads becoming crowded with people heading to work, the highway and road crews could not make much headway in terms of plowing or spreading salt. Traffic in the St. Louis Metropolitan area crawled along throughout the day. Area school busses were running up to 2 hours late in getting children to school. In some areas, accident reports were coming in at the rate of 30 to 40 an hour. Snowfall across the region ranged from 2 to 5 inches.

Calhoun County

Batchtown	18	0330CST			0	0			Thunderstorm Wind (G55)
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The Sheriff's Department reported some trees down in Batchtown.

Madison County

5 SW Edwardsville	18	1010CST			0	0			Hail (1.00)
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Storm spotters reported 1 inch hail at the intersection of I-270 and Highway 111.

Pike County

Pleasant Hill	18	1530CST			0	0			Hail (0.75)
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The local Fire Department reported 3/4 inch hail.

ILZ058>060-064>065-098>100 **Greene - Macoupin - Montgomery - Bond - Fayette - Calhoun - Jersey - Madison**

	24	0600CST			0	0			Winter Storm
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A Christmas Eve snowstorm hit parts of Southwest Illinois. Snowfall amounts across the region ranged from 4 to 8 inches. While area children loved the Christmas snow, adults had to deal with difficult travel conditions through Christmas Day.

ILZ069>070-074-079-101>102 **Clinton - Marion - Washington - Randolph - St. Clair - Monroe**

	24	0600CST			0	0			Winter Storm
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A Christmas Eve snowstorm hit parts of Southwest Illinois. Snowfall across the region ranged from 7 to 10 inches. While area children loved the Christmas snow, area adults had to deal with very difficult travel conditions. Many people had to stay home instead of visiting family and friends.

INDIANA, Central

INZ071

Jackson

	20	1545EST			0	0			Flood
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Flooding of lowlands along the East Fork White River. The river crested at 12.42 feet where the flood stage is 12.0 feet.

INZ021-028>031-035>042-044>048-053>054-057 **Carroll - Warren - Tippecanoe - Clinton - Howard - Fountain - Montgomery - Boone - Tipton - Hamilton - Madison - Delaware - Randolph - Parke - Putnam - Hendricks - Marion - Hancock - Owen - Morgan - Rush**

	24	1600EST			0	0			Heavy Snow
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Low pressure moved across the lower Ohio Valley on Christmas Eve and Christmas Day providing heavy snow to a large part of central Indiana. Snowfall amounts averaged 6 to 9 inches. The snow caused many automobile accidents. Indianapolis set a snow depth record for Christmas morning with 7 inches on the ground.

INDIANA, Northeast

INZ003>009-012>018-020-022>027-032>034

La Porte - St. Joseph - Elkhart - Lagrange - Steuben - Noble - De Kalb - Starke - Pulaski - Marshall - Fulton - Kosciusko - Whitley - Allen - White - Cass - Miami - Wabash - Huntington - Wells - Adams - Grant - Blackford - Jay

	24	2245EST			0	0	0	0	Heavy Snow
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Low pressure tracked from Kentucky into Ohio during the overnight hours of Christmas Eve into Christmas Day morning, spreading a large area of snow across the region. Most locations received 6 to 8 inches of snow. A narrow band of 8 to 10 inches occurred from Monticello, to Rochester, to Albion. Isolated reports of 9 inches of snow were received in Adams and Grant counties. Gusty northwest winds created widespread blowing and drifting snow.

INDIANA, Northwest

INZ001>002-010>011

Lake - Porter - Newton - Jasper

	24	1800CST			0	0			Winter Storm
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Low pressure tracked across Kentucky, southern Indiana and Ohio during the evening of December 24th and the morning of December 25th 2002. The storm left a band of snowfall between 5 and 7 inches across far northwest Indiana. Many locations reported 6 inches of snow with the highest snowfall total of 7.4 inches reported in Crown Point in Lake county Indiana.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
<u>INDIANA, South Central</u>									
Floyd County									
Countywide	19	1700EST 2140EST			0	0			Flash Flood
Ten feet of water covered Crowder Road. Several other county roads were under water but passable.									
Harrison County									
Corydon	19	1700EST 2140EST			0	0			Flash Flood
Numerous low water crossings were under water in the Corydon area. Barricades were necessary in several locations.									
Clark County									
Jeffersonville	19	1704EST 2130EST			0	0			Flash Flood
Underpasses were flooded on Eastern Boulevard.									
INZ090>091									
Harrison - Floyd									
	19	2140EST			0	0			Flood
	20	0300EST							
Numerous roads remained closed countywide due to standing or flowing water.									
INZ079									
Jefferson									
	20	0430EST 0730EST			0	0			Flood
The Muscatatuck River at Deputy crested at 20.8 feet at 5:15 AM EST. Flood stage at Deputy is 20 feet. At this level, county roads are under water in northeast Jefferson County, Indiana.									
<u>INDIANA, Southeast</u>									
INZ066-073>075-080									
Franklin - Ripley - Dearborn - Ohio - Switzerland									
	05	0210EST 0655EST			0	0			Winter Storm
Low pressure tracked across the Tennessee Valley overnight on the 4th and early on the 5th. North of the low, a swath of moderate to heavy snow moved across southeast Indiana, producing 3 to 6 inches of snow.									
INZ050-058>059-066									
Wayne - Fayette - Union - Franklin									
	25	0430EST 1000EST			0	0			Winter Storm
A strong storm system tracked across the region late Christmas Eve into Christmas morning. Precipitation fell as a mix of freezing rain, sleet and snow across southeast Indiana. Across east central Indiana, precipitation fell primarily as snow and produced 3 to 5 inches of accumulation.									
<u>INDIANA, Southwest</u>									
INZ081>082-085>088									
Gibson - Pike - Posey - Vanderburgh - Warrick - Spencer									
	04	1100CST			0	0			Winter Storm
	05	0500CST							
A winter storm brought significant snow and ice accumulations to southwest Indiana. The precipitation type was mostly snow, but the counties bordering the Ohio River received a significant period of freezing rain and sleet. Around one quarter inch of ice accumulated from Evansville east to Boonville and Rockport. Snow accumulations ranged from 2 to 5 inches. A total of 2.5 inches was measured at the Evansville airport. North of Interstate 64, the snow fell in two distinct periods, with a couple of inches during the midday hours and another couple of inches late at night. Travel was heavily impacted by the winter storm. Numerous vehicle accidents occurred, including 25 in the city of Evansville alone. Schools and some businesses were closed. The winter storm began during the morning hours and ended late the following night.									
INZ081>082-085>088									
Gibson - Pike - Posey - Vanderburgh - Warrick - Spencer									
	23	2200CST			0	0			Winter Storm
	24	1900CST							
About two inches of sleet, mixed with some snow, fell south of Interstate 64 during the night of the 23rd. Only an inch or less fell north of the interstate. During the late afternoon and evening of Christmas Eve, an additional 3 inches of snow fell over most of southwest Indiana, except only around an inch in some places along the Ohio River. Emergency officials reported numerous minor accidents and vehicles sliding off roads on Christmas Eve.									
<u>IOWA, Central</u>									
NONE REPORTED.									
<u>IOWA, East Central and Southeast</u>									
Benton County									
3 SW Atkins	18	0810CST			0	0			Hail (0.75)
Delaware County									
Dundee	18	1545CST			0	0			Funnel Cloud

Storm Data and Unusual Weather Phenomena

December 2002

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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IOWA, East Central and Southeast

Buchanan County
2 N Aurora 18 1550CST 0 0 **Funnel Cloud**

IOWA, Northeast

NONE REPORTED.

IOWA, Northwest

NONE REPORTED.

IOWA, Southwest

NONE REPORTED.

KANSAS, East

KSZ008>012-020>024-026-034>040-054>056-058>059 **Republic - Washington - Marshall - Nemaha - Brown - Cloud - Clay - Riley - Pottawatomie - Jackson - Jefferson - Ottawa - Dickinson - Geary - Morris - Wabaunsee - Shawnee - Douglas - Lyon - Osage - Franklin - Coffey - Anderson**

01 0001CST 0 0 **Drought**
31 2359CST

The drought conditions of the past Summer and Autumn continued into December. Only .05 of an inch of rain was recorded at Topeka which tied the second driest December on record. Further to the west, Concordia recorded only .11 of an inch of rain which was three quarters of an inch below normal. Except for isolated areas in east central Kansas where moisture was received from several snow storms (discussed separately) monthly precipitation amounts over the area were less than 2 tenths of an inch.

KSZ058>059

Coffey - Anderson
03 2100CST 0 0 **Winter Storm**
04 0500CST

A winter storm spread snow across Anderson and Coffey counties in east central Kansas. Snowfall amounts ranged from 3 to 6 inches with the larger amounts in Anderson county. Roads became slick and hazardous with a number of vehicle accidents reported but no injuries of note.

KSZ021>022-034>038-040-056-058>059 **Clay - Riley - Ottawa - Dickinson - Geary - Morris - Wabaunsee - Douglas - Franklin - Coffey - Anderson**

07 0200CST 0 0 **Fog**
 0830CST

Dense fog developed over much of east central and parts of northeast Kansas early on the 7th. Visibilities were reduced to near zero in places for a time. But no vehicle accidents were reported.

KSZ040-054>056-058

Douglas - Lyon - Osage - Franklin - Coffey
26 1715CST 0 0 **Winter Storm**
 2200CST

Snow fell over east central Kansas the evening of the 26th and produced amounts of 1 to 4 inches. The greatest amount of 3 to 4 inches occurred near Americus in Lyon county. Roads became slick and resulted in numerous vehicle accidents, but no injuries of note.

KANSAS, Extreme Southeast

KSZ097-101

Crawford - Cherokee
04 0100CST 0 0 **Winter Storm**
05 0500CST

The first of a series of winter storms within the 2002-2003 cool season brought several inches of snow to areas of extreme southeast Kansas. The heaviest snow occurred in a 25 mile wide band extending from McCune to Pittsburg, where six to eight inch amounts were common. Most other accumulation values ranged from two to five inches north and south of the heavy band. No major property damage was directly linked to the elements, however, numerous vehicle accidents were reported across the region.

Bourbon County

Ft Scott 17 2310CST 0 0 **Hail (0.75)**

Cherokee County

5 SW Columbus 18 0055CST 0.5 20 0 0 0 0 **Tornado (F0)**
Tornado briefly touched down in open farm land.

Cherokee County

5 E Columbus 18 0108CST 0.5 20 0 0 0 0 **Tornado (F0)**
Meteorologist at KOAM TV near Crestline, observed a tornado briefly touching down in an open field.

KSZ073-097-101

Bourbon - Crawford - Cherokee
24 0400CST 0 0 **Winter Storm**
 0430CST

The second major winter storm of the 2002-2003 cool season blanketed extreme southeast Kansas with snow accumulations

Storm Data and Unusual Weather Phenomena

December 2002

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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KANSAS, Extreme Southeast

ranging from three to eight inches. Accumulations were greatest near the Oklahoma border where eight inch measurements were common, and tapered down to the north where northern Bourbon County observed around three inches. Despite numerous vehicle accidents, no major property damage was directly linked to the heavy snow.

KANSAS, North Central

KSZ005>007-017>019	Phillips - Smith - Jewell - Rooks - Osborne - Mitchell								
	01 0000CST				0	0	60M		Drought
	31 2359CST								

The prolonged drought across north-central Kansas occasionally was classified into the severe category this year. Most dry land crops were hard hit and there was some decreased yield with irrigated crops.

KANSAS, Northeast

NONE REPORTED.

KANSAS, Northwest

NONE REPORTED.

KANSAS, Southeast

KSZ067-069>070-082>083-091>096-098>100	Reno - Butler - Greenwood - Kingman - Sedgwick - Harper - Sumner - Cowley - Elk - Wilson - Neosho - Chautauqua - Montgomery - Labette								
	04 0700CST				0	0			Heavy Snow
	2000CST								

A powerful early season winter storm crossing the Southern Plains spread snow across southern Kansas from Tuesday evening, Dec. 3rd, thru Wednesday afternoon, Dec. 4th. The resulting accumulations reached 6-10 inches, with the greater amounts, 8-10 inches, along the Oklahoma border. Across Southeast Kansas, freezing drizzle preceded the heavy snow, with numerous highways no doubt slick and dangerous.

Montgomery County 14 NE Independence	17	2158CST			0	0			Hail (0.75)
Neosho County Galesburg	17	2200CST			0	0			Hail (0.75)
Labette County 2 N Parsons	17	2220CST			0	0			Hail (0.75)
Neosho County Morehead	17	2222CST			0	0			Hail (0.75)
Neosho County Erie	17	2230CST			0	0			Hail (0.88)
Labette County Chetopa	18	0048CST			0	0			Hail (1.00)

KANSAS, Southwest

KSZ063>066-074>081-084>090	Finney - Hodgeman - Pawnee - Stafford - Stanton - Grant - Haskell - Gray - Ford - Edwards - Kiowa - Pratt - Morton - Stevens - Seward - Meade - Clark - Comanche - Barber								
	03 0900CST				0	0			Heavy Snow
	04 1200CST								

Snow fell across much of southwest and south central Kansas generally along and south of a line from Syracuse through Dighton, Ness City and LaCrosse. The precipitation started out in the form of freezing rain along the Oklahoma border. Snowfall accumulations of 2 to 4 inches were common. The heaviest snow occurred along and south of a line from Hugoton through Montezuma, Bucklin and Pratt where several locations received 6 to 8 inches. Isolated amounts up to 10 inches occurred in the Liberal area.

KSZ061>066-074>081-084>090	Hamilton - Kearny - Finney - Hodgeman - Pawnee - Stafford - Stanton - Grant - Haskell - Gray - Ford - Edwards - Kiowa - Pratt - Morton - Stevens - Seward - Meade - Clark - Comanche - Barber								
	23 0900CST				0	0			Heavy Snow
	24 0300CST								

Snow fell in an area generally along and south of a line from Syracuse, to Jetmore and Larned. Snowfall amounts at or above six inches fell along and south of a line from Johnson, to Montezuma to Bucklin. Greater amounts fell along the Oklahoma border from Elkhart to Liberal where 8 to 10 inches were reported. The typical vehicle accidents from motorists exceeding their capabilities on snowy roads were numerous. The snow did not cause any direct injuries There were a few minor injuries in some of the car accidents.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
<u>KENTUCKY, Central</u>									
Jefferson County									
Countywide	19	1645EST 2140EST			0	0	20K		Flash Flood
Water was reported in basements in the 1500 block of Mercer Avenue in Louisville. In the Lyndon area, a car was trapped in high water at an intersection. A woman and two children were rescued. Chenoweth Run Creek near Jeffersontown was out of its banks.									
Ohio County									
Countywide	19	1655EST 2140EST			0	0			Flash Flood
Several county roads were closed. Barricades were erected on Highway 62 near Beaver Dam.									
Breckinridge County									
Custer	19	1800EST 2140EST			0	0			Flash Flood
A bridge was covered by water on Highway 690.									
Hancock County									
Hawesville	19	1800EST 1900EST			0	0			Flash Flood
Four to eight inches of water were flowing over Middle Knoxville Road.									
Meade County									
5 S Brandenburg	19	1800EST 2140EST			0	0			Flash Flood
Highway 448 was covered by water.									
Oldham County									
La Grange	19	1815EST 2140EST			0	0			Flash Flood
Moody Lane was closed due to high water. Highway 42 was closed in spots. Ash Avenue was closed.									
Bourbon County									
Countywide	19	2015EST 2245EST			0	0			Flash Flood
High water covered Millsbury Road and US Highway 68. Water was reported on several county roads. Some were nearly impassable.									
Harrison County									
Countywide	19	2030EST 2245EST			0	0			Flash Flood
Up to three feet of water covered roads in the eastern part of the county. Rocky Spring Road 5 miles west of Cynthiana was impassable.									
KYZ024-026-030>031	Breckinridge - Ohio - Jefferson - Oldham								
	19	2140EST			0	0			Flood
	20	0300EST							
Numerous roads remained closed countywide due to standing or flowing water.									
KYZ026	Ohio								
	20	0110EST			0	0			Flood
	21	1530EST							
The Rough River at Dundee crested at 26.2 feet at 8:30 PM on December 20. Flood stage at Dundee is 25 feet. At this level, a section of KY 69 about half a mile long near the bridge begins to flood.									
KYZ061	Butler								
	21	0700EST			0	0			Flood
The Green River at Rochester crested at 17.0 feet. Flood stage is 17 feet. At this level, minor flooding occurs and the ferry is shut down.									
<u>KENTUCKY, Eastern</u>									
KYZ044-050>052-068>069-079-083-085>088-116-118	Fleming - Montgomery - Bath - Rowan - Rockcastle - Jackson - Pulaski - Wayne - Whitley - Knox - Bell - Harlan - Clay - Letcher								
	04	1055EST			0	0	5.7K	0	Heavy Snow
	05	1200EST							
8 inches of snow was reported.									
KYZ080-084-107	Laurel - McCreary - Johnson								
	04	1155EST			0	0	15.6K	0	Winter Storm
	05	1200EST							
4 inches of snow was reported. Power lines were down due to heavy snow and some ice accumulations.									

Storm Data and Unusual Weather Phenomena

December 2002

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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KENTUCKY, Eastern

KYZ058>060-104-106-108>112-114-119>120 **Estill - Powell - Menifee - Elliott - Morgan - Wolfe - Magoffin - Floyd - Lee - Breathitt - Owsley - Martin - Pike**

04	2300EST				0	0	3K	0	Ice Storm
05	1200EST								

1/2 inch of ice was reported. Power lines were down.

This winter storm occurring on December 4th and December 5th was the first of the season for eastern Kentucky. This storm system tracked across the southern United States, spreading precipitation as far north as the Ohio Valley. Snow began on the morning of December 4th, dumping 3 to 5 inches of snow southwest of a line from Mount Vernon to Harlan by around noon, with generally 2 inches or less occurring northeast of this line. Some freezing rain and sleet began on the afternoon of December 4th in southern parts of eastern Kentucky, but was not nearly as significant as the sleet and ice accumulations in east central Kentucky. Heavy snow began falling for counties in the northern portion of eastern Kentucky on the night of December 4th, producing the highest snow amount of 8 inches in Fleming County. Up to three quarters of an inch of ice was reported in McCreary County among other locations receiving between 1/4 and 1/2 of an inch. One indirect death and 2 indirect injuries occurred due to traffic accidents involving slick roads. There were several vehicular accidents due to slick roads. This storm finally moved out of the area with precipitation tapering to flurries by noon December 5th.

KYZ044-050>052-068>069-079-083-085>088-116-118 **Fleming - Montgomery - Bath - Rowan - Rockcastle - Jackson - Pulaski - Wayne - Whitley - Knox - Bell - Harlan - Clay - Letcher**

04	1055EST				0	0	5.7K	0	Heavy Snow
05	1200EST								

8 inches of snow was reported.

KYZ080-084-107 **Laurel - McCreary - Johnson**

04	1155EST				0	0	15.6K	0	Winter Storm
05	1200EST								

4 inches of snow was reported. Power lines were down due to heavy snow and some ice accumulations.

KYZ058>060-104-106-108>112-114-119>120 **Estill - Powell - Menifee - Elliott - Morgan - Wolfe - Magoffin - Floyd - Lee - Breathitt - Owsley - Martin - Pike**

04	2300EST				0	0	3K	0	Ice Storm
05	1200EST								

1/2 inch of ice was reported. Power lines were down.

This winter storm occurring on December 4th and December 5th was the first of the season for eastern Kentucky. This storm system tracked across the southern United States, spreading precipitation as far north as the Ohio Valley. Snow began on the morning of December 4th, dumping 3 to 5 inches of snow southwest of a line from Mount Vernon to Harlan by around noon, with generally 2 inches or less occurring northeast of this line. Some freezing rain and sleet began on the afternoon of December 4th in southern parts of eastern Kentucky, but was not nearly as significant as the sleet and ice accumulations in east central Kentucky. Heavy snow began falling for counties in the northern portion of eastern Kentucky on the night of December 4th, producing the highest snow amount of 8 inches in Fleming County. Up to three quarters of an inch of ice was reported in McCreary County among other locations receiving between 1/4 and 1/2 of an inch. One indirect death and 2 indirect injuries occurred due to traffic accidents involving slick roads. There were several vehicular accidents due to slick roads. This storm finally moved out of the area with precipitation tapering to flurries by noon December 5th.

KENTUCKY, Northeast

KYZ105

Lawrence

04	1400EST				0	0			Winter Storm
05	0700EST								

Snow accumulated 2 to 4 inches before changing to freezing rain and sleet. The freezing rain caused a quarter inch of ice to collect on trees and power lines.

KYZ101>103

Greenup - Carter - Boyd

04	1500EST				0	0			Snow
05	0800EST								

A snow accumulation of 3 to 5 inches was common.

KENTUCKY, Northern

KYZ089>100

Carroll - Gallatin - Boone - Kenton - Campbell - Owen - Grant - Pendleton - Bracken - Robertson - Mason - Lewis

04	2244EST				0	0			Winter Storm
05	0900EST								

Low pressure moved across the Tennessee Valley overnight on the 4th and into the morning of the 5th. A swath of moderate to heavy snow moved across northern Kentucky, producing 3 to 6 inches of accumulation.

KYZ091>093

Boone - Kenton - Campbell

11	0600EST				0	0			Winter Storm
	0900EST								

Storm Data and Unusual Weather Phenomena

December 2002

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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KENTUCKY, Northern

Low pressure tracked across the Ohio Valley early in the morning. Surface temperatures were just below freezing, and precipitation fell in the form of freezing rain and sleet. In the Cincinnati metro area, ice accumulated up to a quarter inch, causing slick roadways during the morning rush hour.

KENTUCKY, Southwest

KYZ001>022

Fulton - Hickman - Carlisle - Ballard - Mccracken - Graves - Livingston - Marshall - Calloway - Crittenden - Lyon - Trigg - Caldwell - Union - Webster - Hopkins - Christian - Henderson - Daviess - Mclean - Muhlenberg - Todd

04	0800CST				0	0			Winter Storm
05	0200CST								

A major winter storm brought significant snow and ice accumulations to all of western Kentucky. The precipitation type ranged from mostly freezing rain along the Tennessee border to mostly snow at Henderson and Owensboro. Ice accumulations in some of the Tennessee border counties were between one and two inches, causing widespread power outages and downed tree limbs. Further north, places from Paducah to Madisonville received several inches of snow, topped by around one half inch of ice accumulation. Northernmost counties, including the Owensboro and Henderson areas, received about 4 inches of snow and one quarter inch of ice. Schools were closed for the remainder of the week. Travel was heavily impacted by the winter storm. Hundreds of vehicle accidents occurred, including a couple with fatalities (indirect storm fatalities). One man was killed when his vehicle crossed the median and hit a semi on the Pennyrile Parkway near the Henderson/Webster County line. Two men were killed when their van overturned on Interstate 24 at the U.S. 45 interchange near Paducah. In the Tennessee border area, especially Fulton, Hickman, Carlisle, southern Graves, and southern Marshall Counties, power was not fully restored for four days. Carlisle County officials estimated 80 percent of the county was without power. Several counties established shelters for those without power. A local utility company reported this was the worst ice storm since 1983, with thousands of downed trees and limbs. Many of the tree limbs landed across roadways. A large tree limb fell through a house in Mayfield, causing damage to a bedroom. The winter storm began during the early morning hours and ended late the following night.

Ballard County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Carlisle County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Daviess County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Fulton County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Graves County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Hickman County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Mccracken County

Countywide	18	2200CST			0	0			Urban/Sml Stream Fld
	19	1700CST							

Thunderstorms dumped copious amounts of rain from 1.5 to nearly 3 inches over western Kentucky. Most of the rain fell during the evening hours of the 18th. Roads that normally flood during heavy rain were underwater. Eight secondary roads near Owensboro in Daviess County were closed. Route 94 was closed at a normal problem spot in Fulton County. Highway 51 was closed at two problem spots south of Clinton in Hickman County. A flood-prone section of Highway 58 in western Graves County was flooded but passable. A usual problem spot on U.S. 62 near Bardwell was monitored closely but did not require any closures. A 6-inch water main broke in downtown Paducah.

Calloway County

3 N Murray	19	0700CST			0	0			Flash Flood
		0900CST							

Creeks rose out of their banks. About 4 miles north of Murray, a creek threatened to overflow across U.S. Highway 641.

KYZ021

Muhlenberg

20	0400CST				0	0			Flood
26	1000CST								

Heavy rainfall on the 18th and 19th in the Green River Basin sent portions of the Green River above flood stage. The river crested slightly over four feet above the 380-foot flood stage on the 21st. This resulted in some flooding of low-lying bottomlands, but no property damage was reported.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
<u>KENTUCKY, Southwest</u>									
KYZ014-018 Union - Henderson									
	23	2200CST			0	0			Winter Storm
	24	2000CST							
On the night of the 23rd, a band of heavy sleet mixed with some snow occurred near the Indiana state line. About two inches of sleet was reported from the Henderson area west across Union County. An inch or less of sleet and snow occurred in the Owensboro area. Another couple of inches of snow fell late Christmas eve, causing several vehicle accidents, none of which were serious.									
<u>LOUISIANA, Northeast</u>									
Franklin Parish									
Countywide	23	2300CST			0	0	7K		Flash Flood
	24	0200CST							
Thunderstorms produced heavy rainfall, which resulted in several roads being flooded across the parish.									
Morehouse Parish									
1 E Oak Ridge	24	0040CST 0200CST			0	0	5K		Flash Flood
Heavy rainfall caused State Road 134 east of the city to be under water.									
Concordia Parish									
Deer Park	24	0125CST			0	0			Hail (0.75)
<u>LOUISIANA, Northwest</u>									
Union Parish									
11.3 NW Farmerville to 16.2 N Farmerville	18	1555CST 1611CST	16.2	110	0	0	1M		Tornado (F2)
A strong tornado developed under a supercell moving northeast across the parish. As the tornado developed in Union Parish, Louisiana, eyewitness reports described the tornado as resembling a stove pipe with screaming winds sounding like a banshee. Where the tornado originally touched down, a bowl like appearance was carved into the woods when viewing the initial impact point horizontally. The tornado then continued northeast across a combination of farmland and wooded region destroying 2 mobile homes and severely damaging 6 wooden houses. As the tornado moved into Union County, Arkansas, the tornado moved across only heavily wooded area void of structures.									
Bossier Parish									
Plain Dealing	18	1715CST			0	0			Hail (1.00)
Caddo Parish									
Gilliam	18	1845CST			0	0			Thunderstorm Wind (G60)
Power lines were blown down across the town.									
Caddo Parish									
.8 SSW Dixie to 1.5 NE Dixie	18	1910CST 1920CST	2.3	80	0	0			Tornado (F1)
A small supercell produced a weak tornado that moved across Dixie, LA. One trailer home had sheet metal torn off of it. An old airport hanger used for storage was destroyed with its contents strewn over two tenths of a mile. Several power poles were blown down.									
Caddo Parish									
Dixie	18	1916CST			0	0	5K		Thunderstorm Wind (G60)
Wind damage to a mobile home. Several power lines blown down.									
Webster Parish									
Springhill	18	2001CST			0	0			Hail (0.88)
Webster Parish									
Springhill	18	2055CST			0	0			Hail (0.75)
Bossier Parish									
Plain Dealing	18	2230CST			0	0			Flash Flood
	19	0115CST							
Several roads across the area were underwater.									
Caddo Parish									
Belcher	18	2230CST			0	0			Flash Flood
	19	0115CST							
Highway 169 closed due to flash flooding.									
Webster Parish									
Springhill	18	2330CST			0	0	60K		Flash Flood
	19	0230CST							
Five businesses were damaged from flood waters.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
LOUISIANA, Northwest									
De Soto Parish									
1 S Mansfield	23	1345CST			0	0	2K		Thunderstorm Wind (G55)
			A fallen tree clipped a mobile home causing minor damage.						
Sabine Parish									
10 W Many	23	1705CST			0	0			Thunderstorm Wind (G60)
			Power lines down along State Highway 191.						
Natchitoches Parish									
8 SW Provençal	23	1725CST			0	0			Thunderstorm Wind (G60)
			Trees and power lines down across the area.						
Winn Parish									
3 SE St Maurice	23	1815CST			0	0			Thunderstorm Wind (G60)
			Numerous trees felled across Highway 71 between St. Maurice and Montgomery.						
Natchitoches Parish									
Natchez	23	1835CST 2100CST			0	0			Flash Flood
			Flash flooding along Highway 119.						
Natchitoches Parish									
2 W Natchitoches	23	2030CST 2100CST			0	0			Flash Flood
			Highway 3191 was flooded and impassable.						
Natchitoches Parish									
2 SE Marthaville	23	2030CST 2100CST			0	0			Flash Flood
			Highway 120 was flooded. Traffic was rerouted.						
Sabine Parish									
Many	23	2030CST 2300CST			0	0			Flash Flood
			Several roads closed due to heavy rainfall.						
Bossier Parish									
Bossier City	23	2120CST			0	0	120K		Lightning
			Lightning was determined as the cause of a fire that nearly destroyed a home in the Carriage Oaks subdivision. Lightning struck the home and started the fire. The home's attached garage was heavily involved in the fire. Strong winds aided in the spread of the flames through much of the home. Most of the contents in the home were also lost.						
Natchitoches Parish									
Natchitoches	23	2230CST			0	0			Flash Flood
	24	0145CST							
			Several roadways around the area were inundated by rapidly rising waters.						
Sabine Parish									
Many	23	2245CST			0	0			Flash Flood
	24	0215CST							
			Numerous roads were reported underwater.						
De Soto Parish									
Mansfield	23	2245CST 2300CST			0	0			Flash Flood
			Several roads closed from heavy rains.						
De Soto Parish									
Mansfield	23	2315CST			0	0			Flash Flood
	24	0300CST							
			Several Parish roads were underwater.						
Winn Parish									
Winnfield	23	2330CST 2345CST			0	0			Flash Flood
			High waters from heavy rains covering numerous roads across the area.						
Caddo Parish									
Shreveport Rgnl Arpt	30	1930CST			0	0			Thunderstorm Wind (G56) ^M
Bossier Parish									
Bossier City	30	1955CST			0	0			Thunderstorm Wind (G60)
			Trees and power lines down in the city.						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
<u>LOUISIANA, Northwest</u>									
De Soto Parish									
Keatchie	30	2007CST			0	0	48K		Thunderstorm Wind (G62)
									Roof blown off a house.
Webster Parish									
6 N Cotton Vly	30	2020CST			0	0			Thunderstorm Wind (G58)
									Several large trees down.
Claiborne Parish									
8 SW Homer	30	2024CST			1	1			Thunderstorm Wind (G57)
									A line of severe thunderstorms moved across the Parish during the evening producing high winds that caused a tree to fall on a truck, killing one man and injuring one female. Many trees were reported down across the area due to the high winds. M?VE
Claiborne Parish									
Homer	30	2040CST			0	0			Thunderstorm Wind (G60)
									Several large trees down.
Bienville Parish									
Arcadia	30	2055CST			0	0			Thunderstorm Wind (G60)
									Several large trees down across I-20.
Sabine Parish									
Many	30	2115CST			0	0			Thunderstorm Wind (G60)
									Several large trees down across the area.
Natchitoches Parish									
Natchitoches	30	2130CST			0	0			Thunderstorm Wind (G65)
									Numerous medium and large trees down across the area.
Jackson Parish									
Jonesboro	30	2155CST			0	0			Thunderstorm Wind (G60)
									Numerous trees down across the area.
Winn Parish									
Winnfield	30	2200CST			0	0			Thunderstorm Wind (G60)
									Numerous trees down across the region.
Grant Parish									
Colfax	30	2230CST			0	0	45K		Thunderstorm Wind (G65)
									Numerous trees toppled or snapped. Many of them were located along Highway 8 east of Colfax.
Caldwell Parish									
Columbia	30	2255CST			0	0			Thunderstorm Wind (G60)
									Numerous trees down across the region.
<u>LOUISIANA, Southeast</u>									
LAZ061 Upper Jefferson									
	12	1745CST			0	0			High Wind (G39) ^M
									A non thunderstorm wind gust of 45 mph was recorded at the New Orleans Armstrong International Airport.
LAZ061>062 Upper Jefferson - Orleans									
	12	1830CST			0	0	3K		High Wind
		2100CST							High winds blew down a few trees and power lines in Metairie, Avondale, and New Orleans.
LAZ062 Orleans									
	12	1834CST			0	0			High Wind (G45) ^M
									A non thunderstorm wind gust of 52 mph was recorded at the New Orleans Lakefront Airport.
Livingston Parish									
Walker	19	1220CST			0	1	20K		Thunderstorm Wind
									Numerous trees, power lines, utility poles, and billboard signs were blown down. A seven year old boy was injured by flying debris and a woman was trapped in a car when a utility pole was blown down and live wires fell on the vehicle. One tree destroyed a car that it fell on and damaged the roof of a house.
St. Charles Parish									
Norco to 5 N Norco	19	1330CST 1338CST	5	20	0	0			Tornado (F0)
									A waterspout formed over the Mississippi River near Norco and moved overhead as a funnel cloud before touching down as a tornado over a marsh and crossing Interstate 10 near mile marker 214

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
LOUISIANA, Southeast							
Washington Parish							
Bogalusa	23	1900CST 2000CST			0 0	20K	Flash Flood
							Flood waters from heavy rain inundated several homes in Bogalusa.
St. Tammany Parish							
Folsom	23	1925CST			0 0	1.5K	Thunderstorm Wind
							Several trees were blown down.
Pointe Coupee Parish							
Livonia	31	0105CST			0 0	0.75K	Thunderstorm Wind
							A few trees were blown down.
Iberville Parish							
3 W Grosse Tete	31	0145CST			0 0	15K	Thunderstorm Wind
							Thunderstorm winds blew the roof off of a two story home and knocked a mobile home off of its foundation.
West Baton Rouge Parish							
Brusly	31	0150CST			0 0	2K	Thunderstorm Wind
							A number of trees and utility poles were blown down.
East Baton Rouge Parish							
(Btr)Ryan Fld Baton	31	0156CST			0 0		Thunderstorm Wind (G68) ^M
Iberville Parish							
Rosedale	31	0200CST			0 0	50K	Thunderstorm Wind
							Thunderstorm winds blew several trees and power lines down, damaged multiple roofs, and shifted one home from its foundation.
Iberville Parish							
Plaquemine	31	0200CST			0 0	3K	Thunderstorm Wind
							Trees and power lines were blown down and the roof of a building was damaged.
East Baton Rouge Parish							
Baton Rouge	31	0200CST			0 0	120K	Thunderstorm Wind
							Thunderstorm winds blew a large tree down on a house resulting in severe damage, knocked down several other trees, power lines, and telephone poles, caused the roof of a building to partially collapse, and caused minor damage to several buildings at the State Capitol complex. A utility pole and three transformers crashed through the roof of a building. Over 200 utility poles were snapped in the Baton Rouge area.
Livingston Parish							
Denham Spgs	31	0215CST			0 0	25K	Thunderstorm Wind
							Thunderstorm winds blew down numerous trees across the city, took the roofs off of a business and trailer, and knocked down a large tent.
St. Helena Parish							
6 N Greensburg	31	0230CST			0 0	10K	Thunderstorm Wind
							Thunderstorm winds ripped the roof off of a house.
St. Helena Parish							
Liverpool	31	0245CST			0 0	1.5K	Thunderstorm Wind
							Numerous trees were blown down.
Assumption Parish							
Pierre Pass	31	0247CST			0 0	3K	Thunderstorm Wind
							A few power lines were knocked down and the roof of a residence was damaged.
Tangipahoa Parish							
4 E Kentwood	31	0255CST			0 0	18K	Thunderstorm Wind
							Thunderstorm winds blew down numerous trees and overturned a mobile home. A trailer was destroyed by a falling tree and a house sustained roof damage when it was hit by a tree.
Tangipahoa Parish							
2 E Amite	31	0255CST			0 0	5K	Thunderstorm Wind
							Several pine trees were blown down causing damage to a home.
Washington Parish							
Franklinton	31	0300CST			0 0	2K	Thunderstorm Wind
							Numerous trees and a few power lines were knocked down.
Washington Parish							
Mt Hermon	31	0300CST			0 0	15K	Thunderstorm Wind
							Multiple roofs were damaged by thunderstorm winds.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
<u>LOUISIANA, Southeast</u>							
Tangipahoa Parish							
Hammond	31	0300CST			0 0	1K	Thunderstorm Wind
							A few trees were blown down.
Washington Parish							
Angie to Bogalusa	31	0305CST 0320CST			0 0	25K	Thunderstorm Wind (G60)
							A line of severe thunderstorms produced damaging wind gusts downing trees and power lines. Some roof damage also occurred due to high winds and fallen tree limbs.
Terrebonne Parish							
Montegut	31	0340CST			0 0	15K	Thunderstorm Wind
							Thunderstorm winds caused minor damage to five or six homes, blew down a tree, and knocked down power lines. Occupants of a garbage truck were trapped when power lines fell across the vehicle.
<u>LOUISIANA, Southwest</u>							
Calcasieu Parish							
Lake Charles	03	1600CST 1800CST			0 0	10K	Flash Flood
							Many roads were closed due to high water.
Beauregard Parish							
De Ridder	03	1700CST 1900CST			0 0	10K	Flash Flood
							Most streets in low-lying areas were flooded.
Allen Parish							
Oakdale	03	1900CST 2100CST			0 0	10K	Flash Flood
							Low-lying roads in Oakdale were flooded and impassable.
Calcasieu Parish							
Buhler	04	0800CST 0900CST			0 0	10K	Flash Flood
							Route 66 north of Sulphur was flooded due to heavy rains.
Beauregard Parish							
Singer	23	2342CST			0 0	250K	Thunderstorm Wind
							In a 5 mile wide swath, 7 homes were damaged from winds, a church roof was damaged by a fallen tree, several barns were damaged, and numerous trees and power lines were blown down.
Calcasieu Parish							
De Quincy	23	2347CST			0 0	5K	Thunderstorm Wind
							Several trees were blown down.
Allen Parish							
Oakdale	24	0030CST			0 0	250K	Thunderstorm Wind
							Several homes were damaged in the Oak Park subdivision, where trees were blown down on homes and vehicles.
Rapides Parish							
10 S Alexandria	24	0045CST			0 0	5K	Thunderstorm Wind
							Several trees and power lines were blown down. One vehicle ran into a pole, but the driver was uninjured.
Rapides Parish							
5 SE Alexandria	24	0047CST			0 0		Hail (0.75)
Avoyelles Parish							
10 S Marksville	24	0109CST			0 0	5K	Thunderstorm Wind
							Several trees and power lines were blown down across the parish.
Evangeline Parish							
Bayou Chicot	24	0115CST			0 0	5K	Thunderstorm Wind
							Trees and power lines were blown down.
St. Landry Parish							
10 N Opelousas	24	0123CST			0 0	5K	Thunderstorm Wind
							Trees and power lines were blown down across the parish.
Calcasieu Parish							
Vinton	30	2322CST			0 0	60K	Thunderstorm Wind
							Several mobile homes near Vinton were damaged, and trees and power lines were blown down.
Cameron Parish							
Cameron	30	2327CST			0 0	100K	Thunderstorm Wind
							Trees and power lines were blown down, and a shrimp boat was capsized.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>LOUISIANA, Southwest</u>									
Calcasieu Parish									
2 W Iowa to 1 N Iowa	30 31	2355CST 0000CST	3	20	0	1	7M		Tornado (F1)
A tornado touched down on the west side of Iowa, destroying two homes, one business, and heavily damaging a small mall and several other homes. One woman was injured when flying debris came in her bedroom window and hit her in the head while she was in bed. One home had wooden debris sticking out of the roof. Large garbage dumpsters were picked up and rolled for over 100 yards. A two story hole was made in the side of the mall, which enabled a large portion of the roof to come off.									
Jefferson Davis Parish									
Jennings	31	0015CST			0	0	75K		Thunderstorm Wind
Several mobile homes north of Jennings were destroyed.									
Vermilion Parish									
Abbeville	31	0040CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
Acadia Parish									
Crowley	31	0040CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
St. Landry Parish									
Opelousas	31	0045CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
Lafayette Parish									
Carencro	31	0055CST			0	0			Hail (0.75)
St. Martin Parish									
Breaux Bridge	31	0110CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
Iberia Parish									
Loreauville	31	0110CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
St. Mary Parish									
Baldwin	31	0130CST			0	0			Hail (0.88)
<u>MAINE, North</u>									
MEZ002-006									
Northeast Aroostook - Southeast Aroostook									
	01	0000EST			0	0			Winter Storm
	02	0300EST							
Low pressure tracking across eastern Maine and New Brunswick produced 5 to 9 inches of snow across extreme northeast Maine.									
MEZ001>004									
Northwest Aroostook - Northeast Aroostook - Northern Somerset - Northern Piscataquis									
	08	2100EST			0	0			Extreme Windchill
	09	0400EST							
The combination of 20 to 30 mph winds and sub-zero temperatures produced wind chills to around 35 degrees below zero.									
MEZ001>002-004>005									
Northwest Aroostook - Northeast Aroostook - Northern Piscataquis - Northern Penobscot									
	14	0400EST			0	0			Winter Storm
	15	1000EST							
Intensifying low pressure tracking northeast along the coast...then through the Gulf of Maine to the maritimes...produced 6 to 12 inches of snow across portions of northern Maine.									
MEZ030									
Coastal Washington									
	14	1600EST 1800EST			0	0			High Wind (G66) ^M
Intensifying low pressure tracking through the Gulf of Maine produced very strong winds along the Downeast coast. Sustained winds of 35 to 45 mph were common. A wind gust to 60 mph was reported at Cutler with a gust to 76 mph at West Quoddy.									
MEZ029>030									
Coastal Hancock - Coastal Washington									
	25	1700EST			0	0			Blizzard
	26	0900EST							
Rapidly intensifying low pressure tracking through the Gulf of Maine produced blizzard conditions along the Downeast coast. The storm generally produced 12 to 18 inches of snow along the Downeast coast...with localized accumulations of up to 22 inches. Snow fell at the rate of several inches per hour at times. The storm also produced sustained winds of 25 to 35 mph with gusts to around 45 mph which led to extensive blowing and drifting of the snow along with frequent whiteouts and snow drifts of around 4 feet.									
MEZ015>017									
Southern Penobscot - Interior Hancock - Central Washington									
	25	1700EST			0	0			Winter Storm
	26	0900EST							
Rapidly intensifying low pressure tracking through the Gulf of Maine produced snowfall totals generally ranging from 8 to 12									

Storm Data and Unusual Weather Phenomena

December 2002

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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MAINE, North

inches...with localized totals of up to 15 inches across interior Downeast areas. Sustained winds of 20 to 30 mph caused considerable blowing and drifting snow.

MEZ001>006-010>011-015>017-031>032 Northwest Aroostook - Northeast Aroostook - Northern Somerset - Northern Piscataquis - Northern Penobscot - Southeast Aroostook - Central Piscataquis - Central Penobscot - Southern Penobscot - Interior Hancock - Central Washington - Southern Piscataquis - Northern Washington
 31 0800EST 0 0 Winter Storm
 2359EST

Low pressure tracking across Quebec province drew warm air northward over persistent low level cold air to produce widespread freezing rain across the region. Ice accumulations of 1/4 to 1/2 inch were common. The precipitation ended during the early morning hours of January 1st. The icy conditions contributed to numerous accidents...with many cars sliding off roads.

MAINE, South

MEZ012

Southern Oxford

12 0300EST 0 0 Heavy Snow
 1200EST

MEZ019>021

Interior Cumberland - Androscoggin - Kennebec

12 0300EST 0 0 Moderate Snowfall
 1200EST

Low pressure moving northeast along the East Coast brought a moderate to heavy snowfall across portions of western Maine. In southern Oxford County, generally from 4 to 7 inches of snow fell, while Kennebec, Androscoggin, and interior Cumberland Counties received from 2 to 6 inches of snow.

MEZ013>014-020>028

Southern Franklin - Southern Somerset - Androscoggin - Kennebec - Interior Waldo - Coastal York - Coastal Cumberland - Sagadahoc - Lincoln - Knox - Coastal Waldo

14 1030EST 0 0 Strong Winds
 1900EST

Strong, northeast winds associated with a low pressure system near the Maine coast downed tree limbs onto power lines causing scattered power outages. Between 2000 and 3000 electric utility customers experienced power outages during the event. Peak wind gusts were measured at 52 mph in Portland, 41 mph in Augusta, and 36 mph in Rockland.

MEZ007>009-012>014-020>021

Northern Oxford - Northern Franklin - Central Somerset - Southern Oxford - Southern Franklin - Southern Somerset - Androscoggin - Kennebec

20 0700EST 0 0 Freezing Rain
 1200EST

Warmer air moving northward ahead of a large low pressure center north of the Great Lakes combined with cold air near the ground to produce light freezing rain and mixed precipitation across inland sections of western Maine. The freezing rain caused slippery driving conditions across the area for the morning hours.

MEZ012-018>028

Southern Oxford - Interior York - Interior Cumberland - Androscoggin - Kennebec - Interior Waldo - Coastal York - Coastal Cumberland - Sagadahoc - Lincoln - Knox - Coastal Waldo

25 1400EST 0 0 Heavy Snow
 26 0700EST

Low pressure off the coast of southeastern Virginia on the morning of the 25th moved northeastward to south of Nova Scotia by the morning of the 26th. The storm brought record or near-record Christmas day snowfalls to southwestern and mid-coast sections of the state where 12 to 18 inches of snow fell. Snowfall amounts dropped off dramatically in the foothills and mountains of western Maine where amounts ranged from nothing in the mountains to only an inch or two in the foothills.

MEZ007>009-012>014-018>028

Northern Oxford - Northern Franklin - Central Somerset - Southern Oxford - Southern Franklin - Southern Somerset - Interior York - Interior Cumberland - Androscoggin - Kennebec - Interior Waldo - Coastal York - Coastal Cumberland - Sagadahoc - Lincoln - Knox - Coastal Waldo

31 0700EST 0 0 Freezing Rain
 1500EST

A warm front extending eastward from a large area of low pressure over central Canada brought a moist southerly flow of warm air aloft as temperatures remained below freezing at the ground. A mixture of sleet and freezing rain developed across the state early in the morning and continued until mid afternoon. The freezing rain caused some roads to become slippery during the day.

Storm Data and Unusual Weather Phenomena

December 2002

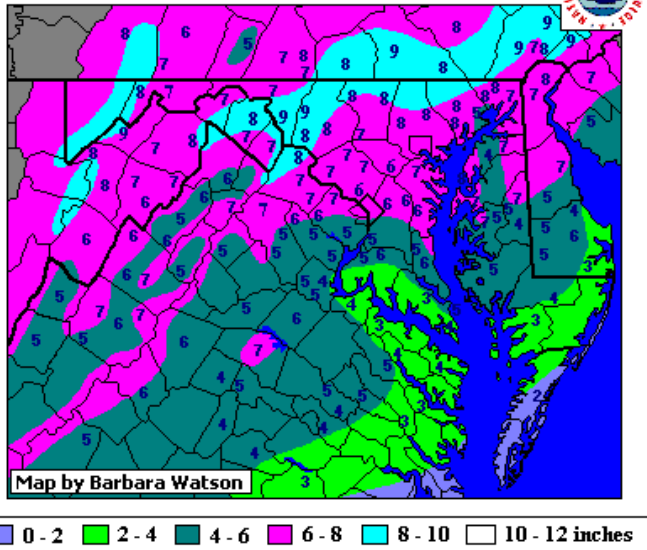
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured	Estimated Damage Property Crops	Character of Storm
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MARYLAND, Central

MDZ002>007-009>011-013>014-016>018 **Allegany - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert**

05 0000EST 0 0 Winter Storm
1500EST

Storm Totals Dec. 5, 2002



Snow and sleet accumulations from December 5, 2002

Low pressure moved from North Carolina to the Delmarva Peninsula between midnight and 3 pm on the 5th. This storm produced accumulating snowfall across the entire region as it moved by. Across Southern Maryland, freezing rain and sleet was mixed in with the snow. The snow and sleet accumulations ranged from 3 to 5 inches in this area. In Central Maryland, including the Washington D.C. and Baltimore suburbs, snowfall totals ranged from 6 to 8 inches. Across North Central and Western Maryland, snowfall accumulations of 7 to 9 inches were recorded. One person died in a car accident in Cumberland that was attributed to the slippery conditions resulting from the snow.

MDZ002>007-009>011-013>014-016>018 **Allegany - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore - Prince Georges - Anne Arundel - Charles - St. Mary'S - Calvert**

07 0000EST 0 0 Extreme Cold/Wind Chill
0900EST

Long standing low temperature records were set on the morning of the 7th as a fresh snow pack, calm winds, and clear skies allowed temperatures to plummet around 20 to 30 degrees below normal overnight. At Baltimore/Washington International Airport a 117-year-old record low temperatures was broken. At 5:04 AM the temperature fell to 6 degrees. This exceeded the previous record of 15 degrees set in 1885. Other low temperatures recorded across Central and Western Maryland included 13 degrees at Patuxent Naval Air Station (St. Mary's Co.), Westminster (Carroll Co.), and Oxon Hill (Prince George's Co.); 12 degrees in Hagerstown (Washington Co.), 11 degrees in Frostburg (Allegany Co.), 7 degrees in Cumberland (Allegany Co.), and 4 degrees in Sharpsburg (Washington Co.). At Inner Harbor in downtown Baltimore, the low temperature only fell to 20 degrees due to the urban heat island effect. In Calvert County, an 82-year-old man with Alzheimer's disease who wandered away from his home during the early morning hours of the 7th was found dead from exposure to the cold.

MDZ002>007-009>011 **Allegany - Washington - Frederick - Carroll - Northern Baltimore - Harford - Montgomery - Howard - Southern Baltimore**

11 0000EST 0 0 Ice Storm
1500EST

Storm Data and Unusual Weather Phenomena

December 2002

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

MARYLAND, Central

MDZ013>014

Prince Georges - Anne Arundel

11	0000EST 0900EST				0	0			Winter Weather/Mix
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Ice accumulation on trees and bushes in Jacksonville, Baltimore County (photo by Eric Lubenhusen)

An area of low pressure that tracked across the region on the 11th produced between 1 and 2 inches of rainfall. Unfortunately while rain was falling during the morning hours, ground temperatures were below freezing across Western and North Central Maryland. This caused the rain to freeze on contact with the ground and several locations reported ice accumulations between 1/4 to 1/2 inch. Roads and sidewalks became treacherous and numerous trees and power lines were downed by the heavy ice accumulations. Across Central and Western Maryland, 38,000 customers lost power as a direct result of the storm. In Frederick County, two men died from carbon monoxide poisoning in their Libertytown home. A gas-powered electric generator that was turned on in response to a 3 day power outage was blamed for the deaths. In Howard County, 22 people were treated in emergency rooms for slip and fall injuries related to the ice. In Anne Arundel County, 8 slip and fall injuries were reported. In Prince George's and Anne Arundel counties, ice accumulations were held to less than one quarter of an inch because temperatures rose above freezing by mid-morning. A few icy patches were reported on roads and sidewalks during the morning hours. In Baltimore and Harford counties, a combination of heavy rainfall and melting snow caused minor flooding on roads during the afternoon and evening of the 11th.

MDZ002>006-013

Allegany - Washington - Frederick - Carroll - Northern Baltimore - Prince Georges

24	1600EST				0	0			Winter Storm
25	1800EST								

MDZ007-009>011-014

Harford - Montgomery - Howard - Southern Baltimore - Anne Arundel

24	1600EST				0	0			Winter Weather/Mix
25	1300EST								

Low pressure passed directly over the region between the evening of the 24th and midday on the 25th. This system brought mainly snow to Western and North Central Maryland. A mixed bag of precipitation including snow, sleet, and freezing drizzle was reported in the Washington D.C. and Baltimore suburbs. The largest snowfall totals occurred near the Pennsylvania border where between 6 and 8 inches was reported. Two to 4 inches of snow fell in Southern Frederick, Southern Carroll, Central Baltimore, Harford, Howard, and Northern Montgomery Counties. Patchy ice on roads from a period of freezing drizzle was blamed for dozens of traffic accidents in Montgomery County. In Northern Prince George's and Northern Anne Arundel counties, in addition to Baltimore City, 1 to 2 inches of snow was recorded. The amount of snow that fell from this storm was enough to give the region an official "White Christmas". According to historical records for Baltimore, measurable snowfall has only occurred 6% of the time on December 25th. In addition, Baltimore only has a 13% chance of having snow on the ground on the 25th. Winds increased to 20 to 30 mph with gusts to 45 MPH after the low passed by on the afternoon of the 25th. Isolated power outages and downed trees were reported.

MARYLAND, Northeast

MDZ008-012

Cecil - Kent

05	0200EST 2100EST				0	0			Heavy Snow
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Storm Data and Unusual Weather Phenomena

December 2002

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

MARYLAND, Northeast

MDZ015-019>020

Queen Annes - Talbot - Caroline

05	0200EST				0	0			Winter Storm
	2100EST								

The first winter storm of the season dropped four to eight inches of snow across the Maryland Eastern Shore. In many places this was more snow than fell all of last winter. The snow began falling shortly after midnight on the 5th and fell at its heaviest during the morning hours. The snow's intensity lessened during the rest of the day and it mixed with sleet and freezing rain at times during the afternoon across southern areas of the Eastern Shore. Precipitation ended during the evening. Schools, county and government offices, courthouses and many businesses were closed on the 5th. Many schools were also closed on the 6th. There were numerous motor vehicle accidents, many slid off roadways into ditches. In Caroline County alone there were twenty-eight reported accidents. Dozens of vehicles were stuck in the snow, this included a plow near Centreville (Queen Anne's County).

Specific Accumulations included 8 inches in Stevensville (Queen Anne's County), Rock Hall (Kent County), Port Deposit and Rising Sun (Cecil County), 7.5 inches in Easton (Talbot County), 7 inches in Queenstown (Queen Anne's County), Greensboro (Caroline County) and Galena (Kent County), 6.5 inches in Conowingo (Cecil County) and Millington (Kent County), 5 inches in Saint Michaels (Talbot County) and 4 inches in Denton (Caroline County).

The low pressure system responsible for the winter storm formed over Texas on the 3rd and moved eastnortheast and reached Louisiana the morning of the 4th, Cape Hatteras the morning of the 5th and then accelerated quickly offshore during the day.

MDZ008-012-015

Cecil - Kent - Queen Annes

11	0400EST				0	0			Winter Weather/Mix
	0900EST								

Freezing rain fell during the early morning of the 11th across northern parts of the Eastern Shore. While it was warm enough aloft for precipitation to fall as rain, enough cold air was left at the surface by a departing high pressure system for the rain to freeze on contact. Freezing rain began around 4 a.m. EST. As a low pressure system moved north along the Atlantic Seaboard, it pulled in warmer air and surface temperatures were above freezing by 9 a.m. EST. Ice accretions were generally between .1 and .2 of an inch. Untreated roadways and walkways were hazardous.

MARYLAND, South

MDZ021>024

Dorchester - Wicomico - Somerset - Inland Worcester

04	2200EST				0	0			Winter Storm
05	1430EST								

A winter storm produced 2 to 5 inches of snow along with less than 1/4 inch of ice across portions of the Lower Maryland Eastern Shore. Some specific snow totals included: Cambridge in Dorchester county 4.5", Salisbury in Wicomico county 3.5", Princess Anne in Somerset county 3", and Snow Hill in Worcester county 2". Local law enforcement agencies reported numerous accidents. Most, if not all schools in the area, were closed Thursday, December 5th and Friday, December 6th due to very slippery road conditions.

MARYLAND, West

MDZ001

Garrett

05	0400EST				0	0			Heavy Snow
	0900EST								

10 inches of snow fell during the night of Dec 4 through 9 am Dec 5th.

MDZ001

Garrett

11	1600EST				0	0			Ice Storm
	2100EST								

Freezing rain and sleet began about 9 AM. The ice glaze reached a quarter of an inch thick by 4 PM.

MDZ001

Garrett

25	0930EST				0	0			Winter Storm
26	0930EST								

Freezing rain and sleet began in the early morning of Dec 25, changed to snow after sunrise on Christmas Day, and continued snowing into the morning of Dec 26. The ice from the freezing rain reached a quarter inch thick by 9:30 AM on the 25th. Total snowfall by the 26th was 9 inches.

MASSACHUSETTS, Central and East

MAZ017>024

Northern Bristol - Western Plymouth - Eastern Plymouth - Southern Bristol - Southern Plymouth - Barnstable - Dukes - Nantucket

05	1300EST				0	0			Heavy Snow
06	1100EST								

A winter storm passing about 200 miles southeast of Nantucket brought heavy snow to southeast Massachusetts, including Cape Cod and the Islands. Snowfall amounts averaged around 6 inches in these areas, while farther north and west, amounts of 2 to 5 inches were common throughout the rest of the Bay State. No storm damage or injuries were reported.

Officially, a storm total of 6.0 inches was reported at the National Weather Service office in Taunton. Other snowfall totals included 8 inches in Bourne; 7 inches in Sandwich, Falmouth, Acushnet, New Bedford, West Tisbury, Nantucket, and Marshfield;

Storm Data and Unusual Weather Phenomena

December 2002

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

MASSACHUSETTS, Central and East

and 6 inches in Dennis, Mansfield, Brockton, and Fairhaven.

MAZ002-008

Western Franklin - Western Hampshire

11	2000EST	0	0	Heavy Snow
12	0700EST			

Heavy snow affected the higher terrain of western Franklin and western Hampshire counties. Amounts averaged 8 to 10 inches, with as little as 2 to 4 inches reported in the valleys. No damage or injuries were reported.

Some specific snowfall totals included 11 inches in Williamsburg; 10 inches in Goshen and Plainfield; 9 inches in Shelburne; and 8 inches in Worthington.

MAZ016

Eastern Norfolk

20	1551EST	0	0	High Wind (G62)	^M
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Blue Hill Observatory

A wind gust to 71 mph was measured at the Blue Hill Observatory in Milton. No damage was reported.

MAZ015>016-024

Suffolk - Eastern Norfolk - Nantucket

25	0203EST	0	0	High Wind (G57)	^M
	2117EST				

MAZ002>012-014>015

Western Franklin - Eastern Franklin - Northern Worcester - Western Middlesex - Western Essex - Eastern Essex - Western Hampshire - Western Hampden - Eastern Hampshire - Eastern Hampden - Southern Worcester - Southeast Middlesex - Suffolk

25	1300EST	0	0	195K	Winter Storm
26	0900EST				

A major winter storm impacted southern New England on Christmas Day, bringing heavy, wet snow and high winds to the Bay State. The greatest snowfall accumulations were reported from the east slopes of the Berkshires into central and northeast Massachusetts, where 8 to 15 inches of snow fell. Around 6 inches of snow fell in the greater Boston area, with 2 to 5 inches in Bristol and Plymouth Counties.

The weight of the snow, combined with strong northeast winds, brought down trees and power lines throughout much of Worcester County and the Merrimack Valley. About 29,000 customers lost power in these areas during the height of the storm, many on the northern end of Interstate 495.

High winds were reported in the immediate Boston area and also on Nantucket. At Logan International Airport, sustained winds reached 40 mph during the late afternoon, while at the Blue Hill Observatory in Milton sustained winds reached 45 mph with a peak gust to 65 mph. On Nantucket, sustained winds of 41 mph were reported.

Official storm totals included 13.5 inches at Worcester Airport, 10.7 inches at Blue Hill Observatory, 5.4 inches at Logan International Airport, and 2.8 inches at the National Weather Service office in Taunton.

Other snowfall totals from the storm included 18 inches in Middlefield; 16 inches in Goshen; 15 inches in Byfield; 12 inches in Newburyport, Pepperell, Townsend, and Shrewsbury; 10 inches in North Andover, Ayer, Reading, Sterling, West Brookfield, Sunderland, West Springfield and Hadley; 8 inches in Methuen, Lexington, Fitchburg, and Sutton; and 6 inches in Waltham, Winthrop, and Northbridge.

MASSACHUSETTS, West

MAZ001

Berkshire

25	1400EST	0	0	Winter Storm
26	0400EST			

A low pressure area from the Mississippi Valley rapidly redeveloped along the North Carolina coast early on Christmas morning. The storm then tracked northeast, along the atlantic coast, reaching just south of eastern Long Island by late Christmas night, while deepening dramatically. With plenty of cold polar air in place, the stage was set for a significant snowstorm across the Berkshires. The snow began in earnest around midday. During the late day and evening hours snowfall rates averaged 1-3 inches per hour. Around a foot of snow fell across the county. Specifically, Dalton reported 10.1 inches and Williamstown, 12.3 inches of snowfall accumulation.

MICHIGAN, East

MIZ063

St. Clair

02	0400EST	0	0	Heavy Snow
03	0800EST			

An arctic cold front swept through the Great Lakes during the evening of the 2nd and into the early morning hours of the 3rd. A band of snowfall accompanied this front. Most of central Lower Michigan received 1 to 2 inches from the front, with southern Lower Michigan receiving 3 to 5 inches. A band of heavier snow fell across western St Clair county. Northeasterly winds off of Lake Huron may have contributed to the heavier snowfall. While most of the snow ended across the region early in the evening on the 2nd, north-northeasterly winds and very cold air allowed a band of heavy lake effect snow to continue affecting far eastern St Clair county and portions of the Thumb into the early morning hours of the 3rd. By the time the snow ended, snowfall accumulated

Storm Data and Unusual Weather Phenomena

December 2002

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

to 11 inches across the eastern portion of St Clair county, including the city of Port Huron. The western half of the county reported snowfall amounts around 8 inches. Snowfall amounts were generally 6 inches or less across the eastern half of the thumb region. This was the second significant lake effect snowfall in the city of Port Huron in less than a week (refer to November Storm Data for information on the first event).

With the snowfall beginning during the overnight hours across Flint and the tri cities and around rush hour in metro Detroit, roads had become quite slippery by the morning of the 2nd. Hundreds of traffic accidents across eastern Michigan were claimed to have resulted from slippery roads. At least a dozen of those accidents resulted in injury. The only reported deaths from the traffic accidents was that of an elderly couple in Shiawassee County. Nearly 170 flights had to be cancelled at Detroit Metro Airport due to the snowfall.

MIZ076-076

Wayne

**03 0800EST
1000EST**

2 0

Extreme Cold

Temperatures across the state averaged well below normal the first week of December. Detroit tied a 131-year record low of 3 degrees Fahrenheit on the morning of the 3rd, while a temperature of -8 degrees Fahrenheit broke the record low in Flint. Temperatures across many other locations in eastern Michigan fell below zero during the morning of the 3rd. Combined with the winds, wind chill readings dropped to near 15 degrees below zero. The newspaper reported that a 70-year old homeless man was found frozen to death in the city of Detroit. A 41-year old man was also found lying outside near his home in the city of Detroit, and was pronounced dead at a nearby hospital. Exposure was the suspected cause of the mans death. M70OU, M41OU

MIZ047>048

Midland - Bay

**18 0100EST
1000EST**

0 0

Ice Storm

A warm front moved north across southern and central Lower Michigan during the morning of the 18th. Rain showers developed along and north of this warm front and affected most of eastern Michigan during the morning of the 18th. With temperatures near the ground below zero, much of this rain fell in the form of freezing rain. The heaviest precipitation occurred across Midland and northern Bay counties, where ice accumulations of around one quarter of an inch were reported, mainly on the roads. Saginaw and Tuscola counties reported around a tenth of an inch of ice accumulations. Across the rest of eastern Michigan, many secondary roadways and overpasses were coated with a thin glazing of ice.

Dozens of traffic accidents were reported due to the icy roads during morning rush hour on the 18th. Most of the accidents were reported in the Saginaw Valley. The only fatal accident reported actually occurred in Oakland County's Waterford Township, where a 26-year old man lost control of his car and hit a tree. Icy roadways were the suspected cause. The ice also lead to many school closings across Midland, Bay, Saginaw, Tuscola, and Washtenaw Counties.

MIZ075>076-082>083

Washtenaw - Wayne - Lenawee - Monroe

**24 2200EST
25 1000EST**

0 0

Winter Storm

On Christmas Eve, a storm system moved up into the Ohio Valley and weakened, while another storm intensified off the East Coast. Despite the fact that the initial storm over the Ohio Valley was weakening, the northern edge of this storm system moved across southern and central Lower Michigan and caused several inches of accumulation across much of the area. The snowfall began near the Ohio border late in the evening on Christmas eve, then slowly lifted northward across eastern Michigan on Christmas morning. The heaviest snowfall amounts occurred across Lenawee, Monroe, Washtenaw and Wayne counties, where 5 to 7.5 inches of accumulation were reported. The highest snowfall totals were: 6 inches in Adrian, 7 inches in Dundee, 7.5 inches in Milan, 6.8 inches in Wyandotte, and 6.5 inches at Detroit Metro Airport. Washtenaw County even declared a snow emergency, ticketing vehicles left parked on the street. The rest of eastern Michigan received 3 to 5 inches of snowfall, with the Flint and Lapeer areas reporting 5.5 inches. Given the large amount of holiday travelers, dozens of traffic accidents were reported across the region. No injuries or deaths were reported.

MICHIGAN, Extreme Southwest

MIZ077>081

Berrien - Cass - St. Joseph - Branch - Hillsdale

**25 0600EST
1200EST**

0 0 0 0

Heavy Snow

Low pressure tracked from Kentucky into Ohio during the overnight hours of Christmas Eve into Christmas Day morning, spreading a large area of snow across the region. Most locations received 6 to 8 inches of snow. A narrow band from southeastern Cass county into western St Joseph county had some local amounts approaching 9 inches. Gusty northwest winds created widespread blowing and drifting snow.

MICHIGAN, North

MIZ019>020-026

Charlevoix - Leelanau - Grand Traverse

**01 1800EST
2000EST**

0 0

Heavy Snow

An area of low pressure moved through the Great Lakes region on the 1st. This system brought 2 to 4 inches of snow to much of northwest Lower Michigan, while an embedded lake enhanced band of 6 to 9 inches of snow fell across several locales.

Storm Data and Unusual Weather Phenomena

December 2002

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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MICHIGAN, North

MIZ020-025>027-031>033-041

Leelanau - Benzie - Grand Traverse - Kalkaska - Manistee - Wexford - Missaukee - Gladwin

18 0545EST 1200EST 0 0 Ice Storm

A surge of warm, moist air moved into northern Michigan during the morning hours of the 18th. This allowed widespread rainfall to develop across the region. However, surface temperatures at the onset of the rainfall were in the 20s across northwest Lower Michigan, setting the stage for freezing rain. By late morning, a quarter of an inch of ice had accumulated across much of area, coating exposed surfaces. The main hazard was icy roads and sidewalks as the ice quickly melted off trees and power lines as surface temperatures climbed above freezing.

MICHIGAN, Upper

MIZ005

Marquette

02 0700EST 0 0 Heavy Snow

Ten inches of lake effect snow fell on the Skandia area in a 24 hour period.

MIZ002-004>007-009>014

Ontonagon - Baraga - Marquette - Alger - Luce - Gogebic - Iron - Dickinson - Menominee - Delta - Schoolcraft

18 0700EST 1000EST 0 0 Ice Storm

Southerly flow from a strong area of low pressure over Minnesota brought abundant moisture and warm air aloft into Upper Michigan during the morning of December 18th. At the surface, early morning temperatures were still below freezing when rain began falling over the southern Upper Peninsula and then spread northward. As the rain fell, it froze on road surfaces as well as cars, trees and other objects. A quarter of an inch of ice accumulation was reported in Powers, Paulding, Cornell, Rock, Arnold, Wetmore, McMillan, Steuben and Nestoria. Watersmeet reported half an inch of ice and Iron Mountain reported a third of an inch of ice. Many schools were closed and numerous minor auto accidents were reported. The freezing rain ended about noon as temperatures warmed above freezing and the accumulated ice began melting.

MIZ001

Keweenaw

21 1800EST 0 0 Winter Storm

Five to six inches of new snow and west winds gusting to 30 and 40 mph caused frequent periods of near zero visibility in blowing snow during the afternoon on December 21st. Drifting snow blocked roads around Copper Harbor and Eagle Harbor.

MIZ002>003-006>007

Ontonagon - Houghton - Alger - Luce

23 0600EST 0900EST 0 0 Heavy Snow

A surge of colder air across Lake Superior along with a west wind produced bands of lake effect snow over parts of Upper Michigan overnight on December 22nd and the morning of the 23rd. Twelve inches of snow was reported in Pelkie and along parts of Highways M26 and M38. Rockland reported 9 inches of new snowfall. Eight inches of new snow fell between Grand Marais and Melstrand. Pine Stump Junction reported 12 inches of lake effect snow. Other areas near Lake Superior received lesser amounts.

MICHIGAN, West

MIZ037>038-044

Mason - Lake - Newaygo

01 1000EST 02 0100EST 0 0 Heavy Snow

The combination of an Alberta clipper system which moved in from the northwest and lake effect snow behind it produced heavy snowfall across west central lower Michigan. The heaviest snowfall occurred across Mason county, where anywhere from 6 to 10 inches was reported. 6 to 8 inches of snow was reported across Lake and Newaygo counties.

MIZ039>040-045>046

Osceola - Clare - Mecosta - Isabella

17 2000EST 18 1300EST 0 0 500K Ice Storm

A period of freezing rain began across the I-94 and I-96 corridors of central and southern lower Michigan during the late evening hours of the 17th and lifted north overnight. The heaviest ice accumulations were reported across Osceola county, where anywhere from a quarter to half inch of ice accumulation was reported. Around a quarter of an inch of ice accumulation was reported across Clare, Mecosta and Isabella counties.

MIZ065>067-072>074

Barry - Eaton - Ingham - Kalamazoo - Calhoun - Jackson

24 2100EST 25 1300EST 0 0 Heavy Snow

A winter storm caused snow to begin to fall along the I-94 corridor of southern lower Michigan at around 9 p.m. on Christmas Eve. It spread north to near I-96 by midnight. The maximum snowfall report of 9 inches was received from Jackson (Jackson county). Anywhere from 6 to 8 inches of snow fell across most of Barry, Eaton, Ingham, Kalamazoo and Calhoun counties.

MINNESOTA, Central and South Central

NONE REPORTED.

Storm Data and Unusual Weather Phenomena

December 2002

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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MINNESOTA, Northeast

MNZ010>012-018>021-025>026-033>037 **Koochiching - Northern St. Louis - Northern Cook / Northern Lake - Northern Itasca - Central St. Louis - Southern Lake - Southern Cook - Northern Cass - Southern Itasca - Southern Cass - Crow Wing - Northern Aitkin - Southern Aitkin - Southern St. Louis / Carlton**

17	2200CST								
18	1500CST				0	0			Ice Storm

Freezing rain, at times mixed with sleet and snow, began late at night and continued through most of the day. One-quarter to one-half inch of ice collected on roads and sidewalks, making them treacherous at times. All the schools in the Duluth area were closed.

MINNESOTA, Northwest

NONE REPORTED.

MINNESOTA, Southeast

NONE REPORTED.

MINNESOTA, Southwest

NONE REPORTED.

MINNESOTA, West

NONE REPORTED.

MINNESOTA, West Central

NONE REPORTED.

MISSISSIPPI, Central

Bolivar County

Gunnison	19	0150CST							
	24	0215CST			0	0	20K		Thunderstorm Wind (G60)

Winds from a severe thunderstorm blew a tree onto a house, resulting in damage.

Bolivar County

Countywide	19	0500CST							
		0745CST			0	0	20K		Flash Flood

Heavy rainfall from thunderstorms resulted in flooding across the county. Minor street flooding was reported in the community of Symonds and six houses were overcome with three to five feet of water in the city of Rosedale.

Jefferson County

Countywide	19	0930CST							
					0	0	5K		Thunderstorm Wind (G60)

Winds associated with a severe thunderstorm blew numerous trees down across the county.

Warren County

Countywide	19	0930CST							
					0	0	5K		Thunderstorm Wind (G60)

Numerous trees were blown down across the county.

Lincoln County

5 SW Brookhaven	19	1115CST							
					0	0	12K		Thunderstorm Wind (G60)

Severe thunderstorm winds blew down numerous trees and powerlines across the area. The downed trees blocked 30 to 40 area roads.

Simpson County

Mendenhall	19	1200CST							
					0	0			Thunderstorm Wind (G60)

Smith County

Mize	19	1233CST							
					0	0			Thunderstorm Wind (G60)

Newton County

3 SW Newton to 2.5 NE Newton	19	1307CST	5.5	440					
		1313CST			0	0	1M		Tornado (F2)

A tornado developed in Newton County, just southwest of the city of Newton. It moved 5.5 miles northeast through the city, resulting in approximately 50 injuries and damage to numerous buildings. In all, over 150 homes and 95 businesses were either damaged or destroyed. The most extensive damage occurred near the city's Wal-Mart, which received heavy roof damage. The tornado lifted just northeast of the intersection of State Road 15 and Interstate 20.

Jasper County

Bay Spgs	19	1322CST							
					0	0	3K		Thunderstorm Wind (G60)

A few trees were blown down across the city.

Lauderdale County

Countywide	19	1400CST							
					0	0			Hail (0.75)

Storm Data and Unusual Weather Phenomena

December 2002

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									
Lauderdale County									
3.5 SW Vimville to 1 NW Vimville	19	1420CST 1425CST	3	150	0	0	33K		Tornado (F0)
A tornado touched down around 2:20 PM, about 3.5 miles southwest of the community of Vimville. It moved three miles northeast across Lauderdale County, toppling numerous large trees and damaging almost twenty other homes, barns, and mobile homes. The tornado lifted about one mile northwest of the city.									
Forrest County									
10 S Bonhomie	23	2035CST			0	0			Hail (0.88)
Forrest County									
.5 N Mc Laurin	23	2045CST			0	0			Hail (1.00)
Bolivar County									
Rosedale	23	2300CST			0	0	5K		Flash Flood
	24	0200CST							
Heavy rainfall resulted in street flooding in the city.									
Rankin County									
Countywide	23	2330CST			0	0	15K		Flash Flood
	24	0200CST							
Thunderstorms moving over Rankin County resulted in flooding across the county. The worst reported flooding occurred in the Brandon and Richland areas. In Brandon, several homes were flooded in the Winchase, Bradford, and Westwind subdivisions, where some sandbagging was taking place. In Richland, one foot of water was covering all lanes of U.S. Highway 49 in the city.									
Sunflower County									
Countywide	24	0005CST 0245CST			0	0	10K		Flash Flood
Heavy rainfall produced street flooding in the community of Drew, with water covering parts of other roads in the county.									
Hinds County									
Byram	24	0035CST 0245CST			0	0	5K		Flash Flood
Five inches of water covered the road at the intersection of Big Creek and Siwell Roads.									
Washington County									
Greenville	24	0050CST 0245CST			0	0	7K		Flash Flood
Heavy rain caused portions of U.S. Highway 82 and Lake Ferguson Road to be under water.									
Adams County									
2 E Washington	24	0135CST			0	0	5K		Thunderstorm Wind (G60)
Winds associated with severe thunderstorms toppled numerous trees and caused partial blocking of U.S. Highway 84.									
Adams County									
Natchez	24	0155CST			0	0			Hail (0.88)
Claiborne County									
Port Gibson	24	0155CST			0	0			Hail (0.88)
Jefferson County									
Fayette	24	0155CST			0	0			Hail (0.88)
Franklin County									
Countywide	24	0215CST			0	0	7K		Thunderstorm Wind (G60)
Thunderstorm winds blew down numerous trees and powerlines across the county.									
Copiah County									
Hazlehurst	24	0220CST			0	0			Thunderstorm Wind (G70)
Lincoln County									
Brookhaven	24	0225CST			0	0			Thunderstorm Wind (G60)
Lincoln County									
Countywide	24	0230CST			0	0	10K		Thunderstorm Wind (G60)
Winds from a severe thunderstorm toppled numerous trees and powerlines across the county.									
Forrest County									
1 N Hattiesburg	24	0240CST			0	0	10K		Thunderstorm Wind (G60)
Numerous trees were blown down in the Eatonville community.									
Jefferson Davis County									
2 W Prentiss	24	0300CST			0	0	5K		Thunderstorm Wind (G60)
Thunderstorm winds toppled numerous trees along U.S. Highway 84.									
Jones County									
Moselle	24	0300CST			0	0	2K		Thunderstorm Wind (G58)
Several large limbs were blown down in the area.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	
<u>MISSISSIPPI, Central</u>									
Lawrence County									
3 W Silver Creek	24	0310CST			0	0	3K		Thunderstorm Wind (G60)
									Numerous trees were blown down in the area.
Marion County									
Columbia	24	0325CST			0	0	5K		Thunderstorm Wind (G60)
									Numerous trees and powerlines were blown down in the area.
Jones County									
12 W Laurel to 8 W Laurel	24	0335CST 0340CST			0	0	2.5K		Thunderstorm Wind (G60)
									Several powerlines were blown down in the area.
Jones County									
Laurel	24	0347CST			0	0	1K		Thunderstorm Wind (G60)
									A severe thunderstorm produced a 60 MPH wind gust and pea-sized hail in the city.
Forrest County									
3 S Hattiesburg	24	0355CST			0	0	7K		Thunderstorm Wind (G60)
									Severe thunderstorm winds blew down several trees, snapping powerlines in the area.
Forrest County									
4 S Hattiesburg	24	0400CST			0	0			Hail (0.75)
Jefferson Davis County									
Prentiss	31	0355CST			0	0	15K		Thunderstorm Wind (G60)
									Thunderstorm winds resulted in minor damage to the city barn and toppled a few trees across State Road 42.
Marion County									
5 N Columbia	31	0355CST			0	0	2K		Thunderstorm Wind (G60)
									Thunderstorm winds blew down a few trees in the area.
Simpson County									
5 SE Pinola	31	0355CST			0	0	2K		Thunderstorm Wind (G60)
									A few trees were blown down across State Road 13 near it's intersection with State Road 28.
Yazoo County									
Yazoo City	31	0410CST 0412CST	1.5	50	0	1	150K		Tornado (F1)
									A tornado touched down about one-half mile southeast of the intersection of U.S. Highway 49W and State Road 3 around 4:10 AM. The tornado then moved northeast approximately 1.5 miles over western sections of the city. The worst damage along the path occurred at the Shady Lane apartment complex, where a roof was ripped from one of the buildings. In addition, several windows were shattered in an adjacent building, with flying debris resulting in damage to other buildings. One female resident of the apartment complex was treated and released from an area hospital with a shoulder injury. The tornado lifted just north of Shady Drive.
Lamar County									
5 NW Purvis	31	0420CST			0	0	3K		Thunderstorm Wind (G60)
									A few trees were blown down across the road in the area.
Forrest County									
Hattiesburg	31	0455CST			0	0	6K		Thunderstorm Wind (G65)
									Several large trees and a few powerlines were blown down in the city.
<u>MISSISSIPPI, North</u>									
De Soto County									
South Haven	18	2215CST 2220CST			0	0	0.01K		Hail (0.75)
Coahoma County									
Clarksdale	19	0400CST 0700CST			0	0	10K		Flash Flood
									Flood water reached up to some homes. Several roads were flooded.
De Soto County									
Horn Lake	19	0830CST 1030CST			0	0	5K		Flash Flood
									Several roads were closed due to flooding.
Tate County									
Senatobia	19	0830CST 1030CST			0	0	5K		Flash Flood
									Some roads were closed due to flooding.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>MISSISSIPPI, North</u>									
Marshall County									
Holly Spgs	19	1000CST 1230CST			0	0	15K		Flash Flood
									One road was washed out. Several other roads were flooded.
Panola County									
Crenshaw	19	1100CST 1130CST			0	0	0.50K		Urban/Sml Stream Fld
									Some minor street flooding occurred in Crenshaw.
<u>MISSISSIPPI, South</u>									
Wilkinson County									
Woodville	19	1000CST			0	0	12K		Thunderstorm Wind
									Thunderstorm winds damaged two unoccupied house trailers, peeled off a fiberglass truck bed cover and wrapped it around the cab of the truck, caused the roof of an outdoor boat shed to collapse, knocked down trees, and blew down a sign.
Harrison County									
Long Beach	23	1820CST			0	0	1K		Thunderstorm Wind
									A few trees were blown down.
Amite County									
Liberty	31	0230CST			0	0	2K		Thunderstorm Wind
									Numerous trees were blown down.
Pike County									
Mc Comb	31	0245CST			0	0	8K		Thunderstorm Wind
									Thunderstorm winds blew down an number of trees, power lines, and utility poles. Two trees fell on houses.
Pearl River County									
Picayune	31	0355CST			0	0	0.75K		Thunderstorm Wind
									A few trees were blown down.
Walthall County									
Salem	31	0400CST			0	0	0.75K		Thunderstorm Wind
									A few trees were blown down.
Jackson County									
Vancleave	31	0630CST			0	0	1.5K		Thunderstorm Wind
									Several trees and power lines were knocked down.
<u>MISSISSIPPI, Southeast</u>									
Greene County									
Rounsaville	19	1145CST 1146CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Rounsaville. Several trees were blown down.
George County									
Lucedale	19	1235CST 1236CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees near Lucedale.
Greene County									
5 S Kittrell	19	1255CST 1256CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees near Knobtown.
Greene County									
5 SE Kittrell	19	1300CST 1301CST			0	0			Hail (0.75)
Perry County									
8 SW Beaumont	23	2110CST 2111CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down near Red Hill. Several trees were blown down and residents heard a loud roar.
Greene County									
4 S Avera	23	2130CST 2131CST	0.1	20	0	0	8K		Tornado (F0)
									A weak tornado briefly touched down south of Avera. Several trees were blown down.
Greene County									
Leakesville	24	0230CST 0231CST			0	0	8K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees and power lines near Leakesville.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
<u>MISSISSIPPI, Southeast</u>									
Stone County									
Whites Crossing	31	0500CST 0501CST			0	0	5K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees near Whites Crossing.
George County									
Lucedale	31	0625CST 0626CST			0	0	8K		Thunderstorm Wind (G50)
									High winds from a thunderstorm blew down several trees and power lines near Lucedale.
George County									
Countywide	31	0820CST 1000CST			0	0			Flash Flood
									Heavy rains caused several streets across the county to flood. Rainfall totals were between two and four inches in a two hour period. Several streets had to be closed for about two hours. The water quickly receded after the rains had moved out of the area.
Stone County									
Countywide	31	0820CST 1000CST			0	0			Flash Flood
									Heavy rains caused several streets across the county to flood. Rainfall totals were between two and four inches in two hours. Several streets had to be closed for about two hours. The water quickly receded after the rains had moved out of the area.
<u>MISSOURI, East</u>									
MOZ072>075									
Crawford - Washington - St. Francois - Ste. Genevieve									
	04	0000CST 2100CST			0	0			Winter Storm
									The first winter storm of the season dropped from 3 to 6 inches of snow across parts of South Central and Southeast Missouri. Virtually all area schools were closed through Thursday. as many rural roads remained very hazardous to travel.
MOZ084>085-099									
Iron - Madison - Reynolds									
	04	0000CST 2000CST			0	0			Winter Storm
									Southeast Missouri got a quick reminder of what winter can be like as an early December snowstorm paralyzed the area with 6 to 10 inches of snow. With temperatures in the middle to upper 20s, roads became snow covered quickly as the snow started shortly after Midnight. Most areas had 4 to 5 inches by sunrise. Due to the hilly terrain, many roads remained snow covered and dangerous through the end of the week.
MOZ041-047>048-050-059>065									
Boone - Moniteau - Cole - Callaway - Gasconade - Warren - St. Charles - Franklin - St. Louis - St. Louis (C) - Jefferson									
	04	0100CST 2200CST			0	0			Winter Storm
									The first winter storm of the season dropped from 2 to 5 inches of snow from Central to East Central Missouri. Although light snow started in some locations around 1 am, the real accumulating snow did not start until 4 to 5 am. This created a disastrous morning rush hour in metropolitan areas. In many areas, school busses were already rolling by the time roads became hazardous causing some to run up to an hour late. A number of areas reported over 100 automobile accidents from 6 to 9 am.
Cole County									
1 W Jefferson City	17	2125CST			0	0			Hail (0.75)
Cole County									
2 W Jefferson City	17	2130CST			0	0			Hail (0.88)
									The Sheriff's Department reported hail up to nickel size just west of Jefferson City.
Pike County									
Bowling Green	17	2330CST			0	0			Hail (0.75)
									The Sheriff's Department reported 3/4 inch hail.
St. Charles County									
Augusta	18	0030CST			0	0			Hail (1.00)
									A retired NWS meteorologist reported 1 inch hail.
Crawford County									
12 N Cuba	18	0040CST			0	0			Hail (1.00)
									The public reported 1 inch hail covering the ground north of Cuba.
Franklin County									
Beaufort	18	0104CST			0	0			Thunderstorm Wind (G55)
									The County Sheriff reported the roof of a house and a barn damaged by thunderstorm winds.
Franklin County									
4 N Union	18	0120CST			0	0			Thunderstorm Wind (G55)
									The Washington Police Department reported power lines down in Highway 47.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
MISSOURI, East									
Boone County									
2 SW Columbia	18	0145CST			0	0			Hail (1.75)
Boone County									
2 NW Columbia	18	0147CST			0	0			Hail (1.00)
The Columbia EOC reported golfball size hail southwest of Columbia. Storm spotters reported 1 inch hail on the northwest side of Columbia.									
Moniteau County									
Mc Girk	18	0215CST			0	0			Hail (0.75)
Amateur radio spotters reported 3/4 inch hail.									
Audrain County									
Mexico	18	0220CST			0	0			Hail (0.75)
Storm spotters reported 3/4 inch hail.									
Cole County									
Jefferson City	18	0229CST			0	0			Hail (0.88)
Cole County									
Jefferson City	18	0236CST			0	0			Hail (1.75)
Hail up tp golfball size was reported across the west side of Jefferson City by the Police Department.									
Callaway County									
Holts Summit	18	0245CST			0	0			Hail (0.75)
The Sheriff's Department reported 3/4 inch hail.									
Audrain County									
Vandalia	18	0250CST			0	0			Hail (0.75)
The Police Department reported 3/4 inch hail.									
Montgomery County									
2 W Middletown	18	0252CST			0	0			Hail (0.75)
The Sheriff's Department reported 3/4 inch hail just west of Middletown.									
Pike County									
Bowling Green	18	0310CST			0	0			Hail (0.75)
The Sheriff's Department reported 3/4 inch hail covering the ground.									
Lewis County									
7 N La Belle	18	1110CST			0	0			Thunderstorm Wind (G55)
The public reported trees down at the intersection of Highways K and Y.									
Franklin County									
North Portion	18	1200CST 1700CST			0	0			Flash Flood
St. Charles County									
Countywide	18	1230CST 1700CST			0	0			Flash Flood
St. Louis County									
Countywide	18	1230CST 1700CST			0	0			Flash Flood
St. Louis (C)									
Countywide	18	1230CST 1700CST			0	0			Flash Flood
Heavy rain triggered flash flooding across the area. Several creeks across the area flooded closing numerous roads. Highway 40 in St. Charles County had to be closed for a while due to flooding. In south St. Louis County, the intersection of I-44 and Highway 141 had to be closed due to high water.									
Moniteau County									
California	18	1255CST			0	0			Hail (0.75)
The County EOC reported 3/4 inch hail.									
Boone County									
2 NW Ashland	18	1317CST			0	0			Hail (1.00)
Boone County									
(Cou)Columbia Rgnl A	18	1324CST			0	0			Hail (0.88)
The public reported 1 inch hail near Ashland. Nickel size hail fell at Columbia Regional airport.									
Callaway County									
Auxvasse	18	1357CST			0	0			Hail (0.88)
The Sheriff's Department reported nickel size hail.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
<u>MISSOURI, East</u>									
Montgomery County									
Wellsville	18	1459CST			0	0			Hail (1.75)
The Sheriff's Department golfball size hail in the Wellsville area.									
Pike County									
1 N Eolia	18	1515CST			0	0			Hail (0.75)
Storm spotters reported 3/4 inch hail just north of Eolia.									
Montgomery County									
Middletown	18	1535CST			0	0			Hail (1.00)
A storm spotter reported hail from nickel to 1 inch size in the Middletown area.									
Osage County									
6 NW Linn	18	1545CST			0	0			Hail (0.75)
An amateur radio spotter reported 3/4 inch hail northwest of Linn.									
Gasconade County									
Gasconade	18	1620CST			0	0			Hail (1.75)
Storm Spotters reported golfball size hail.									
MOZ065-072>075-084>085-099									
Jefferson - Crawford - Washington - St. Francois - Ste. Genevieve - Iron - Madison - Reynolds									
	24	0100CST 2000CST			0	0			Winter Storm
A Christmas Eve snowstorm hit parts of Southeast Missouri dropping from 7 to 12 inches of snow across the area.									
MOZ036-041>042-047>052-059>064									
Pike - Boone - Audrain - Moniteau - Cole - Osage - Callaway - Montgomery - Lincoln - Gasconade - Warren - St. Charles - Franklin - St. Louis - St. Louis (C)									
	24	0400CST 2100CST			0	0			Winter Storm
A Christmas Eve snowstorm his parts of Central and East Central Missouri. Snowfall amounts across the region ranged from 4 to 8 inches. While area children loved the Christmas snow, area adults had to deal with difficult travel conditions through Christmas Day.									
<u>MISSOURI, Lower</u>									
MOZ113-115									
Dunklin - Pemiscot									
	03	2200CST			0	0	10K		Ice Storm
	04	0700CST							
A mix of sleet and freezing rain fell on the Missouri bootheel. The icy conditions caused many trees and power lines to fall down.									
Dunklin County									
Cardwell	18	1845CST 1850CST			0	0	1K		Thunderstorm Wind (G55)
A few trees were blown down.									
Pemiscot County									
Caruthersville	18	1910CST 1915CST			0	0	1K		Thunderstorm Wind
Several large tree limbs were knocked down.									
<u>MISSOURI, Northeast</u>									
Clark County									
Kahoka	18	1120CST			0	0			Hail (0.88)
<u>MISSOURI, Northwest</u>									
Pettis County									
Sedalia	17	2320CST			0	0			Hail (1.00)
Henry County									
Deepwater	18	0330CST			0	0			Thunderstorm Wind (G52)
Tree limbs reported down. Also a report of hail but of unknown size.									
Lafayette County									
Odessa	18	0812CST			0	0			Hail (0.75)
Lafayette County									
Odessa	18	0814CST			0	0			Hail (0.75)
Linn County									
Brookfield	18	0840CST			0	0			Hail (0.75)
Chariton County									
Brunswick	18	0935CST			0	0			Thunderstorm Wind (G52)
Tree reported down near Highway 24.									

Storm Data and Unusual Weather Phenomena

December 2002

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

MOZ076-086>087-100-107>112-114 Perry - Bollinger - Cape Girardeau - Wayne - Carter - Ripley - Butler - Stoddard - Scott - Mississippi - New Madrid

04 0500CST 0 0 Winter Storm
05 0200CST

A major winter storm brought significant snow and ice accumulations to all of southeast Missouri. The precipitation type ranged from mostly freezing rain near the Kentucky border to mostly snow west and north of Cape Girardeau. Ice accumulations were close to one inch in the Kentucky border counties, causing numerous power outages and downed tree limbs. Further north, places from Cape Girardeau to Poplar Bluff received several inches of snow, topped by around one half inch of ice accumulation. Eight to ten inches of snow fell in Wayne and Bollinger Counties, where the precipitation was almost entirely snow. Travel was heavily impacted by the winter storm. Numerous vehicle accidents occurred. In the Kentucky border area, including New Madrid, power was not fully restored for three or four days. Schools were closed for the remainder of the week. The winter storm began during the early morning hours and ended late the following night.

MOZ100-108>109

Wayne - Ripley - Butler

13 1030CST 0 0 Heavy Snow
1800CST

A band of locally heavy snow fell across part of southeast Missouri, mainly west and north of Poplar Bluff. A snowfall amount of 4 inches was reported at Piedmont in western Wayne County, and 5 inches near Doniphan in Ripley County. Adjacent portions of western Butler County also received amounts near 4 inches. The snow fell at temperatures near freezing, resulting in a slushy accumulation on roadways. Some schools were closed or dismissed early. Numerous vehicle accidents and slide-offs were reported. Highway 34 near Piedmont and Highway 49 near Leeper were both closed due to tractor-trailer rigs that jack-knifed. Although nearly 70 accidents were reported to the State Highway Patrol in southeast Missouri, there were no reports of injuries. The heavy wet snow brought down a few tree limbs, including one that fell on an apartment building in Piedmont.

MOZ087-111

Cape Girardeau - Scott

16 0500CST 0 0 Fog
1000CST

Dense fog during the early morning hours reduced visibility to less than one quarter mile. One man was killed in a two-vehicle accident on Route U in Cape Girardeau County (indirect weather fatality). The vehicle was struck in dense fog and knocked off the road, ejecting the victim who was later pronounced dead.

Bollinger County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

Cape Girardeau County

Countywide 18 1945CST 0 0 6K Urban/Sml Stream Fld
19 0800CST

Mississippi County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

New Madrid County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

Perry County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

Scott County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

Stoddard County

Countywide 18 1945CST 0 0 Urban/Sml Stream Fld
19 0800CST

Numerous thunderstorms during the evening of the 18th produced widespread heavy rainfall, ranging from 1.5 to 3 inches. This resulted in minor flooding of poor drainage areas and other flood-prone areas. Low water crossings were under water, including one in Stoddard County just west of Bloomfield and another on Highway PP in Bollinger County. Minor street and road flooding was reported, including Highway B in western Perry County and numerous streets in Cape Girardeau and Sikeston. In Cape Girardeau, a side street became inaccessible when stormwater re-opened a trench that had been dug in the street. The trench had been dug to install a pipe, and had to be refilled after erosion opened it back up. A woman driving her children to school nearly drove into the trench.

MOZ076-086>087

Perry - Bollinger - Cape Girardeau

23 1800CST 0 0 Heavy Snow
24 1800CST

Heavy snow occurred over a small part of southeast Missouri during the evening of the 23rd and again on the afternoon of the 24th.

Storm Data and Unusual Weather Phenomena

December 2002

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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MISSOURI, Southeast

The heavy snow was north of a Cape Girardeau to Marble Hill line. Six inches of snow fell at Perryville in just about four hours on the evening of the 23rd. A second round of heavy snow brought another 4 inches at Perryville during the afternoon of the 24th. Storm total snowfall was near 10 inches in the Perryville area, dropping rapidly to just an inch or two in central Cape Girardeau and Bollinger Counties. For the first time in recent memory, some Christmas church services were cancelled in Perry County. A narrow area of freezing rain across northern Bollinger and northern Cape Girardeau Counties produced up to one quarter inch of glaze.

Butler County Countywide

31	0500CST 1100CST				0	0	20K		Flash Flood
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Ripley County Countywide

31	0500CST 1100CST				0	0	5K		Flash Flood
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Unofficial measurements of around 3.5 inches of rain in 3 days caused flooding of roads, creeks, and low-lying areas. Indian Creek north of Poplar Bluff flooded a quarter mile stretch of NN Highway. A van became stranded in floodwaters along the highway. A towing company rescued 10 vehicles that were stranded on flooded gravel roads off Highways 142 and B. Police rescued a dog that was chained to its dog house in two feet of water. In Ripley County, Routes H and W were closed. Highway 158 at Harviell and sections of Highway 142 east of Naylor were impassable.

MISSOURI, Southwest

MOZ070-077>083-088>092-094>098-102>106

Pulaski - Barton - Cedar - Polk - Dallas - Laclede - Texas - Dent - Jasper - Dade - Greene - Webster - Wright - Lawrence - Christian - Douglas - Howell - Shannon - Barry - Stone - Taney - Ozark - Oregon

04	0100CST				0	0	0		Winter Storm
05	0500CST								

The first winter storm of the 2002-2003 cool season brought several inches of snow to areas of extreme southeast Kansas and the Missouri Ozarks. The heaviest snow occurred in a 25 mile wide line extending from Ash Grove to Mountain View Missouri, where seven to nine inch amounts were common. Most other accumulation values ranged from three to five inches across the region. The exception was applicable in the extreme southwestern portion of the state, where one to three inches combined with freezing rain. No major property damage was directly linked to the elements, however, numerous vehicle accidents were reported across the region.

Lawrence County Stotts City

17	2100CST				0	0			Hail (0.75)
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Lawrence County 5 E Mt Vernon

17	2135CST				0	0			Hail (0.75)
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Greene County Willard

17	2135CST				0	0			Hail (0.88)
----	---------	--	--	--	---	---	--	--	-------------

Lawrence County Mt Vernon

17	2141CST				0	0			Thunderstorm Wind (G70)
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Greene County Willard

17	2158CST				0	0			Hail (0.75)
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Greene County 2 N Fair Grove

17	2158CST				0	0			Thunderstorm Wind (G65)
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Dallas County 1 W Olive

17	2158CST				0	0			Thunderstorm Wind (G65)
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Polk County Pleasant Hope

17	2200CST				0	0			Hail (1.00)
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Greene County (Sgf)Springfield Arpt

17	2218CST				0	0			Hail (0.75)
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Newton County 3 NW Fairview

17	2224CST	0.5	50		0	0	50K	0	Tornado (F0)
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Tornado touched down in a rural area of east central Newton County. One home and four out buildings were destroyed.

Greene County Springfield

17	2230CST				0	0			Hail (0.88)
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Barry County 7 W Monett

17	2230CST	0.5	20		0	0	0	0	Tornado (F0)
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Brief tornado touched down in an open field. No damage was observed from survey.

Greene County Fair Grove

17	2242CST				0	0			Hail (0.88)
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Laclede County 5 NE Sleeper

17	2255CST				0	0			Hail (0.88)
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Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
MISSOURI, Southwest									
Vernon County									
Nevada	17	2303CST			0	0			Hail (0.75)
Lawrence County									
3 ESE Mt Vernon to 1 NW Chesapeake	17	2305CST	4	100	2	17	500K	0	Tornado (F2)
Tornado touched down two miles southwest of the Lucky Lady Trailer Park. The tornado then followed a trajectory through the trailer park and points north and east. 34 homes were either damaged or destroyed. Shortly after the initial touch down, a modular home was directly hit and destroyed. One fatality was observed at this location as a woman seeking shelter with her husband in the bedroom, was thrown approximately one quarter of a mile from the house location.									
As the tornado traversed through the Lucky Lady Trailer Park, many residents evacuated their mobile homes and took shelter in ditches and an open field. However, one fatality occurred at the trailer park when a woman was in the process of leaving her home to seek shelter in a field, was struck by a downed tree. F47PH, F64UT									
Greene County									
4 N Ash Grove	17	2317CST			0	0			Hail (0.88)
Greene County									
4 S Ash Grove	17	2321CST			0	0			Hail (1.50)
Lawrence County									
1 SE Halltown	17	2326CST			0	0			Thunderstorm Wind (G80)
Pulaski County									
St Robert	17	2331CST			0	0			Hail (0.88)
Vernon County									
Nevada	17	2332CST			0	0			Hail (0.88)
Maries County									
2 SW Hayden	17	2335CST			0	0			Hail (0.75)
Pulaski County									
Waynesville	17	2339CST			0	0			Hail (0.88)
Polk County									
1 S Pleasant Hope	17	2340CST			0	0			Hail (0.88)
Polk County									
Pleasant Hope	17	2352CST			0	0			Hail (1.25)
Polk County									
Pleasant Hope	17	2352CST			0	0			Hail (2.50)
Polk County									
Pleasant Hope	17	2352CST			0	0			Thunderstorm Wind (G70)
Vernon County									
3 N Nevada	17	2355CST			0	0			Hail (1.00)
Dallas County									
Redtop	17	2359CST			0	0			Hail (0.88)
	18	2359CST							
Dallas County									
5 S Buffalo	18	0013CST			0	0			Hail (1.75)
St. Clair County									
Appleton City	18	0050CST			0	0			Hail (0.88)
Benton County									
Warsaw	18	0105CST			0	0			Hail (0.88)
Jasper County									
Waco	18	0130CST			0	0			Hail (1.75)
Jasper County									
Jasper	18	0139CST			0	0			Hail (1.25)
Morgan County									
Versailles	18	0145CST			0	0			Hail (0.75)
Jasper County									
1 W Jasper to 1 N Jasper	18	0148CST	1.5	100	0	0	50K	0	Tornado (F1)
Tornado touched down destroying a large barn and several out buildings.									
Jasper County									
Asbury	18	0153CST			0	0			Hail (2.00)

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed Injured		Estimated Damage Property Crops		Character of Storm
MISSOURI, Southwest									
Barton County									
9 S Lamar Muni Arprt to 2 SE Kenoma	18	0153CST 0205CST	9.5	100	1	7	138K	0	Tornado (F1)
The tornado initially touched down and destroyed a mobile home and uprooted trees one mile northwest of Jasper. The tornado then tracked northeast to three miles southeast of Boston where three homes were destroyed at the intersection of highway JJ and 126. A silo and barn were also destroyed with heavy irrigation equipment overturned. The tornado then tracked to two miles southeast of Kenoma where a mobile home and barn were destroyed. A fatality occurred at this location as the tornado destroyed a mobile home with one individual inside. Several additional homes were damaged and out buildings were destroyed further to the northeast. F32MH									
Cedar County									
5 N Stockton	18	0235CST			0	0			Hail (0.88)
Cedar County									
2.5 E Arnica to 3 ENE Arnica	18	0238CST	1	100	0	0	2K	0	Tornado (F1)
Tornado touched down in extreme northeast Cedar County and damaged a barn and an out building.									
Polk County									
4 SW Humansville to 2 NE Humansville	18	0245CST 0257CST	6	100	0	1	500K	0	Tornado (F1)
Tornado traversed northeast over the Cedar-Polk county line, eventually damaging 18 homes. The tornado then uprooted many trees within Polk County prior to advancing into southern Hickory County.									
Christian County									
5 N Ozark	18	0257CST			0	0			Hail (1.00)
Hickory County									
5 S Weaubleau to 6 SSE Weaubleau	18	0257CST	5	100	0	1	43K	0	Tornado (F1)
Tornado touched down and damaged two houses with several others receiving minor damage.									
St. Clair County									
Collins	18	0430CST			0	0			Thunderstorm Wind (G65)
Benton County									
Warsaw	18	0510CST			0	0			Hail (0.75)
Stone County									
Kimberling City	18	0632CST			0	0			Hail (1.75)
Douglas County									
Goodhope	18	0715CST			0	0			Hail (0.88)
Webster County									
Seymour	18	0904CST 1004CST			0	0			Hail (1.00)
Webster County									
1 N Duncan	18	0949CST	0.5	50	0	0	0	0	Tornado (F0)
Tornado touched down near the Webster-Wright County line. Several trees were downed.									
Wright County									
8 SW Grovespring to 2 E Grovespring	18	0955CST 1005CST	10	100	0	0	75K	0	Tornado (F0)
Tornado touched down damaging two mobile homes, several out buildings, along with numerous uprooted trees.									
Ozark County									
Pontiac	18	1430CST			0	0			Hail (0.88)
Ozark County									
Hardenville	18	1445CST			0	0			Hail (0.75)
Ozark County									
2 E Tecumseh	18	1500CST			0	0			Hail (1.50)
MOZ058-066>071- 077>083-088>098- 101>106	24	0400CST 1000CST			0	0			Winter Storm

The second of a series of winter storms to affect the Missouri Ozarks during the cool season of 2002-2003, brought significant snow accumulations to the region. The heaviest accumulation amounts were observed in a 60 mile wide band. This area is along and 30 miles north and south of a line extending from Cassville to Salem Missouri, where accumulations ranged from 12 to 16 inches. Areas to the north and south of this band, received total accumulations of five to eight inches. Numerous vehicle accidents occurred, however, no property damages were directly correlated with the heavy snow.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>MISSOURI, Southwest</u>									
Stone County									
Reeds Spg	30	1410CST			0	0			Hail (0.75)
Laclede County									
Lebanon	30	1450CST			0	0			Hail (1.00)
Greene County									
2 W Springfield	30	1510CST			0	0			Hail (0.88)
Greene County									
Springfield	30	1540CST			0	0	0	0	Hail (0.88)
<u>MONTANA, Central</u>									
MTZ009 North Rocky Mountain Front									
14		0400MST			0	0			High Wind (G56) ^M
		1500MST							
		A high wind event occurred over the northern Rocky Mountain front late on the 14th. Sustained winds of 40 to 45 mph occurred with a wind gust of 64 mph reported in Browning at 0600 MST and a 62 mph wind gust at East Glacier 2E at 1300 MST.							
MTZ049 Eastern Teton									
28		0000MST			0	0			High Wind (G43) ^M
		0600MST							
		Sustained winds of 49 mph with gusts over 50 mph, were reported in Pendroy from 0000 MST to 0400 MST.							
MTZ047 Blaine									
28		0251MST			0	0			High Wind (G53) ^M
		A wind gust to 63 mph occurred at Chinook 11S.							
MTZ009 North Rocky Mountain Front									
29		0000MST			0	0			Winter Storm
		0700MST							
		Heavy snow fell over the northern Rocky Mountain front during the early morning hours on the 29th. 8 inches of snow fell near East Glacier by 0700 MST.							
<u>MONTANA, East</u>									
NONE REPORTED.									
<u>MONTANA, South</u>									
MTZ035 Yellowstone									
04		1600MST			0	0			Heavy Snow
		5 inches of new snow at the National Weather Service Forecast Office in Billings							
MTZ038 Southern Big Horn									
04		1600MST			0	0			Heavy Snow
		7 inches of new snow in St. Xavier							
MTZ040 Park									
26		1153MST			0	0			High Wind (G50) ^M
		50 mph sustained winds in Livingston							
MTZ040 Park									
27		1310MST			0	0			High Wind (G53) ^M
		53 mph sustained winds at the East Livingston Dept. of Transportation Site							
MTZ040 Park									
27		1613MST			0	0			High Wind (G51) ^M
		51 mph sustained wind at the Livingston Airport							
MTZ040 Park									
27		1730MST			0	0			High Wind (G53) ^M
		53 mph sustained wind at the Livingston Airport							
MTZ040 Park									
27		1753MST			0	0			High Wind (G50) ^M
		50 mph sustained wind at the Livingston Airport							
MTZ040 Park									
27		1853MST			0	0			High Wind (G50) ^M
		50 mph sustained wind at the Livingston Airport							

Storm Data and Unusual Weather Phenomena

December 2002

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

MONTANA, West

MTZ001>004-006 **Kootenai/Cabinet Region - West Glacier Region - Flathead/Mission Valleys - Lower Clark Fork Region - Bitterroot / Sapphire Mountains**

26	1600MST				0	0			Winter Storm
27	1500MST								

MTZ043

Blackfoot Region

27	0000MST				0	0			Heavy Snow
	1000MST								

Strong winter storm hit northwest and west central Montana overnight through the afternoon hours of 12/26 to 12/27. Heavy snowfall was reported by Montana DOT and Snotel sites of 6 to 8 inches in both valleys and mountains of northwest Montana. In west central Montana, Snotel sites recorded heavy snow of 6 inches in the higher mountain valleys, with 7 to 8 inches in the mountains. Snow was accompanied by gusty southwest winds of 15 to 30 mph in the valleys, with a wind gust to 61 mph recorded by the automated weather station at Point Six radar north of Missoula at 156 AM on 12/27.

MTZ001>002-004

Kootenai/Cabinet Region - West Glacier Region - Lower Clark Fork Region

28	1600MST				0	0			Heavy Snow
29	1800MST								

Winter storm brought heavy snowfall to the mountains of northwest Montana and to the valleys of the Kootenai/Cabinet and Lower Clark Fork Regions. Montana DOT and Snotel sites reported 5 to 10 inches in the valleys with up to a foot in the mountains from the afternoon of 12/28 to the afternoon of 12/29.

MTZ001>002-004

Kootenai/Cabinet Region - West Glacier Region - Lower Clark Fork Region

30	1100MST				0	0			Heavy Snow
31	1600MST								

Winter storm brought heavy snow to the valleys and mountains of northwest Montana the last two days of December. Heavy snowfall was recorded by Montana DOT and Snotel sites with 6 to 8 inches reported in Libby, and from Bull Lake to Troy. In the mountains, 8 to 12 inches was reported.

NEBRASKA, Central

NONE REPORTED.

NEBRASKA, East

NONE REPORTED.

NEBRASKA, Extreme Northeast

NONE REPORTED.

NEBRASKA, Extreme Southwest

NONE REPORTED.

NEBRASKA, South Central

NEZ039>041-046>049-060>064-072>077-082>087 **Valley - Greeley - Nance - Sherman - Howard - Merrick - Polk - Dawson - Buffalo - Hall - Hamilton - York - Gosper - Phelps - Kearney - Adams - Clay - Fillmore - Furnas - Harlan - Franklin - Webster - Nuckolls - Thayer**

01	0000CST				0	0	480M	Drought
31	2359CST							

The prolonged drought across central and south-central Nebraska occasionally was classified into the extreme to exceptional category this summer and fall. Most dry land crops were near a total loss and there was some decreased yield with irrigated crops.

NEBRASKA, West

NONE REPORTED.

NEVADA, North

NVZ035-035-035-037 **White Pine - S Lander & S Eureka**

28	1600PST				0	0	0.50K	High Wind (G77) ^M
	2300PST							

Strong winds ahead of an approaching cold front gusted to 80 mph in Baker and blew a trailer off of the cinder blocks it was sitting on. A weather spotter in Ruth reported winds gusting to 60 mph. The Mather RAWS site in the Great Basin National Park at an elevation of 9200 feet reported wind gusts to 89 mph and the Flat Springs RAWS site in southern Eureka county at an elevation of 7700 feet reported a wind gust of 83 mph.

NVZ031>032

N Elko Cnty - Sw & Sc Elko

30	1000PST				0	0		Heavy Snow
31	1000PST							

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
<u>NEVADA, West</u>									
NVZ001-003			Mineral/Southern Lyon - Greater Reno/Carson City/Minden Area						
	28	0922PST 1630PST			0	0	10K		High Wind (G75)
	An approaching cold front brought strong and gusty winds to western Nevada. Numerous wind gusts in the 58 to 75 mph range were reported. An 86 mph gust was reported by a spotter near Gardnerville, NV. Scattered power outages occurred due to the winds, but little damage was reported.								
NVZ002			Greater Lake Tahoe Area						
	28	1700PST			0	0			Heavy Snow
	29	0500PST							
	A strong, fast moving cold front brought heavy snow to the eastern Sierra from the evening of December 28 to the morning of December 29. Several locations in the Lake Tahoe reported snowfall rates over 3 inches per hour for several hours during the evening of December 28. By the morning of December 29, over 2 feet of new snow had fallen in only about 12 hours above 8000 feet, with over a foot at many locations above 7000 feet.								
NVZ003			Greater Reno/Carson City/Minden Area						
	31	0120PST			0	0			High Wind (G51)
	Recorded by automated station at the Stead Airport.								
<u>NEW HAMPSHIRE, North and Central</u>									
NHZ002-004-006-009			Southern Coos - Northern Carroll - Southern Carroll - Belknap						
	12	0200EST 1200EST			0	0			Moderate Snowfall
NHZ003-005-007>008			Northern Grafton - Southern Grafton - Sullivan - Merrimack						
	12	0200EST 1200EST			0	0			Heavy Snow
	Low pressure moving northeast along the East Coast brought a moderate to heavy snowfall across portions of the state. In Rockingham and Strafford Counties, much of the precipitation fell as rain. Elsewhere, snowfall amounts ranged from about 3 to 8, with the highest amounts falling in the higher terrain of western Merrimack and Sullivan Counties.								
NHZ014			Coastal Rockingham						
	14	1030EST 1900EST			0	0			Strong Winds
	Strong, northeast winds associated with a low pressure system near the Maine coast downed tree limbs onto buildings causing property damage, including damage to the roof of the Spinnaker Point Field House in Portsmouth. Peak wind gusts were estimated at 60 mph in Greenland and measured at 33 mph in Portsmouth.								
NHZ001>002			Northern Coos - Southern Coos						
	20	0700EST 1200EST			0	0			Freezing Rain
	Warmer air moving northward ahead of a large low pressure center north of the Great Lakes combined with cold air near the ground to produce light freezing rain and mixed precipitation across portions of Coos County during the morning of the 20th. The freezing rain caused slippery driving conditions across the area for the morning hours.								
NHZ003>010-013>014			Northern Grafton - Northern Carroll - Southern Grafton - Southern Carroll - Sullivan - Merrimack - Belknap - Strafford - Interior Rockingham - Coastal Rockingham						
	25	1000EST			0	0			Heavy Snow
	26	0600EST							
	Low pressure off the coast of southeastern Virginia on the morning of the 25th moved northeastward to south of Nova Scotia by the morning of the 26th. The storm brought record or near-record Christmas day snowfalls to southern parts of the state where 12 to 16 inches of snow fell. Snowfall amounts dropped off dramatically north of the White Mountains where amounts ranged from near 0 in northern Coos County to about 6 inches in southern Coos County.								
NHZ001>010-013>014			Northern Coos - Southern Coos - Northern Grafton - Northern Carroll - Southern Grafton - Southern Carroll - Sullivan - Merrimack - Belknap - Strafford - Interior Rockingham - Coastal Rockingham						
	31	0600EST 1400EST			0	0			Freezing Rain
	A warm front extending eastward from a large area of low pressure over central Canada brought a moist southerly flow of warm air aloft as temperatures remained below freezing at the ground. A mixture of sleet and freezing rain developed across the state early in the morning and continued until mid afternoon. The freezing rain caused some roads to become slippery during the day.								
<u>NEW HAMPSHIRE, Southern</u>									
NHZ011>012			Cheshire - Hillsborough						
	11	2000EST			0	0			Heavy Snow
	12	0700EST							
	Heavy snow affected the higher terrain of Cheshire and Hillsborough counties. Amounts averaged 4 to 8 inches, with as little as 1 to 3 inches in the valleys. No damage or injuries were reported from this storm.								

Storm Data and Unusual Weather Phenomena

December 2002

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

NEW HAMPSHIRE, Southern

Some specific snowfall totals included 8 inches in Marlow, Walpole, and New Ipswich; 7 inches in Jaffrey, Peterborough, and Weare; and 6 inches in Greenfield.

NHZ011>012

Cheshire - Hillsborough

25 1300EST

0

0

14K

Winter Storm

26 0900EST

A major winter storm impacted southern New England on Christmas Day, bringing heavy, wet snow to southwest New Hampshire. Snowfall totals of 10 to 16 inches were common in Cheshire and Hillsborough Counties. The weight of the snow brought down tree limbs and some power lines, but little significant damage was reported from this storm.

Some specific snowfall totals included 16 inches in Franconstown, 14 inches in Bedford and Manchester, 13 inches in Rindge and Nashua, 12 inches in Milford, and 9 inches in Keene and Swanzey.

NEW JERSEY, Northeast

NJZ002>006-011

Western Passaic - Bergen - Eastern Passaic - Essex - Hudson - Union

05 1530EST

0

0

Heavy Snow

1700EST

On Wednesday, December 4th, an area of low pressure started to develop along an old frontal boundary that snaked across the northwest Gulf of Mexico and the Gulf coast states. Meanwhile, high pressure stretched from the northern plains, across the Great Lakes, to the Mid-Atlantic coast. This high pressure locked in the cold air across the northeast. That night, the developing storm moved across the southeastern states to the North Carolina coast. Shortly after daybreak on Thursday, December 5th, as the storm started to move off the coast near Cape Hatteras flurries and light snow started to move into northeast New Jersey. Between 9 am and 10 am, bands of moderate to heavy snow started to move across northeast New Jersey. This steady, moderate to heavy snow continued through most of the afternoon, falling at times at rates over an inch per hour. As the storm sped off toward the North Atlantic waters, the heavy snow began to taper off to light snow between 4 pm and 5 pm. By this time, an average of 6 to 8 inches had fallen across the region. As moisture continued to "wrap around" the storm, light snow continued to fall through the evening rush hour commute before tapering off to flurries and finally ending around 9 pm. Final snowfall accumulations ranged from 6 to 9 inches across northeast New Jersey.

NJZ002>005

Western Passaic - Bergen - Eastern Passaic - Essex

25 2000EST

0

0

Heavy Snow

26 0000EST

On Tuesday, December 24th, an area of low pressure began to develop over the Gulf coast states. That night, the storm intensified as it moved northeast, reaching the Virginia coastline by daybreak on December 25th. Around this time, spotty drizzle and light rain along with a few pockets of light freezing rain began to overspread northeast New Jersey. As the morning progressed, the center of low pressure started to track northeast over the Atlantic along a path that hugged the coast. As a result, a steady rain began to fall over northeast New Jersey, and all of the freezing rain and drizzle changed over to plain rain. Early that afternoon, the rain began to change to snow from west to east across the region, as the storm started to move east of the tri-state area allowing the winds to shift to the north. By 3 pm, the entire area had changed over to all snow. During the late afternoon, narrow bands of heavy snow developed and moved over parts of the region, which accounted for the large ranges of snowfall with this storm. As the center of the storm continued to move northeast away from the area, the snow then tapered off to light snow and flurries during the evening, before ending around midnight. Snowfall amounts over northeast New Jersey ranged from 3 to 4 inches in some spots to as much as 8 to 12 inches in other locations. The heavier snowfall amounts generally occurred away from the urban areas, with the highest amounts over the northern portions of Passaic and Bergen Counties.

NEW JERSEY, South and Northwest

NJZ001-007>010-012>019

Sussex - Warren - Morris - Hunterdon - Somerset - Middlesex - Western Monmouth - Eastern Monmouth - Mercer - Salem - Gloucester - Camden - Northwestern Burlington

05 0300EST

0

0

0 Heavy Snow

1900EST

NJZ020>023-025>027

Western Ocean - Cumberland - Western Atlantic - Western Cape May - Eastern Atlantic - Eastern Ocean - Southeastern Burlington

05 0300EST

0

0

0 Winter Storm

2000EST

NJZ024

Eastern Cape May

05 0300EST

0

0

0 Winter Weather/Mix

1200EST

The first winter storm of the season dropped four to ten inches of snow across most of New Jersey with slightly lower amounts across the immediate Cape May County coast. In many places in the southern half of the state, this was more snow than fell all of last winter. The snow spread from south to north between 3 a.m. and 8 a.m. EST. The snow began mixing with and changed to sleet and rain during the afternoon in the southeast part of the state. Some sleet mixed with the snow across the other coastal counties. Precipitation fell as snow elsewhere. The heaviest snow fell during the morning in the southern third of the state and during the midday elsewhere in the state. Precipitation ended during the first half of the evening.

The first winter storm of the season which also coincided with a work day (Thursday) and caused thousands of accidents statewide.

Storm Data and Unusual Weather Phenomena

December 2002

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NEW JERSEY, South and Northwest

No traffic related deaths were reported. There were nearly 100 accidents on the New Jersey Turnpike including five tractor trailers. There were about 50 accidents by 7 p.m. EST on Interstates 78 and 287. Lakewood (Ocean County) alone reported 60 accidents. Numerous accidents were also reported on the Atlantic City Expressway, State Routes 42 and 55, U.S. Route 22 and Interstate 295. Two hundred forty of the state's five hundred ninety-seven school districts never opened. The rest (mainly in the northern half of the state) dismissed their children early. There were many midday closures of courthouses, county and municipal offices. Rutgers University, Sussex Community College, County College of Morris and Fairleigh Dickinson University all dismissed their students early in the afternoon. The state started dismissing non-essential workers at 1 p.m. EST in Trenton. The New Jersey State Senate and Assembly meeting was canceled. Horse racing and simulcasting was cancelled at Freehold and Monmouth Park. Atlantic City International Airport was closed for about 35 minutes to clear its main runway. It was reopened at 1010 a.m. EST. The snowy conditions delayed New Jersey Transit trains 15 to 30 minutes and New Jersey Transit buses by up to one hour. Many evening Freeholder meetings, schools and social functions were cancelled. Clinic, dentist and doctor offices closed early. Many schools were also canceled on the 6th.

There were 30 reported accidents on the Atlantic City Expressway between 9 a.m. and 3 p.m. EST. The most bizarre accident occurred when a woman driving on the Garden State Parkway, skidded down an embankment and ended on the Expressway. In Monmouth County, a jackknifed tractor trailer closed New Jersey State Route 18 for more than one hour. In Hunterdon County, two serious accidents were reported on eastbound Interstate 78 and stalled traffic for hours during the midday hours. A tractor trailer jackknifed in the middle lane, bounced against a guardrail and struck another tractor trailer. Only one lane was open for three hours. In Morris County, northbound Interstate 287 was closed for two hours after another tractor trailer jackknifed. A 62-year-old Dunellen (Middlesex County) man died after clearing a neighbor's driveway with a snowblower.

Specific Accumulations included 9.5 inches in Swedesboro (Gloucester County), 9.2 inches in Lambertville (Hunterdon County), 9.0 inches in New Egypt (Ocean County) and Vernon (Sussex County), 8.5 inches in Moorestown (Burlington County), 8.3 inches in Whitehouse Station (Hunterdon County) and Yardville (Mercer County), 8.2 inches in Mount Holly (Burlington County), 8.1 inches in Piscataway (Middlesex County), 8.0 inches in Sussex (Sussex County), Gillette (Morris County), Hillsborough (Somerset County), Erial (Camden County), Manalapan (Monmouth County) and Delaware Township (Hunterdon County), 7.8 inches in Cream Ridge (Monmouth County), 7.7 inches in New Brunswick (Middlesex County), 7.6 inches in Estell Manor (Atlantic County), 7.5 inches in Stewartsville (Warren County), 7.0 inches in Marcella (Morris County), Mullica Hill (Gloucester County) and Princeton (Mercer County), 6.8 inches in Lindenwold (Camden County), 6.5 inches in Belmar (Monmouth County), 6.4 inches in Newton (Sussex County), 6.2 inches in Tabernacle (Burlington County), 6.0 inches in Long Valley (Morris County), Hackettstown (Warren County), Pottersville (Somerset County) and Woodbine (Cape May County), 5.0 inches at the Atlantic City International Airport, Seabrook (Cumberland County) and Cape May Courthouse (Cape May County) and 3.0 inches in Ocean City (Cape May County).

The low pressure system responsible for the winter storm formed over Texas on the 3rd and moved eastnortheast and reached Louisiana the morning of the 4th, Cape Hatteras the morning of the 5th and then accelerated quickly offshore during the day on the 5th.

NJZ001-007>008

Sussex - Warren - Morris

11	0800EST		0	0		Winter Storm
12	0200EST					

NJZ009>010-015

Hunterdon - Somerset - Mercer

11	0800EST		0	0		Winter Weather/Mix
	1200EST					

A winter storm of sleet and freezing rain affected northwestern New Jersey, affecting Sussex County the most. Precipitation changed to snow before it ended in the county during the night of 11th. A couple of inches of snow accumulated on top of the ice. A shorter duration event of sleet and freezing rain affected sections of Mercer, Hunterdon and Somerset Counties. While it was warm enough aloft for precipitation to fall as rain, enough cold air was left at or near the surface by a departing high pressure system for the rain to freeze on contact or for precipitation to fall as sleet. Precipitation (in the form of sleet and freezing rain) spread from south to north across the area between 8 a.m. and 10 a.m. EST. In sheltered sections of Mercer, Hunterdon and Somerset Counties, surface temperatures remained below freezing throughout the morning and up to two-tenths of an inch of ice accrued to exposed surfaces. The change to plain rain took longer (into the middle of the afternoon) across Warren and Morris Counties. The changeover was also elevation dependent. Higher terrain locations took longer to change to plain rain. In Sussex County, some valley locations changed to plain rain during the afternoon, otherwise a wintry mix continued. Ice accretions in Warren and Morris Counties averaged around one quarter of an inch, highest toward Sussex County. In Sussex County, ice accretions averaged between one quarter and one half of an inch. A couple of inches of snow then accumulated across higher terrain locations during the night of the 11th. Precipitation ended overnight on the 11th.

In Sussex County, schools were closed. Dozens of businesses, offices and town halls closed early. Parts of Sparta Township lost power on Springbrook Trail west of Sparta Lake after a tree fell down. New Jersey State Route 94 in Vernon Township was closed near the New York border for several hours after a vehicle rolled over and leveled a utility pole. Less traveled roadways, untreated walkways, parking lots and driveways were very hazardous. Numerous accidents were reported throughout the county. A satellite dish repairman had to be rescued from a roof in Lafayette Township after it iced over while he was working on the dish. Many night meetings and social functions were cancelled. In Morris County, numerous schools in the western part of the county were

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December 2002

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NEW JERSEY, South and Northwest

closed. Several others closed during the middle of the day as did some municipal offices in the western part of the county. Precarious driving conditions were reported in Jefferson and Mount Arlington. In Boonton Township, two accidents within 20 minutes tore down utility poles. Similar conditions were reported in Warren County as many schools dismissed their children early and businesses closed and night meetings (including a Freeholders) were cancelled.

A large high pressure system from central Canada brought in cold, dry air into the region. As a low pressure system formed in the Gulf of Mexico on the 10th, it started to push moisture north into the region. As the high retreated into New England, the low moved northeast along the Atlantic Seaboard from near Myrtle Beach the morning of the 11th to near Cape Cod the morning of the 12th. Enough warm air moved westward from the Atlantic to change precipitation to plain rain along the coastal plain. But, the cold air became entrenched, especially over Sussex, Warren and Morris Counties and was difficult to displace throughout this event.

NJZ010

Somerset

13	1255EST								
	1352EST	0	0	0	0	Flood			

Runoff from heavy rain on the 11th caused the Millstone River at Griggstown (Franklin Township) to briefly reach above its 9 foot flood stage from 1255 p.m. EST through 152 p.m. EST on the 13th. It crested at 9.14 feet at 1 p.m. EST on the 13th. The Griggstown Causeway between Franklin and Montgomery Townships was closed. Storm totals on the 11th included 1.85 inches in Flemington (Hunterdon County), 1.21 inches in Somerville (Somerset County) and Princeton (Mercer County).

NJZ010

Somerset

13	2304EST								
	1506EST	0	0	0	0	Flood			

Even before the Millstone River could recover from the heavy rain on the 11th, additional rain during the evening and night of the 13th caused further flooding the next couple of days. The Millstone River at Griggstown (Franklin Township) was above its 9 foot flood stage from 1104 p.m. EST on the 13th through 306 p.m. EST on the 15th. It crested at 11.11 feet at 4 p.m. EST on the 14th. The Griggstown Causeway between Franklin and Montgomery Townships was closed. Storm totals on the 13th included 0.71 inches in Princeton (Mercer County), 0.57 inches in Hightstown (Mercer County) and 0.49 inches in Somerville.

NJZ001-007>008

Sussex - Warren - Morris

24	2200EST								
	2350EST	0	0	0	0	Winter Storm			

NJZ009>010-012>013-015

Hunterdon - Somerset - Middlesex - Western Monmouth - Mercer

24	2200EST								
	0030EST	0	0	0	0	Winter Weather/Mix			

The most significant Christmas Day winter storm since 1966 affected the northern half of New Jersey with a wintry mix of snow, sleet, freezing rain and rain. This mix changed back to snow on Christmas Day and dropped up to around one foot of snow across northwest New Jersey. Precipitation began as light snow toward midnight on Christmas Eve. As the northeaster moved northeast along the eastern seaboard, warmer air from the Atlantic and the south warmed the air between 3,000 and 8,000 feet above ground level. This changed precipitation over to sleet and freezing rain. Then as warmer air moved in near the ground precipitation changed to plain rain across much of northern New Jersey by 9 a.m. EST on Christmas Day. The only exception was in Sussex County where most temperatures remained below freezing. Around two-tenths of an inch of ice accrued on exposed surfaces. The northeaster was in the process of intensifying rapidly along the Middle Atlantic seaboard and both its precipitation intensity and coverage increased rapidly across the state during the second half of the morning. In fact, a SKYWARN Spotter in Sussex County reported a thundersleet storm from 1040 a.m. through 1055 a.m. EST on Christmas morning. As precipitation intensity increased and winds started to shift from the northeast to north, precipitation started to change to all snow. This began in Sussex County between 11 a.m. and Noon EST and moved southeast during the afternoon across the rest of the northern half of the state. Precipitation changed back to snow around 1 p.m. EST in Somerville (Somerset County) and Trenton (Mercer County) and between 3 and 5 p.m. EST in Monmouth County. The heaviest snow fell during the afternoon and lessened in intensity during the evening. The snow ended around Midnight Christmas night.

Most travelers made plans around the storm and while there were accidents, no major congestion was reported. The worst reported traveling problems were along Interstate 78 in Warren County, Interstate 287 in Morris County and eastbound Interstate 280 which was down to one lane along the Morris/Essex county border because the other lanes buckled and collapsed. With respect to the snow, the worst problems were in Sussex County where the combination of ice and then heavy wet snow snapped tree limbs and downed power lines. Several vehicles also skidded into utility poles. About 7,000 Jersey Central Power and Light customers lost power in northern New Jersey. The number was down to 650 the morning of the 26th.

Specific accumulations included 14 inches in High Point (Sussex County), 12 inches in Wantage (Sussex County), 11.7 inches in Barry Lakes (Sussex County), 11 inches in Vernon (Sussex County) and Washington Township (Morris County), 10 inches in Hackettstown (Warren County), 9.7 inches in Newton (Sussex County), 7.0 inches in Hope (Warren County), 7.0 inches in Jefferson Township (Morris County), 6.6 inches in Chatham (Morris County), 6.0 inches in Lebanon (Hunterdon County), 5.3 inches in Somerville (Somerset County), 4.7 inches in Clinton (Hunterdon County), 4.5 inches in Millstone Township (Monmouth County), 4.0 inches in New Egypt (Ocean County), 3.5 inches in New Brunswick (Middlesex County), 3.2 inches in Belle Mead (Somerset County), 3 inches in Ewing (Mercer County), 2.5 inches in Princeton (Mercer County).

Storm Data and Unusual Weather Phenomena

December 2002

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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NEW JERSEY, South and Northwest

The northeaster that produced the tidal flooding moved from Mississippi the morning of the 24th to near Norfolk the morning of the 25th to just west of Atlantic City during the afternoon of the 25th to south of Nova Scotia the morning of the 26th.

NJZ012>014-023>026	Middlesex - Western Monmouth - Eastern Monmouth - Western Cape May - Eastern Cape May - Eastern Atlantic - Eastern Ocean	25	1000EST 1400EST	0	0	0	Astronomical High Tide
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A strong onshore flow preceding a northeaster produced minor tidal flooding across southern New Jersey and moderate coastal flooding in Middlesex, Monmouth and parts of Ocean County at the time of high tide around noon on Christmas Day. Heavy rain fell at the time of the high tide and exacerbated the flooding as did flow from inland lakes and rivers. Monmouth County bore the brunt of the tidal flooding as dozens of roads were closed for several hours including State Routes 35 and 71. Moderate flooding was reported in Neptune, Sea Bright, Brielle, Long Branch, Manasquan and Middletown. Several roads were closed in each municipality. In Manasquan, a voluntary evacuation of 1,000 residents was recommended from Third Avenue to the beachfront as roads were closed from flooding from Manasquan Inlet, the Manasquan River and Stockton Lake. Fletcher Lake overflowed, exacerbating the tidal flooding in Bradley Beach and Ocean Grove. One person was trapped in their home in Asbury Park. Low lying areas along Raritan Bay were also flooded in Middlesex County. In Ocean County, moderate flooding was reported in Point Pleasant Beach as New Jersey State Route 35, Broadway and Arnold Avenue were all impassable. The Coast Guard was placed on alert for possible evacuations (they were not necessary) in Point Pleasant and Point Pleasant Beach. Motorists were rescued from three feet of water. In Atlantic County, the Black Horse Pike (U.S. Routes 40 and 322), Dorset Avenue and Wellington Avenue in and around Atlantic City were closed due to flooding. A vehicle became stuck in flood waters in Absecon at the intersection of Shore Road and U.S. Route 30 (White Horse Pike).

Highest tides included 8.73 feet above mean lower low water at South Amboy (Middlesex County), 8.52 feet above mean lower low water at Keansburg (Monmouth County), 8.07 feet above mean lower low water at Sandy Hook (Monmouth County), 7.47 feet above mean lower low water at North Wildwood (Cape May County), 7.31 feet above mean lower low water at the Cape May Ferry Terminal (Cape May County), 7.29 feet above mean lower low water at Atlantic City (Atlantic County), 6.99 feet above mean lower low water at Absecon (Atlantic County) and 6.42 feet above mean lower low water at Sea Bright (Monmouth County).

The northeaster that produced the tidal flooding moved from Mississippi the morning of the 24th to near Norfolk the morning of the 25th to just west of Atlantic City during the afternoon of the 25th to south of Nova Scotia the morning of the 26th.

NJZ014-020-022>023-025>027	Eastern Monmouth - Western Ocean - Western Atlantic - Western Cape May - Eastern Atlantic - Eastern Ocean - Southeastern Burlington	25	1400EST 2300EST	0	0	10K	0 Strong Wind
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NJZ013-024	Western Monmouth - Eastern Cape May	25	1600EST 2300EST	0	0		High Wind (G59)
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Very strong and gusty north to northwest winds blew across eastern New Jersey during the second half of Christmas Day. The strong winds tore down tree limbs and power lines in Ocean and Monmouth Counties. This caused about 6,000 residents in Ocean County and 4,000 residents in Monmouth County to lose power. In Ocean County, Dover and Berkeley Townships were hit the hardest. In Berkeley Township, the municipal building and police headquarters lost power.

Peak wind gusts included 68 mph in Belmar (Monmouth County), 64 mph in Cape May (Cape May County), 56 mph at Barnegat Light (Ocean County), 55 mph in Sandy Hook (Monmouth County), 52 mph in Point Pleasant (Ocean County) and 48 mph at the Atlantic City International Airport.

The northeaster that produced the strong winds moved from Mississippi the morning of the 24th to near Norfolk the morning of the 25th to just west of Atlantic City during the afternoon of the 25th to south of Nova Scotia the morning of the 26th.

NJZ010	Somerset	25	1754EST	0	0	0	Flood
		26	1627EST				

Heavy rain on Christmas Day (before precipitation changed back to snow) helped cause flooding along the Millstone River at Griggstown (Franklin Township). The river was above its 9 foot flood stage from 554 p.m. EST on the 25th through 427 p.m. EST on the 26th. It crested at 9.63 feet at 7 a.m. EST on the 26th. The Griggstown Causeway between Franklin and Montgomery Townships was closed. Storm totals on the 25th included 1.52 inches in Princeton (Mercer County), 1.15 inches in Hightstown (Mercer County) and 0.86 inches in Somerville (Somerset County).

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NEW MEXICO, Central and North

NMZ001>021-026 Northwest Plateau - Northwest Mountains Including Jemez - Upper Rio Grande Valley - Sangre De Cristo Mountains - Northeast Highlands - Harding - Far Northeast Plains - Westcentral Mountains - Middle Rio Grande Valley - Sandia/Manzano Mountains - Central High Plains/Estancia Valley County - Conchas Lake/Guadalupe - Quay - Southwest Mountains/Upper Gila Region - Lower Rio Grande Valley - Lincoln County High Plains/Hondo Valley - Capitan/Northern Sacramento Mountains - De Baca - Chaves County Plains - Roosevelt - Curry - Guadalupe Mountains Of Chaves County

01	0000MST				0	0			Drought
31	2359MST								

Dry conditions dominated much of the month across northern and central New Mexico with extended periods between any wetting precipitation. Heavier snows were limited generally to higher elevation locations above 8500 feet. Most of the measureable moisture that was recorded in the valley areas or away from the mountain ridges was reported early in the month and then again around Christmas. Albuquerque measured 0.36 inch precipitation for the month which was only 0.13 inch below normal, however all this moisture was recorded on December 3rd with only trace amounts on several days during the remainder of the month.

NMZ010>011-016-026 Sandia/Manzano Mountains - Central High Plains/Estancia Valley County - Lincoln County High Plains/Hondo Valley - Guadalupe Mountains Of Chaves County

08	1200MST				0	0			Heavy Snow
09	1200MST								

Heavy snow of 4 to 6 inches was reported from Mountainair in the Manzano Mountains southward to the Sacramento Mountains surrounding Ruidoso.

NMZ012>013-016>018-020>021-026 Conchas Lake/Guadalupe - Quay - Lincoln County High Plains/Hondo Valley - Capitan/Northern Sacramento Mountains - De Baca - Roosevelt - Curry - Guadalupe Mountains Of Chaves County

23	0600MST				0	0			Winter Storm
24	0600MST								

A strong winter storm moved west to east over New Mexico producing heavy snow mainly over the central highlands and the Manzano and Sacramento mountains eastward towards Clovis and Tucumcari where amounts of 6 to 8 inches were reported.

NEW MEXICO, South Central and Southwest

NMZ025 Southern Sacramento Mountains

22	2200MST				0	0			Heavy Snow
23	0800MST								

10 to 16 inches of snow fell in the Cloudcroft area, with the heaviest amounts east and south of town.

NEW MEXICO, Southeast

NONE REPORTED.

NEW YORK, Central

NYZ018

Onondaga

01	0000EST				0	0			Heavy Snow
	1700EST								

A strong cold front moved through central New York during the evening of November 30th. This brought another blast of arctic air. Lake effect snow moved into northern Onondaga County late on the 30th. It continued well into the first of December. The snow was heavy at times accumulating 6 to 10 inches across northern Onondaga County. Locations which had this snowfall included Syracuse, North Syracuse, Clay, Camillus, and Lysander.

NYZ062

Sullivan

05	0600EST				0	0			Heavy Snow
	1900EST								

Low pressure developed on the middle Atlantic Coast the morning of the 5th. The low tracked northeast up the coast during the afternoon and evening. Snow moved into the region around 6 AM ahead of the storm. By 10 AM, snow was heavy at times with snowfall rates of one inch an hour. During the late afternoon the snow tapered off to light snow. Snowfall totals were 5 to 10 inches. The highest amounts were in the extreme south of the county. Water equivalents were mostly between a quarter and a half an inch. Temperatures ranged from the upper teens to the mid twenties.

NYZ062

Sullivan

11	0800EST				0	0			Winter Weather/Mix
12	0800EST								

Low pressure on the gulf coast on the 10th moved northeast to be off Cape Hatteras, North Carolina the morning of the 11th. The storm moved north to be off the New Jersey coast that evening then moved northeast off of Cape Cod the morning of the 12th. Precipitation moved into Sullivan County in New York between 8 and 9 in the morning on the 11th. Precipitation fell in the form of rain but froze to roads and other surfaces with temperatures in the upper 20s. Some sleet was mixed with the freezing rain at the start of the event. In southern parts of the county at lower elevations temperatures rose above freezing for most of the afternoon. The rain and freezing rain was heavy at times during the afternoon. Total rainfall amounts were up to an inch. Freezing rain accretions were up to half an inch. The freezing rain caused numerous accidents. The freezing rain also brought down trees and power lines. This was especially true across the higher elevations. The rain changed to freezing rain then to snow on the evening

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					Killed	Injured	Property	Crops	

NEW YORK, Central

of the 11th. The wet snow then continued heavy at times into the next morning. Snowfall amounts ranged from 1 inch in the extreme south to 4 to 8 inches across the north. Total water equivalents for the entire storm were mostly between an inch and an inch and a half.

NYZ009-015>018-022>025-036>037-044>046-055>057-062 **Northern Oneida - Yates - Seneca - Southern Cayuga - Onondaga - Steuben - Schuyler - Chemung - Tompkins - Madison - Southern Oneida - Cortland - Chenango - Otsego - Tioga - Broome - Delaware - Sullivan**

25	0000EST	0	0	Heavy Snow
26	0400EST			

Low pressure formed off the middle Atlantic coast Christmas evening. This storm intensified as it moved north to be off Long Island, New York Christmas night. Light snow started moving into central New York around midnight on the 25th. The snow was in northern Oneida County by 4 AM. This snow remained light through the early morning accumulating little. In many locations in the Susquehanna Region and Catskills, the snow changed to sleet and freezing rain around sunrise. The precipitation remained light in most places until afternoon. The exception was the Finger Lakes and Chemung Valley where mostly snow fell. Several inches were reported in this area by noon. During the afternoon precipitation changed back to all snow and became heavy. A band of heavy snow lifted north through the region during the afternoon and evening. The band lifted slowly to the northeast finally exiting after midnight in Delaware and Otsego Counties. Snowfall rates were several inches an hour in this band. The snow ended from west to east starting around 11 PM Christmas night. Snowfall amounts in the Finger Lakes and Chemung Valley were 6 to 12 inches. Along the I-81 corridor amounts were 8 to 14 inches. Further east from northern Sullivan County through Delaware County into Otsego County snowfall totals were mostly 2 to 3 feet. In northern Oneida County snow totals were 6 to 10 inches. Due to the snow amounts and snowfall rates the New York State Thruway closed for part of the evening. The heavy snow also caused power outages to 3000 customers in the Catskills. Many counties declared state of emergencies.

NEW YORK, Coastal

NYZ067>081 **Orange - Putnam - Rockland - Northern Westchester - Southern Westchester - New York (Manhattan) - Bronx - Richmond (Staten Is.) - Kings (Brooklyn) - Queens - Nassau - Northwest Suffolk - Northeast Suffolk - Southwest Suffolk - Southeast Suffolk**

05	1400EST	0	0	Heavy Snow
	1730EST			

On Wednesday, December 4th, an area of low pressure started to develop along an old frontal boundary that snaked across the northwest Gulf of Mexico and the Gulf coast states. Meanwhile, high pressure stretched from the northern plains, across the Great Lakes, to the Mid-Atlantic coast. This high pressure locked in the cold air across the northeast United States. That night, the developing storm moved across the southeastern states to the North Carolina coast. Shortly after daybreak on the morning of Thursday, December 5th, as the storm started to move off the coast near Cape Hatteras, flurries and light snow started to move into New York City and the lower Hudson Valley. By 9 am, snow had started to fall across western Long Island and Westchester County, and bands of moderate to heavy snow had started to move into New York City and the lower Hudson Valley. An hour later, snow began to fall across the eastern end of Long Island, and the snow had become heavy over the western end of Long Island and Westchester. By 11 am, a moderate to, at times, heavy snow had spread across the entire region. This steady, moderate to heavy snow continued through most of the afternoon, falling at times at rates over an inch per hour. As the storm sped off toward the North Atlantic waters, the heavy snow began to taper off to light snow between 4 pm and 5:30 pm. By this time, an average of 5 to 7 inches had fallen across the New York Metropolitan area, Long Island and most of the lower Hudson Valley and as much as 6 to 9 inches in Orange county. As moisture continued to "wrap around" the storm, light snow continued to fall through the evening rush hour commute before tapering off to flurries and finally ending between 8 pm and 9 pm in New York City, Westchester, the lower Hudson Valley and western Long Island. Across the east end of Long Island, light snow lingered until shortly before midnight. Final snowfall accumulations ranged from 6 to 8 inches in New York City, Long Island and the nearby northern suburbs. Further north, in portions of Orange and northwest Putnam counties, where heavier snow bands had moved across, final snowfall totals ranged from 7 to 10 inches.

Storm Data and Unusual Weather Phenomena

December 2002

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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NEW YORK, Coastal

NYZ067

Orange

11 2000EST

0 0

Winter Storm

12 0400EST

An area of low pressure formed along the Southeast Atlantic coast on Tuesday December 10th. On Wednesday, December 11th, this storm moved northeast along a track that hugged the east coast. This storm passed by the New York Metropolitan area on the night of December 11th into the 12th, before moving to the Canadian Maritimes during the day on Thursday, December 12th. The proximity of the track of the storm allowed relatively warm air from the Atlantic Ocean to move onshore along the coast, which resulted in most of the precipitation falling as a liquid. However, over inland locations a shallow layer of cold air froze this liquid on contact with the ground, which resulted in a significant ice storm.

Light precipitation started to fall during the early afternoon on Wednesday, December 11th, in the form of a mix of sleet and freezing rain. This light mix continued until around 7 pm, when the precipitation turned to snow and became heavy. This heavy burst of snow lasted between 60 and 90 minutes, was accompanied by lightning and resulted in quick snowfall accumulations of between 2 and 3 inches. By 9 pm, the precipitation changed back to freezing rain, which continued until about 4 am the next morning. Local cooperative observers reported a storm total liquid equivalent of between 1.0 and 1.5 inches, which accumulated as snow or ice. This wintry mix resulted in numerous vehicular accidents due to ice covered roads and several downed trees and power lines.

**NYZ067>071-073-
076>078-080**

Orange - Putnam - Rockland - Northern Westchester - Southern Westchester - Bronx - Queens - Nassau - Northwest Suffolk - Southwest Suffolk

25 1600EST

0 0

Heavy Snow

26 0200EST

On Tuesday, December 24th, an area of low pressure began to develop over the Gulf coast states. That night, the storm intensified as it moved northeast, reaching the Virginia coastline by daybreak on December 25th. Around this time, spotty drizzle and light rain began to overspread the New York Metropolitan area and Long Island, while light freezing rain and freezing drizzle started to fall across the lower Hudson Valley. As the morning progressed, the center of low pressure started to track northeast over the Atlantic along a path that hugged the coast. As a result, a steady rain developed over New York City and Long Island, while freezing rain began to mix with sleet and snow in the lower Hudson Valley. As the storm started to move east of the tri-state area, winds shifted from the east and northeast to the north or northwest. This allowed colder air to slowly infiltrate southeastern New York. The wintry mix changed to snow in the lower Hudson Valley during the early afternoon, and the rain changed to snow during the mid afternoon in New York City and during the late afternoon across all of Long Island except for the twin forks region where the rain did not change to snow until that evening. During the late afternoon and early evening, narrow bands of heavy snow developed and moved over parts of the region, which resulted in large ranges of snowfall with this storm. As the center of the storm continued to move northeast away from the area, the snow then tapered off to light snow and flurries overnight, ending shortly after midnight in the lower Hudson Valley and New York City, and from west to east between about 2 am and 4 am across Long Island. Snowfall amounts in Orange and Putnam counties ranged from 10 to 20 inches, 6 to 12 inches fell in Rockland and Westchester counties, and 3 to 6 inches in New York City, except for an area across the eastern Bronx and northeastern Queens, where 6 to 10 inches fell. On Long Island, 6 to 12 inches fell in Nassau and Western Suffolk counties, while across eastern Suffolk amounts ranged from less than an inch across the twin forks to 2 to 4 inches just west of Riverhead. The wide ranges of snowfall were generally due to narrow banding of heavy snow, but across Long Island the timing of the change from rain to snow also accounted for the pronounced differential of snow received.

NEW YORK, East

NYZ066

Eastern Dutchess

05 1400EST

0 0

Winter Storm

2200EST

A large low pressure area moved from the Gulf States northeastward to eastern North Carolina on December 5, then turned east and headed out to sea. Cold air was in place over eastern New York so all the precipitation with this storm fell in the form of snow. Central and southern areas of Dutchess County were on the northern fringe of a swath of heavy snow, exceeding 6 inches. 8.8 inches of snow fell at Poughkeepsie, while 8.0 inches fell at Storm Mountain. Lighter amounts of snow fell north of Poughkeepsie.

**NYZ038>043-047>054-
058>059**

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

11 2200EST

0 0

Winter Storm

12 2200EST

A fast moving low pressure system tracked northeast along the eastern seaboard on December 11. While the surface low was fairly weak, it brought a nasty winter mix of precipitation to much of eastern New York. Following on the heels of the surface storm, a compact upper air low brought a burst of heavy snow across the Catskills, Mohawk Valley and Greater Capital District, mainly on the west side of the Hudson River. Snowfall rates reached up to 3 inches per hour across much of the area and some thundersnow was reported. Storm total accumulations exceeded a foot across Western Greene County where East Jewitt and Windham both reported 15 inches. Other snowfall accumulations included 6.3 inches at Albany and 10.0 inches at Knox, both in Albany County, 10.0 inches in Conklingville, Saratoga County and 13 inches in Cobleskill, Schoharie County. The combination of the ice, sleet and heavy wet snow resulted in some spotty power outages and many school delays or closings.

Storm Data and Unusual Weather Phenomena

December 2002

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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NEW YORK, East

NYZ041>042-050

Northern Saratoga - Warren - Southern Saratoga

20	0400EST 0800EST			0	0			Freezing Rain
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A light coating of freezing rain, early on the morning of Friday, December 20, glazed many roads in the Lake George Saratoga region. Due to a multitude of accidents, the Adirondack Northway was closed between Exits 25 and 22 for more than three hours. Many other roads were considered impassable as well, due to a coating of ice. After about 800 AM the temperature rose above freezing, melting the ice off roadways.

NYZ032>033-038>043-047>054-058>061-063>066

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

25	1500EST			0	0			Winter Storm
26	0400EST							

A low pressure area from the Mississippi Valley moved northeastward and rapidly redeveloped along the North Carolina coast by early on Christmas morning. The storm dramatically deepened as it tracked northeast along the atlantic coast and reached just south of eastern Long Island by late Christmas night. With plenty of cold polar air in place, the stage was set for a record breaking snowstorm across eastern New York, the biggest snowstorm since the Superstorm of 93. The snow began in earnest before midday across the Catskills and Mohawk Valley, and overspread the remainder of eastern New York by the afternoon. During the late day and evening hours, snowfall rates averaged 1 to 3 inches per hour while an intense narrow band, with rates up to 5 inches per hour, set up across Southern Herkimer and Montgomery counties. The bulk of the crippling snowstorm fell in about a 15 hour period, winding down a little after midnight on December 26. A little sleet mixed in across the Hudson Valley during the early portions of the storm, but snow was the primary precipitation type. Snowfall amounts ranged from nearly 3 feet across portions of the Mohawk Valley and extreme southern Herkimer County, to about 2 feet in the Capital District and around a foot or less well south from Poughkeepsie south, and from Glens Falls north. There was a sharp cutoff where the accumulating snow fell across northern Herkimer and northern Hamilton counties, but the majority of population in both these counties were still impacted by 7 or more inches of snow. A few specific snowfall amounts included 21.0 inches at Albany in Albany County, 8.8 inches at Beacon, Dutchess County, 25.0 inches at Niskayuna, Schenectady County and 23 inches at Cobleskill, in Schoharie County. The maximum amount reported from this storm was 34.0 inches in Cedarville, in southern Herkimer County. The 19.2 inches of snow that fell on Christmas Day easily smashed the 13.8 inch Christmas day record previously set in 1978. It was the ninth greatest snowstorm in Albany's history. Not only did the snow come down at a furious clip, but 15 to 30 mph wind gusts produced some blowing and drifting of the snow and travel was next to impossible during the height of the storm. Near blizzard conditions were noted across the higher terrain, where winds briefly gusted to 50 mph. Many vehicular accidents were reported and many vehicles became stuck or went off roadways. At one point, the New York State Thruway was closed between the cities of Catskill and Syracuse. Many other roads like Highway 5S were closed as well as all county roads in Schenectady County. A general state of emergency was declared in portions of Herkimer, Montgomery and Schenectady counties. Ninety five percent of the flights were cancelled out of Albany International Airport, stranding many at the airport through Christmas night. A transformer malfunction left 2,600 customers in the dark in the Ballston Spa area with spotty power outages noted elsewhere. The snow removal cost was estimated at 310,00 dollars in the city of Schenectady, and it took days for many side roads to be plowed. In the city of Albany the estimated cost of the snow removal was 250,000 dollars.

NYZ053

Western Rensselaer

27	0900EST 1500EST			0	0	1K		Flood
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The heavy snow, the result of the Christmas Day storm, indirectly produced an unusual minor flood along the Wynants Kill in the city of East Greenbush, Rensselaer County on Friday morning, December 27. Large tree limbs, broken by the weight of the heavy snow, fell into the creek, floated, and formed a dam behind a supermarket on Main Street in town. The result was that the Wynants Kill overflowed its banks, flooding many basements in the Elm Court section of East Greenbush. The town declared a state of emergency by late morning. A large backhoe was brought in, which eventually broke up the blockage by 3 PM.

NEW YORK, North

NYZ029>030-034

Southern St. Lawrence - Southern Franklin - Western Essex

23	1500EST 1900EST			0	0	15K		Heavy Snow
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Low pressure over eastern Canada resulted in a favorable trajectory off of the eastern Great Lakes for heavy bands of Lake Effect Snow. Accumulations in these areas impacted by the bands were between 6 and 12 inches. A few reports included: Lake Placid (Essex county) with 10 inches, Tupper Lake (Franklin county) with 6 inches and Oswegatchie (St. Lawrence county) with 9 inches.

NYZ035

Eastern Essex

25	2330EST			0	0	5K		Winter Storm
26	0300EST							

A storm system along the coast of Virginia early on Wednesday, December 25th, moved northeast just south of New England. Snow spread across Essex county Christmas day, with periods of heavy snow across southern Essex county Christmas night, with difficult travel. Snow accumulations ranged from 4 to 6 inches in southern Essex county with 2 inches or less across northern portions.

Storm Data and Unusual Weather Phenomena

December 2002

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NEW YORK, West

NYZ001>002-006>008- Niagara - Orleans - Oswego - Jefferson - Lewis - Erie - Genesee - Wyoming - Chautauqua - Cattaraugus
010>012-019>020

01 0700EST 0 0 110K Heavy Snow
02 0909EST

Lake effect snows developed in a cold, northwest flow during the overnight hours of the first. Over the higher elevations of Chautauqua county up to 18" of snow fell. As the winds backed to southwest, the snow band lifted north and settled over the City of Buffalo and its northern suburbs. On the second, the band weakened and drifted back south. Specific reports included: Ashville 26"; Orchard Park 22"; Elma 20"; Alden and Findley Lake 18"; East Pembroke 17"; and North Tonawanda 11". Off Lake Ontario a weaker snow band developed with accumulations of eight to twelve inches over the north country. Reports included: 12" at Watertown and 9" at Highmarket and West Monroe.

NYZ006>008

Oswego - Jefferson - Lewis

06 1230EST 0 0 30K Heavy Snow
1400EST

Lake effect snow bands developed over Lake Ontario in a westerly flow and pushed inland across Oswego county early in the morning of the sixth. The activity became better organized and became intense for a few hours in the early afternoon where it remained nearly stationary along the Jefferson-Oswego county border. Sandy Creek reported 12 inches of snowfall; 8" in Adams and Pulaski; and 7" at North Osceola.

NYZ013-021

Livingston - Allegany

14 1155EST 0 0 20K Heavy Snow
1430EST

Low pressure over the Tennessee Valley moved northeast to the Atlantic Coast and brought heavy snow to portions of the western southern tier and southern Finger Lakes. Snowfall amounts of six to eight inches fell across Livingston and Allegany counties.

NYZ001-012>013

Niagara - Wyoming - Livingston

16 0615EST 0 0 30K Heavy Snow
1325EST

A general four to six inch snowfall fell across the area. In some locations, lake and terrain effects resulted in high snowfall amounts. Specific reports included: Bennington and Niagara Falls 7" and 8-10" at Mount Morris.

NYZ010-012

Erie - Wyoming

21 1210EST 0 0 10K Heavy Snow
1400EST

Lake effect snows developed just after midnight on the 21st, peaked during the late morning hours and quickly shut down by mid afternoon. Snow fell at the rate of one to two inches per hour during its peak. Bennington reported 10"; East Aurora reported 9" and Colden 8".

NYZ007>008

Jefferson - Lewis

23 0910EST 0 0 16K Heavy Snow
1100EST

A single plume of lake effect snow developed off Lake Ontario in an extremely cold, northwest flow. During its peak, snowfall rates as high as five inches per hour were accompanied by thunder and lightning. Snowfall reports included: Castorland 24"; Highmarket 14"; Hooker 13"; and North Osceola 12".

NYZ003>005-012>014-019>021

Monroe - Wayne - Northern Cayuga - Wyoming - Livingston - Ontario - Chautauqua - Cattaraugus - Allegany

25 1045EST 0 0 135K Heavy Snow
1640EST

Low pressure moved northeast along the Appalachians and brought a general heavy snow to much of the region on Christmas eve and Christmas day. A eight to twelve inch blanket of snow covered the area with higher amounts generally over the Finger Lakes Region. The heavy snows slowed holiday travelers and caused limited delays that the Rochester Airport.

NORTH CAROLINA, Central

NCZ007>011-021>028- Person - Granville - Vance - Warren - Halifax - Forsyth - Guilford - Alamance - Orange - Durham - Franklin
038>043-073>077- - Nash - Edgecombe - Davidson - Randolph - Chatham - Wake - Johnston - Wilson - Stanly - Montgomery -
083>084 Moore - Lee - Harnett - Anson - Richmond

04 1500EST 0 0 Winter Storm
05 0400EST

One of the worst ice storms to ever hit Central North Carolina began in the late afternoon on December 4, and ended in the early morning hours of December 5. Precipitation mainly began as a mix of snow and sleet, then turned to freezing rain. A quarter inch of ice or more covered locations mainly to the west of I-95. The highest precipitation amounts stretched across the Piedmont, from Albemarle to Asheboro to Durham to Warrenton, where a half inch to one inch thick layer of ice was reported. 1 to 2 inches of snow also fell in the Triad area and in the counties bordering Virginia with trace amounts elsewhere. Large trees and power lines were downed by the ice all across the area. The storm caused a record number of power outages, as nearly one million people lost power in Central North Carolina, some for nearly a week.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>NORTH CAROLINA, Central Coastal</u>									
NCZ079		Greene							
	24	1550EST			0	0			High Wind (G50)
		Tree down on car in Walstonburg.							
NCZ091		Lenoir							
	24	1620EST			0	0			High Wind (G50)
		Several trees down in the Woodington area of southern Lenoir county.							
NCZ093		Craven							
	24	1640EST			0	0			High Wind (G50)
		Two trees down in Cove City.							
NCZ093		Craven							
	24	1705EST			0	0			High Wind (G52)
		Numerous trees and power lines down in Vanceboro and Cove City.							
NCZ080		Beaufort							
	24	1715EST			0	0			High Wind (G50)
		Several trees down near Blount's Creek.							
NCZ095		Carteret							
	24	1730EST			0	0			High Wind (G50) ^M
		50 KT wind gust reported at Duke Marine Lab.							
NCZ081		Western Hyde							
	24	1738EST			0	0			High Wind (G50)
		Trees and limbs down between Fairfield and Swan Quarter.							
<u>NORTH CAROLINA, Extreme Southwest</u>									
NONE REPORTED.									
<u>NORTH CAROLINA, North Coastal</u>									
NCZ012>013		Northampton - Hertford							
	04	2200EST			0	0			Winter Storm
	05	1430EST							
		A winter storm produced around 1 inch of snow and between 1/4 to 1/2 inch of ice across portions of the piedmont of northeast North Carolina. Numerous trees and power lines were reported down due to ice accumulations. This resulted in scattered power outages. Local law enforcement agencies also reported several accidents. Many schools in the area were closed Thursday, December 5th and Friday, December 6th due to power outages and very slippery road conditions.							
<u>NORTH CAROLINA, Northwest and North Central</u>									
NCZ019		Wilkes							
	01	1500EST			0	0	0		High Wind
		1700EST							
		High winds downed trees and power lines across Wilkes County during the afternoon of the 1st.							
NCZ001>006-018>020		Ashe - Alleghany - Surry - Stokes - Rockingham - Caswell - Watauga - Wilkes - Yadkin							
	04	1200EST			0	0			Winter Storm
	05	0600EST							
		Snow during the afternoon of the 4th through early morning of the 5th accumulated 4 to 8 inches before changing to freezing rain. In addition ice accretions of a quarter of an inch or more occurred in Surry, Yadkin, and Rockingham counties. Numerous accidents were reported on snow and ice covered roads.							
NCZ001-018-018		Ashe - Watauga							
	14	0800EST			0	0	0		High Wind (G62) ^M
		1400EST							
		High winds downed trees and power lines on the 14th across Ashe and Watauga counties. A period of wind gusts to 62 miles an hour were reported at Boone in Watauga County.							
NCZ005		Rockingham							
	20	0600EST			0	0	10K		High Wind
		High winds during the early morning of the 20th downed a tree onto a home in Eden.							
NCZ018		Watauga							
	22	1900EST			0	0	0		High Wind
		2100EST							
		High winds during the afternoon of the afternoon of the 22nd downed trees across Watauga County.							
NCZ001>002-018>019		Ashe - Alleghany - Watauga - Wilkes							
	25	1200EST			1	0	50K		High Wind
		1830EST							
		High winds during the afternoon downed numerous trees and power lines across the region. A man in Meat Camp was killed when							

Storm Data and Unusual Weather Phenomena

December 2002

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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NORTH CAROLINA, Northwest and North Central

a tree fell onto a tractor he was riding. The tractor was also damaged. In addition numerous wind gusts of near 70 mph were reported in Ashe, Alleghany, and Watauga counties. In Watauga County, a number of trees were downed onto homes causing significant damage to roofs and front porches. M?UT

NORTH CAROLINA, South Coastal

NCZ087

Robeson

04	1600EST	0	0		Ice Storm
05	0200EST				

Between a tenth and a quarter inch of ice was recorded. The ice caused branches to snap on many trees, causing power outages for 9000 residences. No major traffic accidents were noted. Strong high pressure over the mid-Atlantic fed a shallow layer of cold air across interior portions of the state. Low pressure formed over the Gulf coast, spreading moisture over the Carolinas. The result was freezing rain.

NORTH CAROLINA, Southwest

NCZ051-058-062

Swain - Graham - Macon

04	0900EST	0	0		Winter Weather/Mix
	1500EST				

Two inches of snow fell at Highlands, Cashiers, and Nantahala, while the highest elevations along the Tennessee border received as much as 6 inches. A combination of sleet, freezing rain, and rain was observed in the major valleys, with no significant accumulations.

NCZ033-048>050-052>054-059-065

Avery - Madison - Yancey - Mitchell - Haywood - Buncombe - McDowell - Northern Jackson - Henderson

04	1100EST	0	0		Heavy Snow
	2100EST				

Snow began falling around sunrise across the mountains of North Carolina, and had accumulated to 3 to 6 inches by evening.

NCZ034>037-054>057

Caldwell - Alexander - Iredell - Davie - McDowell - Burke - Catawba - Rowan

04	1400EST	0	0		Heavy Snow
	2200EST				

NCZ034>037-054>057-066>067-069

Caldwell - Alexander - Iredell - Davie - McDowell - Burke - Catawba - Rowan - Polk - Rutherford - Lincoln

04	2200EST	0	0	100M	Ice Storm
05	0800EST				

Snow began during the early afternoon across the North Carolina foothills and northwest piedmont, and had accumulated to 3 to 5 inches by late evening. A transition to sleet and then freezing rain occurred during the late evening, and ice accumulated to between 1/4 and 1/2 inch. The result was widespread power outages, which lasted for a week or more in some areas.

NCZ063>064-068-070>072-082

Southern Jackson - Transylvania - Cleveland - Gaston - Mecklenburg - Cabarrus - Union

04	1500EST	0	0	99M	Ice Storm
05	0800EST				

Freezing rain began over the extreme southern mountains of North Carolina during the early afternoon on the 4th, and had spread into the southwest piedmont by mid afternoon. Resultant damage due to ice accumulation began during the mid-to-late afternoon. The intensity of the freezing rain increased after midnight, and by sunrise on the 5th, devastating ice accumulations of 1/2 to 1 1/2 inches were observed. The hardest hit area was Charlotte metro. Hundreds of thousands lost power, and the outages lasted for as long as 2 weeks in some areas.

NCZ053-055-062>063-065

Buncombe - Burke - Macon - Southern Jackson - Henderson

13	0829EST	0	0		High Wind (G65)
	1000EST				

Damaging winds were caused by a gravity wave as it propagated out of upstate South Carolina, and across the southern mountains and foothills of North Carolina. Numerous trees and power lines were blown down, and roads and highways were blocked in Asheville and Hendersonville. Power outages lasted for much of the day across portions of Buncombe County.

NCZ033-048>050-052-059

Avery - Madison - Yancey - Mitchell - Haywood - Northern Jackson

14	0400EST	0	0		Winter Weather/Mix
	1400EST				

Snow accumulated to 1 to 3 inches, with the highest amounts occurring in the highest elevations. Wind gusts to 50 mph also caused some isolated tree damage.

**Avery County
Countywide**

19	1800EST	0	0		Heavy Rain
20	0200EST				

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					Killed	Injured	Property	Crops	
<u>NORTH CAROLINA, Southwest</u>									
Buncombe County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Graham County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Haywood County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Macon County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Madison County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Swain County									
Countywide	19	1800EST			0	0			Heavy Rain
	20	0200EST							
Heavy rain caused a few North Carolina mountain streams to rise to near bankfull. In addition, the wet soil combined with gusty winds to cause some drought weakened trees to fall across the area.									
NCZ033-048>053-058>059-062>063									
Avery - Madison - Yancey - Mitchell - Swain - Haywood - Buncombe - Graham - Northern Jackson - Macon - Southern Jackson									
	22	0500EST			0	0			Winter Weather/Mix
		0900EST							
Freezing rain developed during the early morning across the North Carolina mountains, and some roads and bridges became ice covered. A few traffic accidents resulted.									
Henderson County									
Countywide	24	1200EST			0	0			Flash Flood
		1600EST							
Several creeks and streams flooded, including the Green River. Flooding mainly affected farmland, but some roads did require barricading.									
Rutherford County									
Forest City	24	1200EST			0	0			Flash Flood
		1600EST							
Rising creeks flooded some low lying yards and streets.									
NCZ033-048>053-055>056-059-062									
Avery - Madison - Yancey - Mitchell - Swain - Haywood - Buncombe - Burke - Catawba - Northern Jackson - Macon									
	25	0600EST			0	0			Winter Weather/Mix
		2000EST							
Light snow fell throughout the day across the North Carolina mountains, resulting in snowfall amounts of between a trace and 3 inches within the valleys. Four to six inch amounts were common in the higher elevations from Madison County northward.									
NCZ033>034-048-050-053>055-062									
Avery - Caldwell - Madison - Mitchell - Buncombe - McDowell - Burke - Macon									
	25	1000EST			0	0			High Wind (G50)
	26	0000EST							
Very strong winds developed during the late morning across the mountains and foothills. Wind gusts reached an estimated 60 to 75 mph across the higher elevations. Damage to trees and power lines was widespread, and power outages were numerous. Some trees fell on vehicles and structures.									
NCZ067>068									
Rutherford - Cleveland									
	25	2000EST			0	0			High Wind (G50)
	26	0000EST							
Strong winds developed during the evening just east of the mountains, resulting in numerous trees and power lines being blown down.									
<u>NORTH DAKOTA, Central and West</u>									
NDZ001>005-009>013-017>023-025-031>037-040>048-050>051									
Divide - Burke - Renville - Bottineau - Rolette - Williams - Mountrail - Ward - Mchenry - Pierce - Mckenzie - Dunn - Mercer - Oliver - Mclean - Sheridan - Wells - Foster - Golden Valley - Billings - Stark - Morton - Burleigh - Kidder - Stutsman - Slope - Hettinger - Grant - Bowman - Adams - Sioux - Emmons - Logan - La Moure - McIntosh - Dickey									
	17	1452CST			0	0			Winter Storm
	19	1600CST							

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NORTH DAKOTA, Central and West

A low pressure system developed over southwestern South Dakota, intensified and moved northeast to northwestern Minnesota during the day on the 17th of December. A band of heavy snow fell across north central and parts of east central North Dakota. A upper level system dropped south out of Canada bringing bands of snow from north central to east central North Dakota on the 18th and 19th of December. In addition to the snow, winds of 25 to 40 mph caused considerable blowing and drifting of the snow. Areas of freezing rain preceded the snowfall. The heaviest snowfall occurred over north central North Dakota where 12 to 19 inches accumulated and drifts over 6 feet reported in some areas. Over east central North Dakota 6 to 8 inches of snow fell and in the far west and far south central North Dakota 3 to 5 inch snowfall was common. After a relatively mild autumn, it was the first major arrival of winter weather to affect the region.

NORTH DAKOTA, East

NDZ014>015-024-026-028-038 Benson - Ramsey - Eddy - Nelson - Griggs - Barnes

18	1024CST								
19	0349CST								Winter Storm

6 to 8 inches of snow fell across the area, with the most from New Rockford to Maddock. Much of the area also received light freezing rain or sleet early on the 18th, then winds around 25 mph late in the day on the 18th into early on the 19th.

OHIO, East

NONE REPORTED.

OHIO, North

OHZ013>014

Geauga - Ashtabula

01	0000EST								
	1600EST								Heavy Snow

An arctic cold front dropped southeast across the region on the morning of November 30th. Cold west to northwest winds behind this front caused lake effect snow showers and squalls to develop during the afternoon of the 30th. These snow showers intensified during the evening of the 30th and continued through the afternoon of December 1st. Snowfall totals of up to 10 inches were reported. Gusty winds accompanying the snow caused whiteout conditions at times along with significant drifting.

OHZ012

Lake

02	0930EST								
	2300EST								Heavy Snow

A cold front dropped southeast across Lake Erie and into northern Ohio during the day. Lake effect snow showers developed ahead of this front during the morning hours and intensified during the afternoon. The snow showers began to taper off late in the evening. Accumulations of up to 8 inches and some blowing and drifting were reported across Lake County.

OHZ003-006>014-017>023-027>033

Lucas - Wood - Ottawa - Sandusky - Erie - Lorain - Cuyahoga - Lake - Geauga - Ashtabula - Hancock - Seneca - Huron - Medina - Summit - Portage - Trumbull - Wyandot - Crawford - Richland - Ashland - Wayne - Stark - Mahoning

24	2100EST								
25	2200EST								Heavy Snow

An area of low pressure developed along the Gulf Coast early on December 24th and then moved rapidly northeast. This low moved across eastern Ohio and western Pennsylvania during the morning hours of the 25th. Snow developed well north of the low and spread into northern Ohio during the evening of the 24th. The snow intensified during the early morning hours and again in the afternoon. The snow finally tapered off from west to east during the evening of the 25th. Heavy snow fell in northern Ohio along and north of U.S. Highway 30. Generally, 6 to 10 inches of snow fell in this area with a maximum of 11.2 inches of snow recorded at Cleveland Hopkins International Airport. Snow totals at other locations include: 7.1 inches at Toledo Express Airport; 5.8 inches at Mansfield Lahm Airport; 5.2 inches at the Akron-Canton Regional Airport and 5.5 inches at the Youngstown-Warren Regional Airport. Northwest winds increased to 15 to 25 mph during the storm and caused considerable blowing and drifting with whiteout conditions at times. Travel was severely hampered by this storm and dozens of accidents occurred as a result of the treacherous driving conditions caused by the snow.

OHIO, Northwest

OHZ001>002-004>005-015>016-024>025 Williams - Fulton - Defiance - Henry - Paulding - Putnam - Van Wert - Allen

25	0600EST								
	1200EST								Heavy Snow

Low pressure tracked from Kentucky into Ohio during the overnight hours of Christmas Eve into Christmas Day morning, spreading a large area of snow across the region. Reports of 6 to 8 inches of snow were widespread across northwestern Ohio, with most of the snow falling at the rate of an inch or more per hour. The highest amounts were generally southeast of a Napoleon to Van Wert line. Gusty northwest winds behind the low created widespread blowing and drifting for the remainder of the day.

Storm Data and Unusual Weather Phenomena

December 2002

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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OHIO, Southeast

OHZ066>067-075>076-083>087 Perry - Morgan - Athens - Washington - Jackson - Vinton - Meigs - Gallia - Lawrence

	04	1900EST			0	0			Snow
	05	1100EST							

Snow accumulated 3 to 6 inches.

OHZ066>067

Perry - Morgan

	11	0300EST 1000EST			0	0			Winter Storm
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A quarter to a half inch of ice accumulated on trees and power lines from freezing rain. Temperatures were around 30 degrees when the freezing rain occurred.

OHIO, Southwest

OHZ070>074-077>082-088 Butler - Warren - Clinton - Ross - Hocking - Hamilton - Clermont - Brown - Highland - Adams - Pike - Scioto

	05	0315EST 0930EST			0	0			Winter Storm
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Low pressure tracked across the Tennessee Valley overnight on the 4th into the morning of the 5th. North of this low, a large swath of snow moved across southern Ohio and produced 3 to 5 inches of accumulation.

OHZ070-077

Butler - Hamilton

	11	0600EST 0900EST			0	0			Winter Storm
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Low pressure tracked across the Ohio Valley early in the morning. Surface temperatures were just below freezing, and precipitation fell in the form of freezing rain and sleet. In the Cincinnati metro area, ice accumulated up to a quarter inch, causing slick roadways during the morning rush hour.

OHZ026-034>035-042>046-051>052-060>061

Hardin - Mercer - Auglaize - Darke - Shelby - Logan - Union - Delaware - Miami - Champaign - Preble - Montgomery

	24	2240EST			0	0			Winter Storm
	25	1000EST							

A strong storm system tracked across the Ohio Valley late Christmas Eve into Christmas morning. A mix of snow, sleet, and freezing rain fell across much of central and southwest Ohio. In the Dayton area, precipitation fell primarily as snow. This storm produced 4 to 7 inches of accumulation, along and north of a line from Dayton to Delaware.

OKLAHOMA, Eastern

OKZ054>057-059>064 Osage - Washington - Nowata - Craig - Pawnee - Tulsa - Rogers - Mayes - Delaware - Creek

	03	1600CST			0	0			Ice Storm
	04	0430CST							

An upper level system moving out of the desert southwest into the southern plains interacted with cold air near the surface to produce freezing rain from the afternoon hours on December 3rd to the early morning hours on December 4th. The freezing rain resulted in ice on power lines and trees causing power outages. The power outages were the most widespread to the west and north of Tulsa in western Tulsa, northern Creek, Pawnee, Osage, Washington and Nowata counties. At one time 4,000 homes were without power in Sand Springs and 2,000 homes were without power in Bartlesville. The cities of Drumright, Skiatook and Nowata also experienced significant power outages. Isolated power outages occurred in the rural areas of Rogers, Craig, Mayes, Ottawa and Delaware counties. In addition to the power outages, many roads in the area became slick and hazardous. Several schools were closed on the 4th.

Rogers County

8 NE Foyil

	17	1930CST			0	0			Hail (0.88)
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Nickel size hail fell at Chelsea.

Craig County

Welch

	17	1950CST			0	0			Hail (0.75)
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Craig County

White Oak

	17	1955CST			0	0			Hail (1.00)
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Nowata County

10 E Lenapah

	18	0018CST			0	0			Thunderstorm Wind (G52)
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Thunderstorm winds estimated at 60 miles an hour blew down a large tree limb.

Craig County

7 N Welch

	18	0035CST			0	0			Hail (1.25)
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Craig County

5 N Welch

	18	0035CST			0	0			Thunderstorm Wind (G52)
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Thunderstorm winds estimated at 60 miles an hour blew down several large tree limbs.

Storm Data and Unusual Weather Phenomena

December 2002

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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OKLAHOMA, Eastern

OKZ054>064-067>068 Osage - Washington - Nowata - Craig - Ottawa - Pawnee - Tulsa - Rogers - Mayes - Delaware - Creek - Wagoner - Cherokee

23	1000CST				0	0			Heavy Snow
24	1000CST								

An upper level system moved out of the southern rockies and across the southern plains including Oklahoma December 23rd and 24th. Rain began to fall during the morning of the 23rd and due to evaporational cooling and colder air filtering into the area from the north it began to change over to snow from west to east across the area from 10 am cst on. During the first few hours at any given location the snow fell at an inch or two per hour rate. Due to the heavy snow and temperatures dropping below freezing travel became extremely difficult. Numerous accidents were reported across northeast Oklahoma and several included injuries. One accident around midday on the 23rd resulted in a death about 8 miles east of Ponca City in Osage county. In addition to the difficult travel the snow caused some tree limbs to fall onto power lines producing a few power outages. As many as 13,000 customers in Owasso and eastern part of the city of Tulsa experienced an interruption of electric service. Four to five hundred customers scattered around Ottawa, Craig, Delaware and Mayes counties also suffered power outages. The snow began to taper off from west to east during the late afternoon and early evening hours of the 23rd. However, the snow began again during the late evening hours of the 23rd and the early morning hours of the 24th. This snow lasted into the morning hours of the 24th. Although the snow during the nighttime period was not as heavy as that during the previous afternoon another one to three inches of snow accumulated. Some snow accumulations from the storm include: 10 inches at Miami, 10 inches at South Coffeyville, 10 inches at Ralston, 9 inches at Bartlesville, 9 inches at Jay, 8 inches at Pawnee, 7 inches at Pawhuska, 7 inches at Tulsa, 6 inches at Drumright, 5 inches at Wagoner, 5 inches at Pryor and 5 inches at Tahlequah.

Mcintosh County

Vivian	30	1223CST			0	0			Hail (0.75)
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Mcintosh County

4 N Eufaula	30	1235CST			0	0			Hail (0.75)
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Mcintosh County

Checotah	30	1252CST			0	0			Hail (0.75)
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Muskogee County

1 E Braggs	30	1315CST			0	0			Thunderstorm Wind (G61)
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Thunderstorm winds estimated at 70 miles an hour blew down several trees at Camp Gruber.

Le Flore County

Rock Is	30	1500CST			0	0	50K		Thunderstorm Wind (G61)
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Thunderstorm winds estimated at 70 miles an hour destroyed a 24 unit metal storage facility.

Le Flore County

Loving	30	1510CST			0	0			Thunderstorm Wind (G52)
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Thunderstorm winds estimated at 60 miles an hour blew down large tree limbs.

OKLAHOMA, Extreme Southeast

NONE REPORTED.

OKLAHOMA, Panhandle

OKZ001>003 Cimarron - Texas - Beaver

03	1415CST				0	0			Heavy Snow
04	0000CST								

A cold arctic air mass over the Oklahoma panhandle combined with a disturbance in the upper atmosphere moving northeast across the panhandle produced heavy snow. Snowfall amounts were reported to be five to six inches at Guymon...five to seven inches at Beaver...and six to eight inches at Boise City.

OKZ001>003 Cimarron - Texas - Beaver

23	0600CST				0	0			Heavy Snow
24	0600CST								

A strengthening low pressure system which moved south of the Oklahoma panhandle combined with a cold Canadian air mass and low level moisture to produce heavy snow across all of the Oklahoma panhandle. Roads were reported snow packed and slick...however no official road closures were reported. Numerous minor accidents and stranded motorists were reported...however no injuries or fatalities occurred due to the heavy snow. Snowfall amounts were reported to be six inches at Beaver...six to eight inches at Boise City and Griggs...and eight to ten inches at Guymon.

OKLAHOMA, Western, Central and Southeast

OKZ004>018-021>022 Harper - Woods - Alfalfa - Grant - Kay - Ellis - Woodward - Major - Garfield - Noble - Roger Mills - Dewey - Custer - Blaine - Kingfisher - Beckham - Washita

03	1400CST				0	0			Winter Storm
04	0300CST								

Storm Data and Unusual Weather Phenomena

December 2002

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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OKLAHOMA, Western, Central and Southeast

OKZ019>020-023>030- Logan - Payne - Caddo - Canadian - Oklahoma - Lincoln - Grady - McClain - Cleveland - Pottawatomie - 033>036-038

Harmon - Greer - Kiowa - Jackson - Comanche
03 1800CST 0 0 Ice Storm
04 0300CST

A winter storm affected the northwest half of Oklahoma during the afternoon and evening of the 3rd, and early morning of the 4th. The precipitation started as freezing rain and sleet across portions of west central and northwest Oklahoma, including Harper, Ellis, Woodward, Woods, Alfalfa, and Major Counties, and then quickly changed to snow. Total accumulations were between four and eight inches. The highest totals were nine inches in Arnett (Ellis County), eight inches in Mutual (Woodward County) and eight inches in Buffalo (Harper County). Southeast of this area, a mixture of freezing rain, sleet, and snow fell, with ice accumulations ranging from a trace to one half inch, and snow accumulations between two and three inches. The greatest amount of ice fell from about Stillwater (Payne County), southwestward to about Guthrie (Logan County), Bethany (Oklahoma County), Weatherford (Custer County), and Elk City (Beckham County). Nearly 50,000 residences were without power during the peak of the winter storm.

OKZ004>026-034>035 Harper - Woods - Alfalfa - Grant - Kay - Ellis - Woodward - Major - Garfield - Noble - Roger Mills - Dewey - Custer - Blaine - Kingfisher - Logan - Payne - Beckham - Washita - Caddo - Canadian - Oklahoma - Lincoln - Greer - Kiowa

23 1000CST 0 0 Heavy Snow
1700CST

A winter storm brought moderate to occasionally heavy snow to portions of western, central, and northern Oklahoma during the morning and afternoon of the 23rd. Although these areas received an average of four inches of snow, portions of west central and north central Oklahoma received between four and eight inches. Hinton (Caddo County) and Watonga (Blaine County) received ten inches of snow, while Enid (Garfield County) received nine inches, and Cordell (Custer County) received eight inches. Northern portions of the Oklahoma City metropolitan area, including Edmond (Oklahoma County), received between three and four inches.

Jefferson County

10 E Waurika 30 0805CST 0 0 Hail (0.75)

Pontotoc County

2 SE Ada 30 0905CST 0 0 Hail (0.88)

Carter County

Ardmore 30 0930CST 0 0 Hail (0.75)

Carter County

Ardmore 30 0930CST 0 0 5K Lightning

Lightning struck a tank battery.

Pontotoc County

Ada 30 1000CST 0 0 Hail (0.75)

Johnston County

6 N Tishomingo 30 1015CST 0 0 Thunderstorm Wind (G78) ^M

Wind was measured by the Oklahoma mesonet.

Pontotoc County

1 W Fittstown 30 1023CST 0 0 Hail (0.75)

Johnston County

Mill Creek 30 1025CST 0 0 Hail (0.75)

Johnston County

Mill Creek 30 1025CST 0 0 Thunderstorm Wind (G52)

Hughes County

5 S Calvin 30 1101CST 0 0 Hail (0.75)

OREGON, Central and East

ORZ047

John Day Basin
14 0400PST 0 0 15K High Wind (G46) ^M
1500PST

Strong winds blew down several trees in Canyon City. A portion of a metal roof was blown off a road department building. Damage was also done to residential roofs. In John Day, half of one side of a metal roof folded up and back on a bowling alley due to high winds between 4 AM and 5 AM. Power outages occurred between 8:15 AM and 11:00 AM according to storm spotters and a radio station in John Day. A wind gust of 53 MPH was measured at the John Day Airport at 10:55 AM.

ORZ048

Ochoco-John Day Highlands
14 0400PST 0 0 High Wind (G57) ^M
1500PST

A wind gust of 65 MPH was recorded at a RAWS site, Keeney two. One tree was blown down on highway 395 just east of the Beech Creek Summit at 4,709 feet.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
OREGON, Central and East									
ORZ043		Central Oregon							
	14	0500PST 1400PST			0	0			High Wind (G78) ^M
									A peak wind gust to 90 MPH was measured by an anemometer at the Mount Bachelor Ski resort. Other peak wind gusts included 71 MPH at Lava Butte, 56 MPH near Sisters, 50 MPH at the Redmond Airport, and 48 MPH at Sunriver. Four trees were blown down in Sunriver before 10 AM. Several areas lost power due to wind damage and trees falling on power lines.
ORZ049		Grand Ronde Valley							
	14	0700PST 1800PST			0	0	12K		High Wind (G51) ^M
									A peak wind gust of 50 MPH was recorded at the La Grande Airport at 7:35 AM. Three thousand businesses and homes lost power from Imbler to La Grande around 5:45 PM when high winds blew two power lines together, causing a short circuit. Valley of Peace Christian Television station lost it's \$10,000 transmitter in the high winds. A storm spotter in Union estimated winds at 55-63 MPH with trees blown down. In addition, metal roofing came off some homes and City Hall in Union.
ORZ042		North Central Oregon							
	14	1000PST 1500PST			0	0			High Wind (G54) ^M
									Strong wind gusts occurred at two RAWs sites in Oregon. One was at Patjens where a peak wind gust of 62 MPH was measured, and another wind gust of 56 MPH was measured at North Pole ridge.
ORZ050		Wallowa County							
	14	1000PST 1700PST			0	0			High Wind (G73) ^M
									Sustained winds to 40 MPH with a peak gust to 84 MPH was recorded three miles north of Joseph. In Wallowa, a localized event of strong swirling winds from the ground up to 200 feet, lasting less than a minute, blew a roof off of a home. A wind gust of 67 MPH was also recorded a RAWs site, Harl Butte, 6,071 feet in elevation. Residents at the south end of Wallowa Lake were without power for 16 hours after a utility pole broke. Other damage reports included a tree blowing down onto a house causing damage to the eaves in Enterprise, a barn blowing apart and causing damage to new fencing in Joseph, a roof being blown off a mobile home two miles south of Enterprise, and a cast iron bathtub being deposited several miles away by the wind.
ORZ047		John Day Basin							
	15	1700PST			0	0	1K		High Wind
	16	0710PST							Estimated winds, measuring category nine on the Beaufort scale (47-54 MPH) led to some roof damage, with downed tree branches in Canyon City.

Storm Data and Unusual Weather Phenomena

December 2002

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

OREGON, Central and East

ORZ046

Blue Mountains

15 1830PST

0

0

2K

High Wind

16 0700PST



High winds completely tore off a roof over a building and an attached carport at Pike's Peak at 3800 feet.

Highway 204 between Weston and Tollgate was blocked by a roof of a building.

ORZ045

Foothills Of The Blue Mountains

15 1830PST

0

0

High Wind (G60) ^M

16 0700PST

High winds brought power outages to portions of Pendleton, Mission, Pilot Rock, Athena, Weston, Heppner, and Condon. The strong winds also created areas of blowing dust near highway 11, which was closed for about an hour, and along highway 395 between Pendleton and Pilot Rock, with visibilities reported down to less than a quarter mile. Farm equipment was blown over and signs were down on highway 331 near Wild Horse Casino. The winds caused part of the roof to peel off the NWS office in Pendleton. A peak wind gust of 69 MPH was measured by an automated weather station at the Pendleton NWS WFO.

Storm Data and Unusual Weather Phenomena

December 2002

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

OREGON, Central and East

ORZ050	Wallowa County								
	15	2030PST			0	0			High Wind (G81) ^M
	16	0030PST							



A portion of a tree snapped off onto a home in the Enterprise-Joseph area.

A local weather station between Joseph and Enterprise reported a peak wind gust to 93 MPH shortly after midnight on December 16th. Shingles were blown off the roofs of some homes, and some outbuildings were blown away. Several trees blew over during the storm as well. Approximately 100 customers lost power Monday morning.

ORZ043	Central Oregon								
	15	2300PST			2	0			High Wind (G61)
	16	0700PST							

A 57 foot tall Ponderosa pine tree was blown down by the wind onto a mobile home in Bend, killing two people in their sleep. Two additional homes and a motor vehicle were also damaged by the winds. Over 1,500 customers were left without power due to high winds blowing trees onto power lines and poles themselves being blown over. A wind gust of 70 MPH was estimated in Millican. M52MH, F51MH

ORZ042	North Central Oregon								
	16	0526PST			0	0	1K		High Wind

A tree fell onto a power line, where the power line was holding up a tree and protecting it from falling onto a mobile home in the city of Maupin.

ORZ050	Wallowa County								
	21	1500PST			0	0			Heavy Snow
	22	0230PST							

Heavy snow fell near Joseph with 12 inches of snow reported, where 9 inches fell between 3:00 PM and 6:30 PM on the 21st.

ORZ045	Foothills Of The Blue Mountains								
	27	0607PST			0	0			High Wind (G50) ^M

A peak wind of 58 MPH was measured by an automated weather station at the Pendleton NWS WFO.

ORZ046	Blue Mountains								
	29	2130PST			0	0			Heavy Snow
	30	2130PST							

Eighteen inches of snow fell in 24 hours seven miles west of Tollgate.

ORZ043	Central Oregon								
	29	2200PST			0	0			Heavy Snow
	30	0649PST							

Six inches of snow fell outside the city of Bend.

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
<u>OREGON, Central and East</u>									
ORZ046			Blue Mountains						
		30			0	0			Heavy Snow
		31							
			Eighteen inches of snow fell in 24 hours at Meacham.						
ORZ048			Ochoco-John Day Highlands						
		30			0	0			Heavy Snow
		31							
			Ten inches of snow fell in the city of Granite.						
<u>OREGON, Northwest</u>									
ORZ011			Northern Oregon Cascades						
		09			0	0			Heavy Snow
		10							
			Timberline received 8 inches, Santiam Pass 7 inches, Tombstone and Mt Hood Meadows both 6 inches.						
ORZ002			Central Oregon Coast						
		10			0	0			High Wind (G52) ^M
			Passage of a strong Pacific cold front produced gusts to 53 mph at Gleneden Beach, and sustained winds of 45 mph with gusts to 60 mph at Newport Jetty.						
ORZ002-004			Central Oregon Coast - Central Coast Range Of W Oregon						
		10			0	0			High Wind (G60) ^M
		11							
			With the passage of strong Pacific warm front, Florence reported sustained winds at 41 mph with gusts to 58 mph, and Newport Airport reported gusts to 52 mph. In the Coastal Mountains, Laurel Mountain reported gusts to 69 mph.						
ORZ001>002-004			Northern Oregon Coast - Central Oregon Coast - Central Coast Range Of W Oregon						
		13			0	0			High Wind (G72) ^M
		14							
			A series of cold fronts brought strong winds to the North and Central Oregon Coast and Coastal Range. Garibaldi reported sustained 51 mph winds with gusts to 82 mph, Cannon Beach reported gusts to 83 mph, Newport Jetty 45 mph with gusts to 62 mph, Newport Hatfield Marine Center gusts to 62 mph, Seaside gusts to 69 mph, and Florence 39 mph with gusts to 59 mph. In the Coastal Mountains, Wilkerson reported gusts to 62 mph and Cannibal Mountain gusts to 57 mph.						
ORZ001-004			Northern Oregon Coast - Central Coast Range Of W Oregon						
		15			0	0			High Wind (G57) ^M
		16							
			Winds associated with a strong cold front pounded the North and Central Oregon Coast as well as the Coastal Mountain Range. Cannon Beach reported gusts to 66 mph, while in the Coastal Mountains, Wilkerson reported gusts to 62 mph and Cannibal Mountain gusts to 57 mph. Rains associated with the frontal system caused a slide 8 miles South of Yachats that blocked Highway 101 for a short period.						
ORZ004-011			Central Coast Range Of W Oregon - Northern Oregon Cascades						
		16			0	0			Heavy Snow
		18							
			Post-frontal cold air brought heavy snow to the area. Government Camp received 10 inches, Timberline 13 inches, Mt Hood Meadows 18 inches, Bennett Pass 9 inches, Willamette Pass and Blue Box Pass 6 inches each, Santiam Pass and Mt Bachelor 3 inches each. In the Coastal Mountains, Wilson River Summit received 3 inches.						
ORZ011			Northern Oregon Cascades						
		20			0	0			Heavy Snow
		21							
			Santiam Pass received 16 inches of snow, Timberline 15 inches, Government Camp 13 inches, White River 12 inches, 10 inches at Blue Box Pass and 9 inches at Mt Hood Meadows.						
ORZ001			Northern Oregon Coast						
		24			0	0			High Wind (G43) ^M
		25							
			Another Pacific storm brought high winds to the North Oregon Coast, with reported sustained winds of 50 mph in Tillamook.						
ORZ001>002-004-007			Northern Oregon Coast - Central Oregon Coast - Central Coast Range Of W Oregon - Central Willamette Valley						
		26			0	0			High Wind (G81) ^M
		27							
			A Pacific storm brought high winds to the area as it moved across Northwest Oregon. The Siuslaw News reported wind gusting to 93 mph at Sea Lion Caves. Florence reported sustained winds 58 mph with gusts to 73 mph, Cannon Beach gusts to 68 mph, and Newport Airport 45 mph with gusts to 65 mph. Lincoln City, Tillamook, Newport Marine Hatfield Center, and Dunes all reported gusts to 60 mph. In the Coastal Mountains, Cedar reported gusts to 58 mph and Wilkerson gusts to 57 mph. In the Cascade						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
<u>OREGON, Northwest</u>									
			Foothills, Yellowstone reported gusts to 61 mph and Brush Creek gusts to 59 mph. Trees were downed along Highway 26, blocking the road to Sunset Summit. In the Willamette Valley, The Stayton Mail reported a power outage that left 14000 customers in the dark in the Jefferson, Scio, and Stayton areas. Power outages were also reported from Lincoln City to Yachats.						
ORZ001>002			Northern Oregon Coast - Central Oregon Coast						
	30	0200PST 0600PST			0	0			High Wind (G76) ^M
			Strong winds once again buffeted the North and Central Oregon Coast. Sea Lion Caves reported gusts to 87 mph, Florence sustained winds 51 mph with gusts to 70 mph, Sunset Beach gusts to 61 mph, and Newport Airport 43 mph with gusts to 57 mph.						
ORZ011			Northern Oregon Cascades						
	30	1300PST			0	0			Heavy Snow
	31	0400PST							
			Willamette Pass received 23 inches of snow, Timberline 17 inches, Mt Hood Meadows 15 inches, Blue Box and Bennett Passes both 12 inches.						
<u>OREGON, Southeast</u>									
ORZ020-061-063			Harney - Malheur						
	30	0900PST 1900PST			0	0			Heavy Snow
			A Pacific storm moving through the area dropped 3 to 10 inches of snow fell over a widespread area with up to 18 inches falling in the mountains in the Wallowa Mountains northeast of Baker City.						
<u>OREGON, Southwest</u>									
ORZ021-021-021-021-021>022-022			South Central Oregon Coast - Curry County Coast						
	11	1200PST			0	0			High Wind (G76) ^M
	12	1410PST							
			Cape Arago recorded a gust to 59 mph. A High Wind Warning was issued for the Southern Oregon coast (ORZ021/022) at 0836 PST on 12/11 and expired at 2110 PST on 12/12. This warning verified with the spotter reports and coastal wind reports listed above.						
ORZ029>031			Klamath Basin - Northern & Eastern Klamath County & Western Lake County - Central & Eastern Lake County						
	12	0526PST 1408PST			0	0			High Wind (G35) ^M
			See below. A High Wind Warning was issued for the above zones at the above times, but winds were not as strong as expected and the warning did not verify.						
ORZ021-021-021-021-021-021-021>022-022-022-022-022-022-022-022-022-022-022			South Central Oregon Coast - Curry County Coast						
	13	0154PST			0	0			High Wind (G97) ^M
	16	0000PST							
			Spotter CO41 in Bandon reported wind gusts to 75 mph. A High Wind Warning was issued for the Southern Oregon coastal headlands (ORZ021/022) at 0440 PST on 12/13 and extended to all coastal areas at 0322 PST on 12/15. It was cancelled at 0433 PST on 12/16. The above reports verified the warning but also indicated that the high winds were occurring along the entire coast during the entire event, not just the headlands.						
ORZ029-031-031-031-031			Klamath Basin - Central & Eastern Lake County						
	13	2301PST			0	0			High Wind (G84) ^M
	14	0900PST							
			Klamath Falls ASOS recorded winds 44g54 mph at 0100 PST. A High Wind Warning was issued for south central Oregon zones ORZ029/030/031 at 2125 PST on 12/13 and expired at 1900 PST on 12/14. The above spotter reports verified the warning. No reports were received for ORZ030, but it is very likely that winds in that zone met warning criteria.						
ORZ021			South Central Oregon Coast						
	14	1710PST			0	0			Flood
	15	0342PST							
			See below. A Flood Warning was issued for the South Fork of the Coquille River at Myrtle Point for the above dates and times. This warning did not verify as the river approached, but did not exceed flood stage.						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
OREGON, Southwest									
ORZ021			South Central Oregon Coast						
		16 0136PST			0	0			Flood
		17 0005PST							
		See below. A Flood Warning was issued for the South Fork of the Coquille River at Myrtle Point effective at the above times. This warning verified as the river exceeded the flood stage of 38.0 feet from 0648 PST on 12/16 until 2318 PST on 12/16. The crest of 40.55 feet occurred at 1239 PST on 12/16.							
ORZ021			South Central Oregon Coast						
		16 0813PST			0	0			Flood
		1230PST							
		See below. A Flood Warning was issued for the North Fork of the Coquille River at Coquille effective at the above times. This warning did not verify as the river approached, but did not exceed flood stage.							
ORZ021			South Central Oregon Coast						
		16 0813PST			0	0			Flood
		17 1050PST							
		See below. A Flood Warning was issued for the Coquille River at Coquille effective at the above times. This warning verified as the river exceeded the flood stage of 21.0 feet from 1820 PST on 12/16 until 0225 PST on 12/17. The crest of 21.15 feet occurred at 2000 PST on 12/16.							
ORZ021-021>022-022-022			South Central Oregon Coast - Curry County Coast						
		19 0629PST			0	0			High Wind (G76) ^M
		20 1000PST							
		Cape Blanco recorded a peak gust of 76 mph. A High Wind Warning was issued for the coastal headlands of ORZ021 from Cape Blanco south and ORZ022 at 0515 PST on 12/18 and cancelled at 1104 PST on 12/20. The observations above are the highest sustained winds and peak gusts recorded at those stations. Cape Blanco met or exceeded high wind warning criteria from 0000 PST on 12/19 (possible earlier) until 1000 PST on 12/19 and again from 1300 PST on 12/19 until 1200 PST on 12/20.							
ORZ026-026			Jackson County						
		19 1033PST			0	0			High Wind (G60) ^M
		1336PST							
		Spotter JA20 in Ashland reported sustained 30-40 mph winds gusting into the 60s. A Wind Advisory was in effect at this time, but it appears that a High Wind Warning would have been appropriate for the Ashland area.							
ORZ021			South Central Oregon Coast						
		21 1610PST			0	0			High Wind (G44) ^M
		Cape Arago recorded a sustained wind of 44 mph. No High Wind Warning was issued for the above event, but this was the only verifying observation, so a warning was likely not necessary as the winds did not meet criteria for more than 1 hour.							
ORZ021			South Central Oregon Coast						
		25 1700PST			0	0			High Wind (G45)
		26 0000PST							
		Cape Blanco recorded winds of 4 mph gusting to 61 mph during this 7 hour stretch. A High Wind Warning was issued for the coastal headlands of ORZ021/022 at 1515 PST on 12/24 and expired at 1410 PST on 12/25. The reports above verified a High Wind Warning, but they occurred just after the warning was cancelled, so this was a missed event.							
ORZ021-021			South Central Oregon Coast						
		27 0440PST			0	0			High Wind (G71) ^M
		0500PST							
		Cape Arago recorded a sustained wind of 49 mph. A High Wind Warning was issued for ORZ021/022 at 1503 PST on 12/26 and cancelled at 1002 PST on 12/27.							
ORZ021			South Central Oregon Coast						
		27 0500PST			0	0			High Wind (G71)
		Cape Arago recorded a gust to 71 mph. Sustained winds of 50 mph were also recorded at 0440 PST. A High Wind Warning was issued for zones ORZ021/022 at 1503 PST on 12/26 and expired at 1002 PST on 12/27. The above observation verified the warning for ORZ021, and it likely verified in ORZ022 as well.							
ORZ027>028			South Central Oregon Cascades - Siskiyou Mountains & Southern Oregon Cascades						
		27 0615PST			0	0			Winter Storm
		1525PST							
		See below.							

Storm Data and Unusual Weather Phenomena

December 2002

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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OREGON, Southwest

A Winter Storm Warning was issued for the above zones at the above times. It was downgraded to a Snow Advisory at 1525 PST on 12/27. This warning did not verify.

Curry County Countywide

	27	1732PST			0	0			
	28	1549PST							Urban/Sml Stream Fld

See below.

Jackson County Countywide

	27	1732PST			0	0			
	28	1549PST							Urban/Sml Stream Fld

See below.

Josephine County Countywide

	27	1732PST			0	0			
	28	1549PST							Urban/Sml Stream Fld

See below.

Numerous spotter reports of rainfall totals in the 2 to 4 inch range were received, along with reports of "HIGH WATER" signs along area roads. It would appear that this warning verified.

ORZ030

Northern & Eastern Klamath County & Western Lake County

	28	0800PST			0	0			
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The Chemult cooperative observer reported 10 inches of snow in the previous 24 hours.

The above observation would have verified a Heavy Snow Warning, but only a Snow Advisory was in effect. An advisory would have been sufficient for most of the surrounding area, however.

ORZ024

Eastern Curry County & Josephine County

	28	0947PST			0	0			
	29	1055PST							Flood

See below.

A Flood Warning was issued for the Rogue River at Agness effective at the above times. This warning verified as the river exceeded the flood stage of 17.0 feet from 0706 PST on 12/28 until 0706 PST on 12/29. The crest of 19.17 feet occurred at 1600 PST on 12/28. Unfortunately, there was no lead time on this warning, it was issued after the river exceeded flood stage.

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

South Central Oregon Coast - Curry County Coast

	30	0410PST			0	0			
	31	0830PST							High Wind (G75) ^M

Cape Arago recorded a sustained wind of 43 mph.

A High Wind Warning was issued for the headlands of Oregon zones ORZ021/022 at 0345 PST on 12/29 and was not definitively cancelled, but issued statements imply that it expired at 0500 PST on 12/31. From the above reports, it appears that the warning should have been issued for the entire coast, not just the headlands.

ORZ030

Northern & Eastern Klamath County & Western Lake County

	30	0845PST			0	0			
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Spotter KL73 in Crescent reported 6 inches of snow since 2300 PST on 12/29.

A Winter Storm Warning was issued for Oregon zones ORZ025/027/028/030 above 3500 feet at 1459 PST on 12/29 and expired at 1040 PST on 12/31. The report above was the only verifying observation.

ORZ021

South Central Oregon Coast

	30	1101PST			0	0			
	31	2359PST							Flood

A Flood Warning was issued for the Coquille River at Coquille and the South Fork of the Coquille River at Myrtle Point effective at the above times. This warning verified at both locations. The South Fork of the Coquille river at Myrtle Point exceeded the flood stage of 38.0 feet from 0712 PST on 12/31 until 0333 PST on 1/1/03 PST. The crest of 40.02 feet occurred at 1439 PST on 12/31. The Coquille River at Coquille exceeded flood stage from 1645 PST on 12/31/02 until 0730 PST on 01/01/03. The crest of 21.11 feet was reached at 1945 PST on 12/31.

ORZ023>024-026

Central Douglas County - Eastern Curry County & Josephine County - Jackson County

	30	1830PST			0	0			
	31	2359PST							Flood

A Flood Warning was issued for four locations effective at the above times. The warning was actually cancelled at 0025 on 01/01/03. The locations were Deer Creek at Roseburg (ORZ023), Rogue River at Agness (ORZ024) and Eagle Point (ORZ026), Cow Creek at Riddle (ORZ023), and the South Umpqua River at Winston and Roseburg (ORZ023).

Of all these locations, the warnings only verified at two locations. The Rogue River at Agness exceeded the flood stage of 17.0 feet from 2310 PST on 12/30 until 2133 PST on 12/31. The crest of 19.66 feet occurred at 0900 PST on 12/31.

the Coquille River at Coquille and the South Fork of the Coquille River at Myrtle Point effective at the above times. This warning verified on the South Fork, but not the Coquille. The South Fork of the Coquille river at Myrtle Point exceeded the flood stage of

Storm Data and Unusual Weather Phenomena

December 2002

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

38.0 feet from 0712 PST on 12/31 until 0333 PST on 1/1/03 PST. The crest of 40.02 feet occurred at 1439 PST on 12/31. Deer Creek at Roseburg exceeded the flood stage of 10.0 feet from 2146 PST on 12/30 until 2300 PST on 12/30. The crest of 10.40 feet occurred at 2205 PST on 12/30.

ORZ031

Central & Eastern Lake County

30	2000PST	0	0		High Wind (G83)	M
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A spotter at Summer Lake reported wind 50 mph gusting to 83 mph.

A High Wind Warning was issued for the Summer Lake area of ORZ031 at 2025 PST on 12/30 in response to this report. It was cancelled at 1800 PST on 12/31.

PACIFIC

Saipan

Garapan

01	1245SST	0	1		Rip Current
	1800SST				

A diver, 40 year old Domauyuk Yury, was swept away by strong currents at the north of the Grotto in Marpi. A pilot and Police Officers Vince Babauta and Michael Camacho flying in a helicopter spotted Yury floating in the waters north of the Groto. He was waving his hands to show that he was fine. Notified about the victim's location, the officers on harbor patrol rescued him at 1756. Yury told police the he and his friend, Andrei Dorosuen, went to the Grotto to dive around 1245. Yury said that when he exited the cave at the Grotto, the current was so strong it caused him and Dorosuen to separate. He said that he was dragged so he decided to just float with the current. Yury said he tried to swim back to the Grotto, but failed so he relaxed hoping that help would come. Dorosuen said he waited for Yury for 20 minutes before he got out from the water and rushed to Sting Ray Dive Shop to report the incident. The dive shop called the Department of Public Safety Unit at 1600. Yury suffered minor scratches on his arms and legs.

GUZ005>008

Northern Marianas - Guam - Saipan - Rota

08	0800SST	1	316	175M	Hurricane/Typhoon
09	0100SST				

A circulation became Tropical Depression 31W early on the morning of the 3rd. It was about 70 miles north-northeast of Kosrae. It quickly became Tropical Storm Pongsona later that morning. On the evening of the 5th it became Typhoon Pongsona, it was 150 miles east-northeast of Chuuk.

Typhoon Pongsona's eye crossed the northern end of Guam on the 8th. Much of the island had to endure a long period in the storm's eye wall since the storm was moving slow, about 10 miles per hour.

Maximum sustained wind at the National Weather Service Office was 105 mph from the West at 1826 on the 8th. highest reported gust was 115 mph from the North at 1508. Wind may have been stronger, but unrecorded since tower which sensor was on blew down.

At Andersen Air Force Base the estimated maximum sustained wind was 115 mph from the North at 1459. The highest reported gust was 150 mph from the north 1459.

Lowest Pressure was 937.2 Mb at 1900L from Andersen AFB.

24 hour rainfall at the National Weather Service Office in Guam ending at midnight on the 9th was 19.67 inches.

Storm surge on Guam...near 20 feet at some locations. 9 to 13 feet on many northeastern, northern and northwestern locations near the eye wall. Considerable surge flooding from Tumon Bay southward to Piti on the west coast. Some buildings on the west coast had standing water up to four feet.

Beach erosion on Guam...Considerable at western clockwise through northeastern locations. Sea wall heavily damaged at the Paseo Park in Hagatna and at western coastal locations along Marine Drive.

Flooding on Guam...minor at some low lying locations. Central Rivers ran very high with record streamflows at the Pago River (East side) and Asan River (West side).

There was extensive flooding in several villages. Major damage throughout the northern two-thirds of Guam

Hospital

Winds from the typhoon collapsed the walls at Guam Memorial Hospital. The medical telemetry unit, pediatrics, the Intensive Care Unit and the Respiratory Unit were shut down because of the collapse of the wall. No injuries were sustained at the hospital.

300 people were brought to the hospital for storm related injuries.

One death was related to the typhoon. An elderly woman was cut badly during the peak of the storm and apparently went into cardiac arrest. 71 years old.

Storm Data and Unusual Weather Phenomena

December 2002

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

PACIFIC

Hotels

Several people reportedly were injured at the Outrigger Guam Resort, near the upper-level floors where travel agent offices are located. The metal security gate that separated the hotel from the entertainment and restaurant complex next door fell during the early part of the storm, causing injuries, and windows at the travel agencies blew in, cutting people with glass. A doctor was found in the hotel to treat the injured. The ceiling in the bridge between the Outrigger and Sam Choy's Restaurant partially collapsed. Several rooms were flooded, the outside walls of two rooms on the eighth and ninth floors were ripped out by the storm.

The Guam Marriot Resort had damage to the lobby and two restaurants .

The Hilton Hotel in Tumon suffered millions in damage as many rooms were flooded, walls cracked and the executive lounge in the Magalahi Tower was wrecked as strong typhoon winds destroyed the typhoon-proof windows.

Tank Farm Fire

Fire at Mobil tank farm at the commercial port at Cabras Island.

It is believed that static electricity inside on of the tanks may have been the cause of the fire. During the height of the storm a tank of unleaded gasoline caught fire. Static electricity may have occurred inside the tank due to friction caused by extremely high winds rushing through the ventilation system. The tank that first caught fire contained less than 15 percent of its total capacity of unleaded gasoline when the fire erupted. The explosion sent the tank's lid airborne, and it landed more than six hundred feet northeast of the tank.

By the 9th the fire had already destroyed two other nearby tanks. A third tank had ignited by the heat of the other fires. A fourth by the 10th. One was a jet fuel tank, one gasoline and a third diesel.

The fire was extremely hot, the tanks were close together and low water pressure hampered firefighting efforts.

The fire was finally put out on the 13th around 1600.

Churches

The Santa Teresita Catholic Church in Mangilao sustained extensive damage. The wind ripped apart a chunk of tin sheets from metal beams and blew in a huge glass windows.

The roof blew off St. Jude's Church in Sinajana. the roof of the Ordot-Chalan Pago church also blew away.

Airport

Damage to navigation equipment. 65 percent of the metal security fence surround the airport was pushed over by the typhoon force winds.

A Continental Airline hanger at Guam's International Airport had its roof damaged.

Storm Damage on Guam was estimated at \$73 million.

Utilities and Roads

\$52 million worth of damage to the power system with \$47 million worth occurring to power poles, lines and transformers. The agency needed to replace to 715 concrete poles and 513 transformers.

Pavement on bridges over the Asalonso and Pauliloc rivers in Inarajan looked as if it were scraped off the road. Motorist familiar with the area said the rivers overflowed and caused the pavement to be ripped off sections of those roads.

Sand and gravel from the beach washed onto Marine Drive in East Hagatna.

Schools

Storm Data and Unusual Weather Phenomena

December 2002

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

PACIFIC

Two walls at Vincent Benavente Middle School were damaged. The second floor of Father Duenas Memorial School's main building were damaged. Much of the roof was torn from metal beams. Rain pouring in the after the roof was gone flooded parts of the interior of the school.

Rain water from the typhoon drenched carpeting, blew out air conditioning units and shattered windows at Evangelical Christian Academy in Chalan Pago.

Harvest Christian Academy suffered extensive damage.

1751 destroyed
2048 major damage
4692 minor

400 homes in Yigo destroyed alone.

Tamuning gym suffered major damage.Paseo Stadium sustained considerable damage. Lighting system was totally destroyed.

72 of 110 water wells were inoperable. All wells were on generator with only some generators able to work. The generators are only supposed to be used temporarily.

Typhoon force winds at Alupang Sunset Gardens pushed cars around in the parking lot. People said they were stacked over each other like a fallen stack of dominoes.

Typhoon force winds blew the awning off the outdoor visitation area at the island's prison in Mangilao. About 150 inmates were moved from the dome to the indoor visitation site.

On the 8th 2271 people were in shelters on Guam on the 8th. This increased to 3467 people on the 9th after people discovered that there homes were uninhabitable. People still in the shelters as of Dec 16. People began to leave the shelters on Dec 27 as tents were handed out

Agriculture

Major damage to crops on Rota and Tinian, two island -wide power outages on Tinian and damage at Rota's East Harbor. Scattered power outages were reported in Saipan.

ROTA

150 people sought shelter in Rota. 200 families became homeless. Damage estimated at 30 to 50 million dollars. 114 houses destroyed, 154 with major damage with another 306 with minor damage.

10 minor injuries

Storm surge on Rota...22 feet at Songsong Village on the east coast of the southwest peninsula. Surge crossed about four-fifths of the peninsula.

Beach erosion on Rota...fuel pier and loading pipeline destroyed.

On Rota an automated wind sensor reported the maximum sustained wind to be 78 mph with gust to 85 mph from the east at 1846.

Saipan

549 people sought shelter in Saipan.

Six minor injuries were reported.

\$50,000 damage to power system and \$56,0000 for water system

2 houses destroyed, 7 with major damage with another 8 with minor damage.

Storm Data and Unusual Weather Phenomena

December 2002

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

On Saipan the maximum sustained wind was 44 mph and highest gust was 56 mph both from the east and both occurring at 2129.

Tinian

Had one power pole broken plus other related items. Cost to fix everything \$9000
2 houses destroyed, 7 with major damage with another 8 with minor damage. F71PH

PACIFIC OCEAN

**San Mateo Pt To
Mexican Bdr Out
30Nm**

7 S Point Loma	17	1517PST			0	0			Waterspout
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**E Santa Barbara Chnl
Pt Conception To Pt
Mugu**

1 W El Capitan Beach	19	1238PST			0	0			Waterspout
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**Pt Piedras Blancas To
Pt Arguello Wwd
60Nm**

5 W Point Piedras Blanc	19	1500PST			0	0			Marine Tstm Wind
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**Pt Arguello To Santa
Cruz Is Ca Wwd 60Nm**

5 W Point Conception	19	1600PST			0	0			Marine Tstm Wind
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**E Santa Barbara Chnl
Pt Conception To Pt
Mugu**

4 S Santa Barbara Harb	19	2003PST			0	0			Marine Tstm Wind
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A powerful early season storm brought gusty winds and waterspouts to the coastal waters of Central and Southern California. Buoys across the outer waters from Point Piedras Blancas to Santa Cruz island reported winds in excess of 50 knots as a line of thunderstorms moved through the waters. In the East Santa Barbara Channel, waterspouts were reported off of El Capitan Beach and the East Santa Barbara Channel buoy reported winds gusting to 34 knots in association with a thunderstorm.

PENNSYLVANIA, Central

PAZ004>006-010>012-017>019-024>028-033>037-041>042-045>046-049>053-056>059-063>066 Warren - Mckean - Potter - Elk - Cameron - Northern Clinton - Clearfield - Northern Centre - Southern Centre - Cambria - Blair - Huntingdon - Mifflin - Juniata - Somerset - Bedford - Fulton - Franklin - Tioga - Northern Lycoming - Sullivan - Southern Clinton - Southern Lycoming - Union - Snyder - Montour - Northumberland - Columbia - Perry - Dauphin - Schuylkill - Lebanon - Cumberland - Adams - York - Lancaster

05	0300EST 1500EST				0	0			Heavy Snow
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On Thursday, December 5th, a low pressure system over the Ohio Valley redeveloped along the middle Atlantic coastline, producing a large swath of moderate to locally heavy snow across much of central and southern Pennsylvania. Snowfall began during the pre-dawn hours, and rapidly increased in intensity through the mid-morning hours. The snow gradually tapered off by early afternoon from west to east. By the time the snow ended early Thursday afternoon, widespread snowfall amounts of 7 to 10 inches blanketed much of the lower Susquehanna Valley, with 5 to 8 inches across the central mountains and middle Susquehanna Valley. Snowfall rates of 1 to 2 inches per hour occurred between 8:00 and 11:00 a.m., creating hazardous travel conditions and resulted in numerous school and business closings throughout central Pennsylvania.

PAZ004>006-010>012-017>019-024>028-033>037-041>042-045>046-049>053-056>059-063>066 Warren - Mckean - Potter - Elk - Cameron - Northern Clinton - Clearfield - Northern Centre - Southern Centre - Cambria - Blair - Huntingdon - Mifflin - Juniata - Somerset - Bedford - Fulton - Franklin - Tioga - Northern Lycoming - Sullivan - Southern Clinton - Southern Lycoming - Union - Snyder - Montour - Northumberland - Columbia - Perry - Dauphin - Schuylkill - Lebanon - Cumberland - Adams - York - Lancaster

10	0800EST				0	0			Ice Storm
11	2200EST								

On Wednesday December 11th, a low pressure system along the central Gulf Coast developed and moved northward along the Appalachian Mountains. This low then weakened, while a new low developed along the mid Atlantic coast. This system produced a wintry mix across much of Central Pennsylvania, mainly in the form of freezing rain. The precipitation developed during the early to mid morning hours of Wednesday, and tapered off Wednesday evening. Average ice accretion of one quarter to one half of an inch developed by the time the precipitation tapered off Wednesday evening, triggering numerous downed tree limbs and power outages across Central Pennsylvania. Nearly 51,000 customers were without power at the height of the storm on Wednesday, closing numerous schools and businesses across Central Pennsylvania. In addition, numerous traffic accidents were reported.

Storm Data and Unusual Weather Phenomena

December 2002

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

PAZ005-010>011-017-033 **Mckean - Elk - Cameron - Clearfield - Somerset**

13	1700EST				0	0			Heavy Snow
14	1100EST								

Low pressure over the southern Appalachians on the 13th of December moved north and crossed Pennsylvania on the 14th. A large area of precipitation moved into the southern tier of Pennsylvania on the evening of the 13th...and spread north overnight. Initially...a mix of rain and snow fell across central and southern areas...while freezing rain fell across the north. Overnight...the precipitation changed to all snow. By early morning of the 14th, 6 inches of snow had fallen across the Laurels Highlands and portions of the Northwest mountains. Snow totals by the end of the storm ranged from 6 to 8 inches.

PAZ006-037

Potter - Tioga

13	2000EST				0	0			Ice Storm
14	1100EST								

Low pressure over the southern Appalachians on the 13th of December moved north and crossed Pennsylvania on the 14th. A large area of precipitation moved into the southern tier of Pennsylvania on the evening of the 13th...and spread north overnight. Initially...a mix of rain and snow fell across central and southern areas...while freezing rain fell across the north. By early morning of the 14th, a quarter inch / .25/ of freezing rain had accumulated over Tioga and Potter counties. The precipitation changed back to snow before ending on the afternoon of the 14th, with another inch or two of snow falling.

PAZ004>006-010>012-017>019-024>028-033>037-041>042-045>046-049>053-056>059-063>066

Warren - Mckean - Potter - Elk - Cameron - Northern Clinton - Clearfield - Northern Centre - Southern Centre - Cambria - Blair - Huntingdon - Mifflin - Juniata - Somerset - Bedford - Fulton - Franklin - Tioga - Northern Lycoming - Sullivan - Southern Clinton - Southern Lycoming - Union - Snyder - Montour - Northumberland - Columbia - Perry - Dauphin - Schuylkill - Lebanon - Cumberland - Adams - York - Lancaster

25	0500EST 2300EST				0	0			Heavy Snow
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Low pressure developed along the western Gulf Coast during Tuesday morning, December 24th, and moved northeast into the Ohio Valley from late Tuesday into Tuesday night. This low then weakened as it moved east across southern Pennsylvania, while another low pressure system developed and intensified rapidly during the morning hours of Wednesday, December 25th. This second, stronger low pressure system then tracked northeast off the New England Coast by Wednesday night. Generally light snow overspread Central Pennsylvania during Tuesday evening, and continued intermittently through Tuesday night, occasionally mixing with sleet and rain across the lower Susquehanna Valley. Heavier snow then rapidly developed around daybreak Wednesday from west to east. Intense snowfall rates of 2 to 3 inches per hour reduced visibilities to near zero across much of Central Pennsylvania during the mid morning hours, before eventually tapering off to flurries during the mid afternoon hours of Wednesday.

As a result of this storm, accumulations generally ranged from 6 to 12 inches across much of Central Pennsylvania, with higher amounts across the lower and mid Susquehanna Valley, where locally 12 to 18 inches fell. The snow was much wetter in consistency across the lower Susquehanna Valley, which resulted in numerous downed trees and power lines. Widespread power outages occurred across the lower Susquehanna Valley, where at least 50,000 customers endured power loss. In addition, excessive snowfall led to many road closures on Wednesday, including long stretches of Interstates 80 and 81.

PENNSYLVANIA, East

PAZ054-061

Carbon - Lehigh

01	1100EST 1600EST				0	0	0		Winter Weather/Mix
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A series of snow squalls caused a couple of multi-vehicular accidents in the Lehigh Valley and the Poconos. Accumulations were very light, but subfreezing temperatures made the snow stick to the roads and become slippery quickly. In Lehigh County, a 50 vehicle pile-up caused immense delays, but no major injuries on Interstate 78 just west of Allentown. In Carbon County, another multi-vehicular accident in Mahoning Township caused several injuries that required hospitalization. The driver of a dump truck lost control of his vehicle, crossed the double yellow and struck a van head-on. The dump truck then spun and struck a tractor trailer and a minivan.

PAZ054>055-060>062-067>071

Carbon - Monroe - Berks - Lehigh - Northampton - Chester - Montgomery - Bucks - Delaware - Philadelphia

05	0400EST 2200EST				0	0	0		Heavy Snow
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The first winter storm of the season dropped between six and ten inches of snow across Eastern Pennsylvania. In the immediate Philadelphia area, this was more snow than fell all of last winter. Snow spread from south to north between 4 a.m. and 7 a.m. EST across the region. The heaviest snow fell between 8 a.m. and 2 p.m. EST and fell at lighter rates until it ended during the evening of the 5th. Schools were canceled.

The first winter storm of the season which also coincided with a work day (Thursday) caused over one thousand accidents and large traffic jams on the interstates and expressways. Hundreds of other vehicles skidded into ditches. Government offices, courthouses, shopping malls and businesses all closed early. The city of Philadelphia declared a SnowCat4, its most severe winter storm designation. About one quarter of all arriving and departing flights at Philadelphia International Airport were cancelled. Flights

Storm Data and Unusual Weather Phenomena

December 2002

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

PENNSYLVANIA, East

were delayed up to three hours. There were a few flight cancellations at Lehigh Valley International Airport. Around the Philadelphia area, about 10,000 PECO customers lost power, mainly from vehicles crashing into poles. Two crashes alone caused power outages to 4,000 customers. A tractor trailer crash in Coopersburg (Lehigh County) caused 1,800 PPL customers to also lose power. Otherwise, the snow was very powdery and caused few power line problems.

In the Philadelphia area, a jackknifed tractor trailer in the southbound lanes of the Northeast Extension slowed the entire morning commute. In Montgomery Township (Montgomery County), a tractor trailer blocked one northbound lane of U.S. Route 422 for the entire morning. Large traffic jams were also reported on the Schuylkill Expressway. In Delaware County, there were 80 disabled vehicles alone. Eleven people suffered minor injuries when a SEPTA bus skidded into an embankment in Chester (Delaware County). In Middletown (Delaware County), 10 passengers on a Fair Acres Geriatric Center bus were injured when it crashed. A man slipped and fell onto the SEPTA regional line track in Primos (Delaware County). In general the average 15 minute commute turned into one hour for many people. Farther north in the Lehigh Valley, U.S. Route 309 was closed between Coopersburg (Lehigh County) and Springfield Township (Bucks County) after a tractor trailer plowed into a utility pole. In Upper Saucon Township (Lehigh County), three tractor trailers were stuck trying to drive on a hilly road. In Northampton County, there were 130 accidents by 3 p.m. EST and 50 vehicles were disabled on Interstate 78 and Pennsylvania State Route 33. Shoveling snow caused three Chester County men (ages 55, 68 and 86) to die from heart attacks.

Specific Accumulations included 9.5 inches in Wyomissing (Berks County) and Ambler (Montgomery County), 9.2 inches in Horsham (Montgomery County), 9 inches in Manayunk (Philadelphia), Kidder Township (Carbon County), Newtown Square (Delaware County), Perkasio (Bucks County) and Thorndale (Chester County), 8 inches at the Lehigh Valley International Airport, Bossardville and East Stroudsburg (Monroe County), Bethlehem and Forks Township (Northampton County), Palm (Montgomery County), Southampton (Bucks County) and Exton (Chester County), 7.5 inches in Reading (Berks County) and Levittown (Bucks County), 7 inches at the Philadelphia International Airport, Lehighton (Carbon County), Blakeslee (Monroe County), Upper Chichester Township (Delaware County), Downingtown (Chester County), Morgantown (Berks County) and Neshaminy Falls (Bucks County), 6.8 inches in Salisbury Township (Lehigh County) and Easton (Northampton County).

The low pressure system responsible for the winter storm formed over Texas on the 3rd and moved eastnortheast and reached Louisiana the morning of the 4th, Cape Hatteras the morning of the 5th and then accelerated quickly offshore during the day on the 5th.

PAZ054>055-060>062-067>069 **Carbon - Monroe - Berks - Lehigh - Northampton - Chester - Montgomery - Bucks**

11	0500EST	0	0	Winter Storm
	2300EST			

A winter storm of sleet and freezing rain affected the northern Philadelphia suburbs, Berks County and the Lehigh Valley. Freezing rain and sleet also fell in the Poconos, but precipitation changed to snow before it ended during the evening of the 11th. About 12,000 Eastern Pennsylvania residents lost power, mainly from freezing rain and sleet accruing to exposed surfaces and taking down tree limbs and subsequently power lines. While it was warm enough aloft for precipitation to fall as rain, enough cold air was left at or near the surface by a departing high pressure system for the rain to freeze on contact or for precipitation to fall as sleet. Precipitation (in the form of sleet and freezing rain) spread from south to north across the area between 5 a.m. and 8 a.m. EST. In upper sections of Montgomery, Chester and Bucks Counties, surface temperatures remained below freezing throughout the morning and about a quarter of an inch of ice accrued to exposed surfaces. Farther south in those counties, precipitation just briefly fell as freezing rain or sleet before temperatures rose above freezing. The change to plain rain took longer (into the middle of the afternoon) across Berks County and the Lehigh Valley. The changeover was also elevation dependent. Higher terrain locations took longer to change to plain rain. In the Poconos, some valley locations changed to plain rain during the afternoon, otherwise a wintry mix continued. Ice accretions in the Lehigh Valley averaged around one quarter of an inch and in Berks County and the Poconos averaged between one quarter and one half of an inch. A couple of inches of snow then accumulated across higher terrain locations of the Poconos during the evening of the 11th. Precipitation ended late in the evening on the 11th.

In Berks County, numerous minor accidents occurred. Most schools, government offices and businesses closed because of the ice. About 6,200 Metropolitan Edison and Pennsylvania Power and Light (PPL) customers lost power because of downed power lines by tree limbs. Power was restored during the evening of the 12th. In the Poconos, numerous accidents also occurred. In Stroudsburg (Monroe County) two pickup trucks crashed head on and a woman flipped her car on Pennsylvania State Route 191. Traffic moved at a crawl through the Delaware Water Gap National Recreation area. Vehicles slid into ditches on Interstate 80. Many schools were closed and most had delayed openings on the 12th. Evening events were postponed. About 5,000 PPL customers lost power. The number was down to 2,000 on the 12th with full restoration on the 13th. The snow during the evening of the 11th slowed the restoration process.

A large high pressure system from central Canada brought in cold, dry air into the region. As a low pressure system formed in the Gulf of Mexico on the 10th, it started to push moisture north into the region. As the high retreated into New England, the low moved northeast along the Atlantic Seaboard from near Myrtle Beach the morning of the 11th to near Cape Cod the morning of the 12th. Enough warm air moved westward from the Atlantic to change precipitation to plain rain along the coastal plain. But, the cold air became entrenched, especially over the Poconos, Berks County and the Lehigh Valley and was difficult to displace throughout this event.

Storm Data and Unusual Weather Phenomena

December 2002

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

PAZ054>055-060>062	Carbon - Monroe - Berks - Lehigh - Northampton								
	24	2000EST			0	0	100K		Winter Storm
	26	0300EST							
PAZ067>069	Chester - Montgomery - Bucks								
	24	2200EST			0	0			Winter Weather/Mix
	25	2359EST							

The most significant Christmas Day winter storm since 1966 crippled the Poconos, brought heavy snow to the Lehigh Valley, Berks County and the far northern suburbs of Philadelphia and a wintry mix to the rest of the Philadelphia suburbs. Precipitation began as light snow on Christmas Eve. As the northeaster moved northeast along the eastern seaboard, warmer air from the Atlantic and the south warmed the air between 3,000 and 8,000 feet above ground level. This changed precipitation over to sleet and light freezing rain. As warmer air moved in near the ground precipitation changed to plain rain across much of the Philadelphia northwest suburbs by daybreak on Christmas Day and by mid-morning in the Lehigh Valley and Berks County. In the Poconos, most temperatures remained below freezing and around two-tenths of an inch of ice accrued on exposed surfaces. The northeaster was in the process of intensifying rapidly along the Middle Atlantic seaboard and both its precipitation intensity and coverage increased rapidly across Eastern Pennsylvania during the second half of the morning. As precipitation intensity increased and winds started to shift from the northeast to north, precipitation started to change to all snow. This began in the Poconos by 1030 a.m. EST and moved southeast during the remaining daylight hours across the rest of the state. Precipitation changed back to snow around 11 am EST in the Lehigh Valley and Berks County and between 11 a.m. and Noon EST in the Philadelphia northwest suburbs. The heaviest snow fell between 11 a.m. and 4 p.m. EST and snowfall rates in parts of the Poconos averaged two inches per hour. The snow ended during the evening, except overnight in the Poconos.

The combination of freezing rain, sleet and heavy wet snow brought down a plethora of trees, tree limbs and power lines from Berks and Schuylkill Counties northeast through the Poconos. About 225,000 Pennsylvania Power and Light (PPL) and Metropolitan Edison customers lost power. The 175,000 outages to PPL customers was the second worst on record only surpassed by Hurricane Floyd. Huge trees snapped like twigs and even utility poles snapped. Thousands of trees were knocked down. Entire sections of new lines, poles and transformers had to be replaced. The restoration process was hindered because many of the outages were in remote areas and the smaller roads were not plowed. In addition, trees continued to fall through the weekend (28th and 29th) and created new outages. Repair crews from as far away as Maryland, New York and western Pennsylvania helped with the restoration process. Entire sections of Interstates 80, 81, 84 and 380 were closed. Interstate 80 was closed at the New Jersey State border. In Carbon County, a state of emergency was declared on Christmas Day and was not lifted until December 29th. Twice the county had to hand emergency response calls to Monroe County. All fire department and ambulance personnel were placed on stand-by. Power was restored for good at the county emergency services during the evening of the 27th. Shelters were opened in five Carbon County townships. Many people resorted to placing snow in their refrigerators to keep food cold and melting snow on stove tops to flush toilets. U.S. Route 209 was closed between Lansford and Nesquehoning because of downed trees. Businesses in Jim Thorpe were closed through the 28th. About 31,000 Carbon County residents lost power. The number was down to 7,700 the evening of the 27th and 1,400 the evening of the 29th (all in the Panther Valley). Power was completely restored on the 30th.

In Monroe County, the southern and western parts of the county were hit the hardest. About 16,000 county residents lost power. All power was restored on the 27th with the last restoration in the Pocono Wild Haven Estate in Wooddale. Many vehicles were abandoned and left on roadways. Many roads were impassable during the height of the storm. All county offices were closed on the 26th. The 21 inches of snow in Tobyhanna was a one day December record. In Berks County 30,000 homes and businesses lost power, two-thirds of them in Reading. Other hard hit municipalities were Sinking Spring, Cumru, Hamburg, Fleetwood and Oley. Several shelters were opened throughout the county. The Red Cross also sent people without power to hotels. All power was restored by the morning of the 29th. Two men in the county died shoveling snow. One was a 57-year-old in Muhlenberg Township and the other was a 78-year-old in Sinking Spring. In the Lehigh Valley, Interstate 78 was plagued with vehicles stuck in snow. There were multiple minor collisions on U.S. Route 22 as well as Pennsylvania State Routes 33 and 248. About 5,600 homes and businesses lost power in the valley mainly in Allentown, Emmaus, Salisbury and South Whitehall Townships. In the Philadelphia suburbs the quick accumulation of snow led to many accidents. Vehicles were unable to ascend hills and many slipped and slid into ditches. By the middle of the afternoon there were over 100 reported accidents in Bucks County. Strong winds and sleet forced the cancellation of the annual re-enactment of Washington crossing the Delaware River.

Specific accumulations included 21 inches in Tobyhanna (Monroe County), 19 inches in Albrightsville (Carbon County) and Blakeslee (Monroe County), 14.8 inches in Pocono Summit (Monroe County), 14 inches in Beltzville (Carbon County), 13 inches in Jim Thorpe (Carbon County) and Vinemont (Berks County), 12 inches in Mohnton (Berks County), 10.8 inches in East Stroudsburg (Monroe County), 10 inches in Honeybrook (Chester County), 8 inches in Morgantown (Berks County) and Schnecksville (Lehigh County), 7.5 inches in Perkasio (Bucks County), 7.4 inches in Williams Township (Northampton County), 7.2 inches at the Lehigh Valley International Airport, 7 inches in Reading (Berks County), 6.6 inches in Bath (Northampton County), 6 inches in Easton (Northampton County), 5.2 inches in Glenmoore (Chester County), 4.9 inches in Palm (Montgomery County), 4.8 inches in Doylestown (Bucks County), 3.0 inches in Southampton (Bucks County), 2.7 inches in Green Lane (Montgomery County) and 1 inch in Valley Forge (Chester County)

The northeaster that produced the tidal flooding moved from Mississippi the morning of the 24th to near Norfolk the morning of the 25th to just west of Atlantic City during the afternoon of the 25th to south of Nova Scotia the morning of the 26th.

Storm Data and Unusual Weather Phenomena

December 2002

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

PENNSYLVANIA, East

PAZ055	Monroe								
	30	2100EST			0	0			Winter Weather/Mix
	31	0100EST							

Some very light freezing rain fell across the higher terrain of Monroe County during the night of the 30th. The freezing rain preceded the passage of a warm front that moved through the region overnight. Temperatures rose through the night and by 1 a.m. EST on the 31st, they were above freezing throughout the county. Ice accretions on untreated surfaces was mainly trace amounts.

PENNSYLVANIA, Northeast

PAZ040-043>044-047>048	Wayne - Wyoming - Lackawanna - Luzerne - Pike								
	05	0600EST			0	0			Heavy Snow
		1900EST							

Low pressure developed on the middle Atlantic coast the morning of the 5th. The low tracked northeast up the coast during the afternoon and evening. Snow moved into the region around 6 AM ahead of the storm. By 10 AM, snow was heavy at times with snowfall rates of one inch an hour. During the late afternoon the snow tapered off to light snow. Snowfall totals were 6 to 10 inches. Water equivalents were mostly between a quarter and a half an inch. Temperatures ranged from the upper teens to the mid twenties.

PAZ038>040-043>044-047>048	Bradford - Susquehanna - Wayne - Wyoming - Lackawanna - Luzerne - Pike								
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	11	0800EST							
	12	0800EST			0	0			Winter Weather/Mix

Low pressure on the gulf coast on the 10th moved northeast to be off Cape Hatteras, North Carolina the morning of the 11th. The storm moved north to be off the New Jersey coast that evening then moved northeast off of Cape Cod the morning of the 12th. Precipitation moved into northeast Pennsylvania between 8 and 9 in the morning on the 11th. Precipitation fell in the form of rain but froze to roads and other surfaces with temperatures in the upper 20s. Sleet mixed in with the freezing rain at times at the beginning of the event. In southern parts of Pike and Luzerne Counties temperatures rose above freezing for most of the afternoon. The rain and freezing rain was heavy at times during the afternoon. Rainfall amounts were up to an inch. Freezing rain accretions were up to half an inch. The freezing rain caused numerous accidents which closed most of the major thoroughfares including, Interstates 81, 80, and 84. Several counties declared states of emergencies. The freezing rain also brought down trees and power lines. This was especially true across the higher elevations. The freezing rain changed to snow on the evening of the 11th. The wet snow then continued heavy at times into the next morning. Snowfall amounts for Pike and Luzerne Counties were up to two inches. The remainder of the counties further north received 2 to 8 inches of snow. The heaviest snow of 6 to 8 inches was from Wyoming County eastward across southern Susquehanna, northern Lackawanna, into northern Wayne Counties. Total water equivalents for the entire storm were mostly between an inch and an inch and a half. The freezing rain and the heavy wet snow caused hundreds of customers to lose power.

PAZ038>040-043>044-047>048	Bradford - Susquehanna - Wayne - Wyoming - Lackawanna - Luzerne - Pike								
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	24	2300EST							
	26	0100EST			0	0			Heavy Snow

Low pressure formed off the middle Atlantic coast Christmas evening. This storm intensified as it moved north to be off Long Island, New York Christmas night. Light snow moved into northeast Pennsylvania around midnight on the 25th. This snow remained light through the early morning accumulating little. In many locations the snow changed to sleet and freezing rain around sunrise. The precipitation remained light in most places until afternoon, During the afternoon precipitation changed back to snow and became heavy. In Bradford County precipitation was mostly snow for the entire event. A band of heavy snow lifted north through the region during the afternoon and early evening. Snowfall rates were several inches an hour. The snow ended around midnight on the 26th. In Bradford County snowfall amounts were mostly 7 to 10 inches. In Luzerne County snow totals were 9 to 14 inches. Elsewhere amounts were 10 to 20 inches with some amounts up to 2 feet closer to the New York border and at higher elevations. Due to the interstates being closed due to accidents from time to time many counties declared states of emergencies. The heavy snow caused isolated power outages.

PENNSYLVANIA, Northwest

PAZ002>003	Southern Erie - Crawford								
	01	0000EST							
		1700EST			0	0	225K		Heavy Snow

An arctic cold front dropped southeast across the region on the morning of November 30th. Cold west to northwest winds behind this front caused lake effect snow showers and squalls to develop during the afternoon of the 30th. These snow showers intensified during the evening of the 30th and continued through the afternoon of December 1st. Snowfall totals were generally 6 to 12 inches with a maximum of just over 17 inches in southeastern Erie County. Gusty winds accompanying the snow caused whiteout conditions at times along with significant drifting.

PAZ001>003	Northern Erie - Southern Erie - Crawford								
	24	2300EST							
	25	2200EST			0	0	500K		Heavy Snow

An area of low pressure developed along the Gulf Coast early on December 24th and then moved rapidly northeast. This low

Storm Data and Unusual Weather Phenomena

December 2002

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

moved across eastern Ohio and western Pennsylvania during the morning hours of the 25th. Snow developed well north of the low and spread into northwestern Pennsylvania just before midnight of the 25th. The snow intensified during the early morning hours and again in the afternoon. The snow finally tapered off during the evening of the 25th. Heavy snow fell over all of Northwest Pennsylvania with total accumulations generally between 6 and 9 inches. 8.1 inches of snow was officially recorded at Erie International Airport. Northwest winds increased to 15 to 25 mph during the storm and caused considerable blowing and drifting with whiteout conditions at times. Travel was severely hampered by this storm and dozens of accidents occurred as a result of the treacherous driving conditions caused by the snow.

PENNSYLVANIA, West

PAZ031>032

Greene - Fayette

05	0900EST								
	1200EST			0	0				Heavy Snow

8 inches of snow fell during the night of Dec 4 until noon Dec 5.

PAZ009-013>014-020>023-029>030

Forest - Lawrence - Butler - Beaver - Allegheny - Armstrong - Indiana - Washington - Westmoreland

11	0900EST								
	1700EST			0	40				Ice Storm

Quarter inch of ice accumulated.

PAZ007

Mercer

25	0900EST								
	1200EST			0	0				Heavy Snow

6 inches of snow fell.

PAZ032

Fayette

25	0930EST								
	1200EST			0	0				Heavy Snow

6 inches of snow fell.

PAZ023

Indiana

25	1400EST								
	1200EST			0	0				Winter Storm

Freezing rain and sleet began in the early morning of Dec 25, changed to snow after sunrise on Christmas Day, and continued snowing into the morning of Dec 26. Indiana county reported ice from the freezing rain was a quarter of an inch thick by 11 AM on the 25th. By 3 PM, snow totaled 6 to 8 inches.

PAZ013-016-022-030

Lawrence - Jefferson - Armstrong - Westmoreland

25	1400EST								
	1200EST			0	0				Heavy Snow

6 inches of snow fell.

PAZ008

Venango

25	1800EST								
	1200EST			0	0				Heavy Snow

5 to 7 inches of snow fell.

PAZ009

Forest

26	0400EST								
	1200EST			0	0				Heavy Snow

6 to 10 inches of snow fell from the early morning of Dec 25 through noon the next day.

PUERTO RICO

NONE REPORTED.

RHODE ISLAND

RIZ002>007

Southeast Providence - Western Kent - Eastern Kent - Bristol - Washington - Newport

05	1200EST								
	1000EST			0	0				Heavy Snow

A winter storm passing about 200 miles southeast of Nantucket brought heavy snow to much of Rhode Island. Due to its offshore track, the storm brought the most snow to central and southern sections of the Ocean State, where amounts averaged around 7 inches. Amounts averaged less in northwest Providence County, generally between 2 and 5 inches. No storm damage or injuries were reported.

Officially, the storm total at T.F. Green State Airport in West Warwick was 6.4 inches. Other snowfall totals included 8 inches in Middletown, Coventry, West Greenwich, and Cranston; 7 inches in North Kingstown, Tiverton, and Johnston; and 6 inches in Charlestown, Warwick, and downtown Providence.

Storm Data and Unusual Weather Phenomena

December 2002

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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RHODE ISLAND

RIZ001

Northwest Providence

25	1300EST				0	0	10K		Winter Storm
26	0900EST								

RIZ004

Eastern Kent

25	2208EST				0	0			High Wind (G35) ^M
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T.F. Green State Airport, sustained wind

A major winter storm impacted southern New England on Christmas Day, bringing heavy, wet snow and high winds to the Ocean State. The greatest snowfall accumulations were reported in northwest Providence County, where amounts of 4 to 7 inches were common. Only 1 to 3 inches of snow were observed farther south into Kent and southeast Providence Counties, where rain was reported through much of the day.

The weight of the snow, combined with strong northeast winds, brought down tree limbs and power lines in Woonsocket, North Smithfield, and Burrillville. About 2,000 customers lost power during the height of the storm. At T.F. Green State Airport in West Warwick, sustained winds reached 40 mph during the evening.

Officially, the storm total at T.F. Green State Airport was only 1.1 inch. Other snowfall totals included 7 inches in Burrillville, 6 inches in North Foster, and 4 inches in Woonsocket.

SOUTH CAROLINA, Central

SCZ015>016-018-020>022-026>029-031

Lancaster - Chesterfield - McCormick - Newberry - Fairfield - Kershaw - Saluda - Lexington - Richland - Lee - Sumter

04	0755EST				0	0	0		Ice Storm
05	1000EST								

A major ice storm produced around an inch of ice that took down many trees and powerlines. Roads were hazardous. Many were without power for several days.

Freezing rain fell over most of the Midlands, PeeDee, and western CSRA. Ice accumulations were around a quarter of an inch in McCormick, Saluda, Lexington, Richland, Sumter, and Lee counties. Around a half an inch of ice accumulated in Newberry, Fairfield and Kershaw counties. Lancaster and Chesterfield counties were hardest hit with around an inch of ice. Many trees and powerlines were down in these two counties and people in Lancaster county went without power for several days.

Lexington County

Lexington

24	1112EST				0	0	0		Thunderstorm Wind (G50)
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Sheriff reported trees down in subdivision off Platt Springs Road.

Richland County

Columbia

24	1120EST				0	0	0		Thunderstorm Wind (G50)
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Sheriff reported several trees and highway signs blown down.

SOUTH CAROLINA, North Coastal

SCZ017-023>024-032

Marlboro - Darlington - Dillon - Florence

04	1600EST				0	0			Ice Storm
05	0200EST								

Around a tenth of an inch of frozen precipitation was observed, knocking down limbs and causing power outages. Only a few minor traffic accidents were noted. Strong high pressure over the mid-Atlantic fed a shallow layer of cold air across interior portions of the state. Low pressure formed over the Gulf coast, spreading moisture over the Carolinas. The result was freezing rain.

SOUTH CAROLINA, Northwest

SCZ001>002-004>014-019

Oconee Mountains - Pickens Mountains - Greater Oconee - Greater Pickens - Greater Greenville - Spartanburg - Cherokee - York - Anderson - Abbeville - Laurens - Union - Chester - Greenwood

04	1500EST				0	0	100M		Ice Storm
05	0700EST								

Freezing rain began across upstate South Carolina during the early afternoon of the 4th, and had spread into the eastern piedmont by mid afternoon. Resultant damage due to ice accumulation began during the mid-to-late afternoon. The intensity of the freezing rain increased after midnight, and by dawn on the 5th, devastating ice accumulations of 1/2 to 1 1/2 inches were observed, with the hardest hit areas being along the I-85 corridor, from Anderson, to Greenville-Spartanburg, to Gaffney. Hundreds of thousands lost power, and the outages lasted for as long as 2 weeks in some areas.

SCZ001>006-010

Oconee Mountains - Pickens Mountains - Greenville Mountains - Greater Oconee - Greater Pickens - Greater Greenville - Anderson

13	0800EST				0	0			High Wind (G70)
	0915EST								

Damaging winds were caused by a gravity wave as it propagated out of northeast Georgia and across upstate South Carolina during the late morning hours. In the Oakway community, the roof was blown off of a mobile home. Some gas pumps were blown over at a convenience store in Fairplay. Numerous trees and power lines were also downed. Around 10,000 people lost power from the Georgia state line to the northern half of Greenville County.

Storm Data and Unusual Weather Phenomena

December 2002

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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SOUTH CAROLINA, Northwest

Greenville County

Taylors to 24 1030EST 0 0 **Flash Flood**
7 E Simpsonville 1900EST
 Brushy and Gilder Creeks flooded, while the Reedy River reached flood stage on the west side of the county.

Spartanburg County

Landrum 24 1100EST 0 0 **Flash Flood**
 1400EST
 Some creeks and small streams flooded.

Spartanburg County

Spartanburg 24 1100EST 0 0 **Flash Flood**
 1400EST
 Some roads flooded, along with some small creeks and streams.

SCZ010

Anderson
 24 1900EST 0 0 **Flood**
 2300EST
 A creek flooded part of highway 29 near the Georgia border.

Oconee County

Northeast Portion 24 2000EST 0 0 **Flash Flood**
 25 0000EST
 Some roads and yards were covered with water, including highway 107.

SOUTH CAROLINA, South Coastal

Jasper County

Tarboro 24 1225EST 0 0 **Thunderstorm Wind (G50)**
 Several trees were down.

Beaufort County

2 ENE Beaufort 24 1230EST 0 0 **Thunderstorm Wind (G50)**
 Large tree limbs and power lines were down on Lady's Island. One tree fell on an automobile.

Charleston County

2 N Ravenel 24 1250EST 0 0 **Thunderstorm Wind (G50)**
 Trees down across Highway 165.

Charleston County

North Charleston 24 1300EST 0 0 **Thunderstorm Wind (G50)**
 Several trees were down across Rutledge Ave near Hampton Park.

SOUTH DAKOTA, Central and North

NONE REPORTED.

SOUTH DAKOTA, Southeast

NONE REPORTED.

SOUTH DAKOTA, West

SDZ012

Butte
 03 2000MST 0 0 0 **Heavy Snow**
 04 0633MST

A compact low pressure system tracked across the northern plains and spread light snow across western South Dakota. A narrow band of heavy snow developed over portions of Butte County. Belle Fourche received eight to nine inches of snow, while six inches accumulated between Belle Fourche and Newell during the nighttime hours.

SDZ025

Northern Foot Hills
 29 1528MST 0 0 0 **High Wind (G53) ^M**

A very strong cold front moved across western South Dakota during the morning and afternoon. Wind gusts of 61 mph were recorded behind the front in the northern foothills of the Black Hills.

TENNESSEE, Central

TNZ005>011-022>034-064

Stewart - Montgomery - Robertson - Sumner - Macon - Clay - Pickett - Benton - Houston - Humphreys - Dickson - Cheatham - Davidson - Wilson - Trousdale - Smith - Jackson - Putnam - Overton - Fentress - Dekalb
 04 0600CST 0 0 **Winter Storm**
 1900CST

The winter storm peaked around 11 AM CST. Some of the problems noted by TDOT were :

Counties and Conditions

Storm Data and Unusual Weather Phenomena

December 2002

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

TENNESSEE, Central

Stewart- Icing on some roadways.

Montgomery- Many roads icy. Ice on trees and power lines. About an inch of snow and sleet on ground.

Dickson- 1/4 inch of ice on trees.

Cheatham- Icy roads in many spots.

Benton- Ice on trees and roads.

Houston- Ice on trees and roads.

Humphreys- Icing on trees and power lines. There were trees on some roads.

Roberston- Numerous roads iced over. Trees and power lines were down. Ice was 1/4 to 1/2 inch thick by 6:30 AM CST.

Davidson - Icing on trees and power lines caused scattered outages in the Belmont, Centennial Park and Nolensville Road area.

Sumner- About 2 inches of slushy ice and snow on roads mainly north of Gallatin.

Wilson- Ice on trees and power lines, mainly in the northern part of county.

Macon- About a 1/4 inch of ice on all surfaces. Roads were slick and trecherous. About an inch of snow was on the ground.

Clay- Roads were slick and icy. Ice on trees and power lines. Highway 52 east was in very bad shape.

Pickett- 1/4 inch of ice on all surfaces. 2 inches of snow on the ground. Roads were in very bad shape.

Smith- About 1/4 inch of ice on trees and power lines. Northern section had very icy roads.

Trousdale- 1/4 inch of ice on surfaces. Roads in northern sections were in very bad shape.

Jackson- About 1/4 inch of ice on power lines and trees. Secondary roads were icy.

Overton - 3 inches of ice and snow on roads. Ice accumulations were about an inch on all surfaces.

Putnam - Icing on trees.

Fentress- Roads were icy. An inch of snow was on the ground.

Dekalb- Some icing on trees and back roads.

Benton County Camden

19	0500CST			0	0			Flood
	0700CST							

TDOT reported creeks out of their banks. Roads were closed around Camden.

Houston County Countywide

19	0500CST			0	0			Flood
	0700CST							

TDOT reported standing water on many roads. Creeks were running high.

Stewart County Indian Mound

19	0500CST			0	0			Flood
	0700CST							

TDOT reported a few roads covered with 2-3 inches of water. Creeks were running high.

TNZ005-022>024

	Stewart - Benton - Houston - Humphreys							
19	0900CST			0	0			Flood
	1600CST							

Sheriff reported some secondary roads were flooded.

Storm Data and Unusual Weather Phenomena

December 2002

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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TENNESSEE, East

TNZ012>015-017>018-041-045>047-074 **Scott - Campbell - Claiborne - Hancock - Sullivan - Johnson - Cocke/Smoky Mountains - Unicoi - Northwest Carter - Southeast Carter - Sevier/Smoky Mountains**

04	0000EST 2000EST				0	0	Winter Storm
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Snowfall accumulations of four to seven inches were reported across the northern Cumberland plateau, higher elevations of northeast Tennessee and Smoky Mountains. Two to four inches were reported in the lower elevations.

TENNESSEE, West

TNZ001>004-019>020-048 **Lake - Obion - Weakley - Henry - Dyer - Gibson - Lauderdale**

04	0100CST 1100CST				0	0	35K Ice Storm
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A mix of sleet and freezing rain on northern sections of West Tennessee. The icy conditions caused many trees and power lines to fall down.

Shelby County
Memphis

18	2145CST 2150CST				0	0	5K Thunderstorm Wind
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A couple of trees fell on some power lines and a car.

Tipton County
Covington

18	2200CST 2205CST				0	0	0.01K Hail (0.75)
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Tipton County
Covington

18	2230CST				0	0	1K Flash Flood
19	0030CST						

A few streets were flooded.

Shelby County
Arlington

18	2245CST 2250CST				0	0	5K Thunderstorm Wind
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Some power lines were knocked down.

Shelby County
Memphis

18	2345CST				0	0	5K Flash Flood
19	0130CST						

Several roads were flooded in the Midtown section of Memphis.

Chester County
Henderson

19	0900CST 1100CST				0	0	5K Flash Flood
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Several roads were closed due to flooding.

Fayette County
Oakland

19	0900CST 1100CST				0	0	5K Flash Flood
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Several roads were flooded.

Madison County
Adair

19	0900CST 1130CST				0	0	5K Flash Flood
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Several roads and streets were flooded.

Shelby County
Millington

19	0930CST 1000CST				0	0	0.50K Urban/Sml Stream Fld
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Some minor street flooding occurred in Millington.

Henderson County
Lexington

19	1000CST 1200CST				0	0	5K Flash Flood
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Some roads were closed due to flooding.

Gibson County
Laneview

19	1010CST 1030CST				0	0	0.50K Urban/Sml Stream Fld
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Some minor street flooding occurred in Laneview.

Haywood County
Brownsville

19	1100CST 1230CST				0	0	5K Flash Flood
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Some roads were closed due to flooding.

Storm Data and Unusual Weather Phenomena

December 2002

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, West</u>									
Tipton County									
Covington	19	1200CST 1230CST			0	0	0.50K		Urban/Sml Stream Fld
		Some minor street flooding occurred in Covington.							
Tipton County									
Munford	19	1540CST 1600CST			0	0	0.50K		Urban/Sml Stream Fld
		Some minor street flooding occurred in Munford.							
<u>TEXAS, Central</u>									
Mason County									
Mason	23	1715CST			0	0			Hail (0.75)
		Hail covered the ground and caused automobiles to slide off the road.							
Menard County									
7 S Hext	30	1147CST			0	0			Hail (1.50)
		Walnut sized hail.							
San Saba County									
Algerita	30	1251CST			0	0			Hail (0.88)
		A couple of severe thunderstorms developed along a cold front moving through the northwest hill country during the late morning and early afternoon.							
<u>TEXAS, Central Southeast</u>									
Brazoria County									
Northeast Portion	04	0610CST 0700CST			0	0	2K		Flash Flood
		Flooding in extreme northeast portion of county.							
Harris County									
South Portion	04	0625CST 0650CST			0	0	10K		Flash Flood
		Flooding in the Southwest Freeway and Hillcroft areas.							
Galveston County									
Central Portion	04	0630CST 1135CST			0	0	20K		Flash Flood
		Flooding from League City to Dickinson with numerous roads underwater and impassable.							
Chambers County									
East Portion	04	0650CST 1140CST			0	0	9K		Flash Flood
		Flooding around Highway 124 near Winnie; numerous roads underwater and impassable.							
Jackson County									
La Ward	12	0700CST			0	0	5K		Hail (1.75)
		1.75 inch hail in La Ward.							
Jackson County									
Lolita	12	0700CST			0	0	5K		Hail (1.75)
		1.75 inch hail in Lolita.							
Jackson County									
Ganado	12	0715CST			0	0	15K		Hail (2.75)
		2.75 inch hail in Ganado.							
Wharton County									
El Campo	12	0720CST			0	0	1K		Hail (0.75)
		0.75 inch hail in El Campo.							
Austin County									
2 S Cat Spg	12	1100CST 1102CST			0	0	5K		Thunderstorm Wind
		Tree downed by wind near FM 949 about 2 miles south of FM 1094.							
Waller County									
Hempstead	12	1230CST			0	0	15K		Thunderstorm Wind
		Wind damage to a home in Hempstead.							
Washington County									
10 SW Burton	23	0910CST	0.2	20	0	0	7K		Tornado (F0)
		Tornado near Ledbetter.							

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
TEXAS, Central Southeast									
Burleson County									
Lyons	23	0943CST			0	0	2K		Hail (1.00)
			1.00 inch hail in Lyons.						
Colorado County									
Weimar	23	0951CST	0.3	20	0	0	18K		Tornado (F0)
			Tornado damaged part of a Catholic cemetery.						
Brazos County									
Allenfarm	23	1120CST	0.5	30	0	0	5K		Tornado (F0)
			Tornado near Allenfarm at FM 159 and Highway 105.						
Grimes County									
Bedias	23	1215CST			0	0	8K		Thunderstorm Wind (G52)
			Wind damage in Bedias.						
Grimes County									
2 E Bedias	23	1215CST	0.5	30	0	0	7K		Tornado (F0)
			Tornado 2 miles east of Bedias.						
Madison County									
6 E Midway	23	1245CST	1	30	0	2	55K		Tornado (F1)
			Tornado touched down near the Trinity River in eastern Madison County and overturned a mobile home. Two injuries were reported. Nearby buildings were also damaged by the tornado.						
Montgomery County									
5 SW Conroe	23	1320CST	0.5	20	0	0	7K		Tornado (F0)
			Tornado spotted near FM 1488 and Highway 242.						
San Jacinto County									
Evergreen	23	1355CST	0.5	20	0	0	10K		Tornado (F0)
			Tornado damaged some trees near Evergreen.						
San Jacinto County									
Coldspring	23	1530CST	0.5	30	0	0	25K		Tornado (F0)
			Tornado damaged a boat in Cape Royale.						
Brazos County									
3 N Kurten	23	1655CST			0	0	5K		Hail (0.75)
			0.75 inch hail.						
Madison County									
3 N Madisonville	23	1705CST			0	0	10K		Hail (1.75)
			1.75 inch hail.						
Burleson County									
Chreisman	23	1901CST			0	0	15K		Thunderstorm Wind (G52)
			Roof of porch blown off by wind.						
Burleson County									
Caldwell	23	1905CST			0	0	10K		Hail (1.75)
			1.75 inch hail.						
Brazos County									
Bryan	23	1935CST			0	0	15K		Hail (1.75)
			1.75 inch hail.						
Madison County									
Madisonville	23	2010CST			0	0	15K		Hail (1.75)
			1.75 inch hail.						
Washington County									
Burton	23	2010CST	0.5	20	0	0	5K		Tornado (F0)
			Tornado in Burton.						
Colorado County									
10 W Columbus	23	2020CST			0	0	7K		Hail (0.75)
			0.75 inch hail.						
Colorado County									
10 S Columbus	23	2020CST			0	0	10K		Thunderstorm Wind (G52)
			Wind damage on FM 806.						
Madison County									
3 ENE Madisonville	23	2020CST			0	0	10K		Hail (1.75)
			1.75 inch hail.						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons		Estimated Damage		Character of Storm
					Killed	Injured	Property	Crops	
TEXAS, Central Southeast									
Austin County									
Wallis to 2 SE Wallis	23	2055CST 2105CST			0	0	45K		Thunderstorm Wind (G52)
			Trees downed, barns and buildings damaged along Highway 36 between Wallis and Orchard.						
Wharton County									
Wharton	23	2055CST			0	0	35K		Thunderstorm Wind (G52)
			Roof blown off a business.						
Polk County									
Livingston	23	2100CST			0	0	3K		Hail (0.75)
			0.75 inch hail.						
Wharton County									
Wharton	23	2101CST			0	0	35K		Thunderstorm Wind (G52)
			Roof damage, trees down and light poles down in and around Wharton.						
Fort Bend County									
Fulshear	23	2112CST			0	0	1K		Thunderstorm Wind (G52)
			60 mph wind gust.						
Harris County									
Houston	23	2115CST			0	0	75K		Thunderstorm Wind (G61)
			Power lines down from estimated 70 mph winds at Westheimer and FM 1093.						
Fort Bend County									
Sugarland	23	2117CST			0	0	1K		Thunderstorm Wind (G52)
			60 mph wind gust.						
Houston County									
Kennard	23	2117CST			0	0	7K		Hail (0.75)
			0.75 inch hail.						
Harris County									
Houston	23	2120CST			0	0	5K		Hail (1.00)
			1.00 inch hail.						
Harris County									
Houston	23	2121CST			0	0	1K		Thunderstorm Wind (G52)
			60 mph wind gust.						
Fort Bend County									
Beasley	23	2125CST			0	0	15K		Thunderstorm Wind (G52)
			Wind damage to home just south of Beasley on FM 316.						
Harris County									
Houston	23	2130CST			0	0	5K		Hail (1.00)
			1.00 inch hail Kirby and Westheimer						
Harris County									
Houston	23	2130CST			0	0	1K		Thunderstorm Wind (G52)
			60 mph wind gust Kirby and Westheimer.						
Harris County									
Bellaire	23	2144CST			0	0	10K		Thunderstorm Wind (G50)
			Power lines down near Highway 6 and Bellaire.						
Harris County									
Aldine	23	2145CST			0	0	55K		Thunderstorm Wind (G52)
			Billboard signs down.						
Matagorda County									
Palacios	23	2200CST			0	1	150K		Thunderstorm Wind (G52)
			TV tower fell on trailer.						
Brazoria County									
Angleton	23	2206CST			0	0	25K		Thunderstorm Wind (G50)
			Trees and power lines down.						
Liberty County									
Liberty	23	2215CST			0	0	70K		Thunderstorm Wind (G55)
			Damage to homes, carports and patio covers, high school press box and dugouts; trees and power lines down.						
Liberty County									
Liberty	23	2218CST	0.3	30	0	0	30K		Tornado (F0)
			Building damaged.						

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time	Path	Path	Number of		Estimated		Character of Storm
		Local/ Standard	Length (Miles)	Width (Yards)	Killed	Injured	Property	Crops	
<u>TEXAS, Mid - South</u>									
Kleberg County									
Kingsville	12	0505CST			0	0			Hail (0.75)
			Dime sized hail reported between U.S. 77 and Kingsville N.A.S.						
Duval County									
San Diego	12	0550CST			0	0			Hail (0.75)
Nueces County									
Corpus Christi	12	0615CST			0	0			Hail (0.75)
			Dime sized hail reported between Navigation Blvd and McBride Ln.						
Nueces County									
Corpus Christi	12	0635CST			0	0			Hail (0.88)
Bee County									
Skidmore	12	0650CST			0	0			Hail (0.75)
Bee County									
Papalote	12	0710CST			0	0			Hail (1.50)
La Salle County									
Fowlerton	23	1840CST			0	0			Hail (0.75)
Memullen County									
Tilden	23	1900CST			0	0			Hail (0.75)
Live Oak County									
Three Rivers	23	1933CST			0	0			Hail (0.75)
Bee County									
Tuleta	23	2000CST			0	0			Hail (0.75)
Goliad County									
Goliad	23	2025CST			0	0			Thunderstorm Wind (G50)
			Large tree reported down.						
Goliad County									
Schroeder	23	2039CST			0	0			Hail (0.75)
			Dime sized hail reported by spotter on County Road 622.						
Victoria County									
Nursery	23	2045CST			0	0			Thunderstorm Wind (G50)
			Large trees fell on several homes in Nursery.						
Victoria County									
Victoria	23	2100CST			0	0			Hail (0.75)
Victoria County									
Victoria	23	2110CST			0	0			Hail (1.00)
Memullen County									
10 S Tilden	30	1520CST			0	0			Hail (1.75)
Duval County									
5 E Freer	30	1624CST			0	0			Hail (0.75)
Bee County									
6 SW Beeville	30	1715CST	0.5	75	0	0			Tornado (F0)
			Tornado reported by several witnesses over open field near FM 796 and Hwy 59.						
Live Oak County									
7 SE Dinero	30	1715CST			0	0			Hail (0.75)
<u>TEXAS, North</u>									
Limestone County									
Mexia	03	0950CST 1050CST			0	0			Flash Flood
			Water up to car doors in town.						
Bosque County									
Iredell	23	1755CST			0	0			Hail (0.88)
			Hail one inch deep on the ground.						
Bosque County									
3 SW Morgan	23	1820CST 1830CST			0	0			Hail (1.00)
Bell County									
Killeen	23	1855CST 1910CST			0	0			Hail (1.50)

Storm Data and Unusual Weather Phenomena

December 2002

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									
Hill County									
4 N Itasca	23	1855CST 1904CST			0	0			Hail (1.00)
Coryell County									
Copperas Cove	23	1859CST 1915CST			0	0			Hail (1.00)
Ellis County									
Waxahachie	23	1920CST 1925CST			0	0			Hail (0.88)
Bosque County									
Clifton	23	1925CST 1935CST			0	0			Hail (1.00)
Hail covered highways caused several vehicles to slide off Highway 6 south of Clifton.									
Hill County									
Blum	23	1945CST 2010CST			0	0			Hail (0.75)
Hill County									
Aquilla	23	1950CST			0	0			Hail (1.00)
Hill County									
Covington	23	1957CST			0	0			Hail (1.75)
Freestone County									
Fairfield	23	2000CST 2009CST			0	0			Hail (1.00)
Freestone County									
3 N Dew	23	2010CST			0	0			Hail (1.75)
Occurred on Interstate 35, 2 miles north of the Leon/Freestone county line.									
Hunt County									
5 SW Quinlan to 3 SE Quinlan	23	2017CST 2034CST			0	0			Hail (1.00)
Hail covered Highway 34 south of Quinlan.									
Leon County									
Leona	23	2020CST			0	0			Hail (0.75)
Anderson County									
Palestine	23	2030CST			0	0			Hail (1.00)
Occurred in the Westwood section of Palestine.									
Leon County									
Centerville	23	2030CST			0	0			Hail (0.75)
Leon County									
Centerville	23	2035CST			0	0			Hail (1.00)
Parker County									
Poolville	30	1152CST			0	0			Hail (0.75)
Denton County									
Aubrey	30	1208CST			0	0			Hail (0.75)
Wise County									
Alvord	30	1218CST			0	0			Hail (0.75)
Denton County									
7 NE Lewisville	30	1230CST 1235CST	0.3	30	0	0	75K		Tornado (F0)
A small tornado briefly touched down in The Colony at Alta Oaks Lane and Alta Oaks Court, doing widespread damage to fences, trees, and unroofing two houses. There were no injuries.									
Cooke County									
5 S Gainesville	30	1304CST			0	0			Hail (1.00)
Grayson County									
Sherman	30	1315CST			0	0			Hail (0.75)
Parker County									
Aledo	30	1315CST			0	0			Thunderstorm Wind (G61)
Wind gusts to 70 mph were estimated along and south of Interstate 30 from the Aledo area eastward.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
TEXAS, North									
Tarrant County									
11 WSW Ft Worth	30	1315CST			0	0			Thunderstorm Wind (G61)
	Wind gusts to 70 mph were reported from the Parker County line eastward to Junction Loop 580.								
Tarrant County									
Ft Worth	30	1326CST			0	0			Thunderstorm Wind (G52)
	Wind gusts to 60 mph were reported in Edgecliff Village in the south part of Ft. Worth.								
Collin County									
Frisco	30	1330CST			0	0			Hail (1.75)
Ellis County									
Italy	30	1402CST 1405CST	0.2	.4	0	0	0		Tornado (F0)
	Brief tornado touchdown near Italy with no damage reported.								
Ellis County									
Milford	30	1405CST			0	0			Thunderstorm Wind (G52)
	Numerous reports of large tree limbs blown down.								
Hill County									
Hillsboro	30	1426CST			0	0			Hail (1.00)
Hill County									
Whitney	30	1428CST			0	0			Hail (1.00)
Collin County									
Plano	30	1430CST 1500CST			0	0			Flash Flood
	The Plano Fire Department conducted a high water rescue in the 1000 block of Custer Road.								
Collin County									
Plano	30	1430CST			0	0			Hail (1.00)
Bell County									
Killeen	30	1445CST			0	0			Hail (1.00)
Navarro County									
Dawson	30	1450CST			0	0			Thunderstorm Wind (G52)
McLennan County									
Crawford	30	1453CST			0	0			Hail (1.00)
Ellis County									
Forreston	30	1454CST			0	0			Thunderstorm Wind (G61)
Coryell County									
Gatesville	30	1459CST			0	0			Hail (0.88)
Lamar County									
Paris	30	1500CST 1600CST			0	0			Heavy Rain
	Heavy rain up to three inches caused low lying street flooding, and some streets were barricaded.								
Bosque County									
Valley Mills	30	1503CST			0	0			Hail (0.75)
Dallas County									
Dallas	30	1513CST			0	0			Heavy Rain
	Water 8 inches deep at the intersection of Interstate 635 and Hillcrest.								
Dallas County									
Dallas	30	1522CST 1600CST			0	0			Flash Flood
	Flash flooding was reported at the intersection of Highway 175 and Interstate 635.								
Navarro County									
3 W Corsicana	30	1522CST			0	0			Hail (0.75)
Hill County									
Covington	30	1528CST			0	0			Thunderstorm Wind (G52)
	A large tree was blown down by high winds.								
Bell County									
Temple	30	1610CST			0	0			Hail (1.75)
Kaufman County									
Ola	30	1610CST 1625CST			0	0			Hail (0.75)
	Dime size hail from Ola eastward to the Kaufman County line.								

Storm Data and Unusual Weather Phenomena

December 2002

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, North</u>									
Van Zandt County									
Phalba	30	1620CST			0	0			Thunderstorm Wind (G52)
Trees were blown down in the southwest part of the county near Phalba.									
Bell County									
Troy	30	1630CST			0	0			Hail (0.75)
Henderson County									
Eustace	30	1633CST			0	0			Hail (0.75)
Dime size hail was also reported at Gun Barrel City.									
Henderson County									
Brownsboro	30	1705CST			0	0	10K		Thunderstorm Wind (G52)
Trees and powerlines were blown down by high winds.									
Milam County									
Rockdale	30	1705CST			0	0			Thunderstorm Wind (G52)
A large tree was blown down onto a road.									
Van Zandt County									
Edom	30	1705CST			0	0	10K		Thunderstorm Wind (G52)
Trees and powerlines were blown down.									
Falls County									
Marlin	30	1710CST			0	0			Hail (0.75)
Limestone County									
7 W Echols	30	1720CST 1750CST			0	0			Heavy Rain
Water ponding was reported along Farm to Market Road 73 near the Navasota River.									
Limestone County									
7 W Groesbeck	30	1720CST			0	0			Hail (1.00)
Milam County									
San Gabriel	30	1850CST			0	0			Hail (1.00)
<u>TEXAS, North Panhandle</u>									
TXZ001>014-017>018 Dallam - Sherman - Hansford - Ochiltree - Lipscomb - Hartley - Moore - Hutchinson - Roberts - Hemphill - Oldham - Potter - Carson - Gray - Randall - Armstrong									
	03	1415CST			0	1	30K		Heavy Snow
	04	0000CST							
A disturbance in the upper atmosphere moving northeast over a cold arctic air mass across the Texas panhandle produced heavy snow. Snowfall amounts were reported to be four inches at Lipscomb...Canadian...Panhandle...Amarillo...Canyon...and Claude...four to five inches at Vega...Dumas and Pampa...four to six inches at Borger and Dalhart...five inches at Miami...five to six inches at Perryton and Channing...and six inches at Stratford and Spearman. A forty-eight year old woman was involved in an accident and was critically injured about one mile east of Pampa on U.S. Highway 60 when the pickup truck she was driving went into a skid...slid into a bar ditch on the south side of the roadway and then slammed into a tree. Roads across the Texas panhandle were snow packed and slick...however no roads were officially closed.									
TXZ001-006 Dallam - Hartley									
	17	1453CST			0	0			High Wind (G38) ^M
A deepening surface low pressure system in southwest Kansas produced a tight gradient over the northwest Texas panhandle during the afternoon hours which resulted in strong sustained winds in excess of forty miles an hour. At 12:53 pm CST and again at 15:53 pm CST...the sustained winds at Dalhart Municipal Airport reached thirty-seven knots.									
TXZ001>019 Dallam - Sherman - Hansford - Ochiltree - Lipscomb - Hartley - Moore - Hutchinson - Roberts - Hemphill - Oldham - Potter - Carson - Gray - Wheeler - Deaf Smith - Randall - Armstrong - Donley									
	23	0600CST			0	0			Heavy Snow
	24	0600CST							
A strengthening low pressure system which moved south of the Texas panhandle combined with a cold Canadian air mass and low level moisture to produce heavy snow across all but the far southeast Texas panhandle. Roads were reported snow packed and slick...however no official road closures were reported. Numerous minor accidents and stranded motorists were reported...however no injuries or fatalities occurred due to the heavy snow. Snowfall amounts were reported to be four inches at Clarendon...five inches at Claude...six inches at Higgins...Canadian...Vega...Panhandle...Shamrock...Hereford...six to seven inches at Amarillo...six to eight inches at Spearman and Perryton...seven to eight inches at Miami and Pampa...eight inches at Dalhart and Hartley...and eight to ten inches at Sunray...Borger and Stratford.									
<u>TEXAS, Northeast</u>									
Gregg County									
Longview	18	2200CST			0	0			Flash Flood
	19	0145CST							
Eastman Road one mile south of Highway 80 and Houston Street at 1104 was underwater from excessive heavy rains.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
TEXAS, Northeast									
Harrison County									
Scottsville	18	2200CST			0	0			Flash Flood
	19	0145CST							
	Highway 80 underwater for 200 to 300 yards.								
Harrison County									
2 E Hallsville	18	2230CST			0	0			Flash Flood
	19	0145CST							
	Highway 80 and numerous other county roads were flooded and impassable.								
Rusk County									
3 SW Henderson	19	0030CST			0	0			Thunderstorm Wind (G60)
	Numerous trees down across the area.								
Rusk County									
Mt Enterprise	19	0040CST			0	0			Thunderstorm Wind (G60)
	Numerous trees down across the area.								
Angelina County									
5 N Lufkin	23	1108CST			0	0			Hail (0.75)
Shelby County									
Huxley	23	1620CST			0	0			Thunderstorm Wind (G60)
	Several large trees down across FM 839.								
Nacogdoches County									
Nacogdoches	23	1810CST			0	0			Flash Flood
		2245CST							
	Evacuations of homes along California Avenue due to excessive rains causing Toro and Bonita bayous to overflow their banks.								
Cherokee County									
Alto	23	1835CST			0	0			Hail (1.25)
Cherokee County									
Wells	23	1835CST			0	0			Hail (1.25)
Nacogdoches County									
2 S Nacogdoches	23	1855CST			0	0			Hail (1.00)
Cherokee County									
2 W Dialville	23	2040CST			0	0			Hail (1.75)
Cherokee County									
Jacksonville	23	2045CST			0	0			Hail (1.75)
Cherokee County									
Gallatin	23	2050CST			0	0			Hail (1.75)
Cherokee County									
Turney	23	2050CST			0	0			Hail (1.00)
Rusk County									
Henderson	23	2115CST			0	0			Hail (1.25)
Rusk County									
Henderson	23	2115CST			0	0			Hail (1.75)
	Hail covered the ground on the west loop which resulted in numerous car wrecks.								
Panola County									
Tatum	23	2137CST			0	0			Hail (0.88)
Angelina County									
Lufkin	23	2230CST			0	0			Flash Flood
		2245CST							
	Numerous county roads flooded.								
Nacogdoches County									
Nacogdoches	23	2230CST			0	0			Flash Flood
		2245CST							
	Numerous county roads under water.								
Angelina County									
Lufkin	23	2300CST			0	0			Flash Flood
	24	0245CST							
	Numerous county roads were reported underwater from heavy rains.								

Storm Data and Unusual Weather Phenomena

December 2002

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, Northeast</u>									
<u>Nacogdoches County</u>									
Nacogdoches	23	2300CST			0	0			Flash Flood
	24	0245CST							
Numerous county roads underwater.									
<u>Shelby County</u>									
Center	23	2315CST			0	0			Flash Flood
	24	0300CST							
Numerous secondary roads were closed due to flooding. 4.34 inches of rain fell in a 12 hour period.									
<u>Red River County</u>									
7 N Clarksville	30	1625CST			0	0			Thunderstorm Wind (G60)
Highway signs with tip overs designed for 60 mph blown over as well as power lines and power poles blown down.									
<u>Smith County</u>									
Whitehouse	30	1730CST			0	0			Thunderstorm Wind (G60)
Numerous trees and several power lines blown down.									
<u>Cass County</u>									
Douglassville	30	1735CST			0	0			Thunderstorm Wind (G65) ^M
Numerous trees toppled.									
<u>Cass County</u>									
Linden	30	1757CST			0	0			Hail (1.75)
<u>Cass County</u>									
Domino	30	1800CST			0	0			Hail (1.75)
<u>Harrison County</u>									
Marshall	30	1830CST			0	0			Thunderstorm Wind (G60)
Several large trees blown down.									
<u>Angelina County</u>									
Lufkin	30	2012CST			0	0			Hail (0.75)
<u>Shelby County</u>									
Timpson	30	2030CST			0	0			Thunderstorm Wind (G60)
Several large trees down.									
<u>Angelina County</u>									
Huntington	30	2110CST			0	0			Hail (0.75)
<u>San Augustine County</u>									
San Augustine	30	2114CST			0	0			Hail (0.75)
<u>TEXAS, South</u>									
<u>Starr County</u>									
4 E El Sauz	30	1724CST			0	0			Thunderstorm Wind (G60)
Wind gust to 60 mph was measured in a thunderstorm by the Aerostat facility.									
<u>Starr County</u>									
La Gloria	30	1748CST			0	0			Hail (0.75)
<u>Brooks County</u>									
Falfurrias	30	1752CST			0	0			Thunderstorm Wind (G60)
40 to 60 foot auger blown over by strong winds in a thunderstorm.									
<u>Hidalgo County</u>									
Mc Cook	30	1759CST			0	0			Thunderstorm Wind (G61)
<u>Hidalgo County</u>									
5 W Mission	30	1828CST			0	0			Thunderstorm Wind (G60)
<u>Hidalgo County</u>									
10 N San Manuel	30	1830CST			0	0			Hail (0.88)
<u>Hidalgo County</u>									
10 N San Manuel	30	1830CST			0	0			Thunderstorm Wind (G60)
Small trees were uprooted with limb damage to larger trees due to thunderstorm winds.									
<u>TEXAS, South Central</u>									
<u>Bastrop County</u>									
South Portion	04	0430CST 0600CST			0	0	10K	0	Flash Flood
General 1 to 2 inch rainfall was reported over Bastrop County, with isolated totals near 4 inches in the south part of the county. Due to the soils remaining saturated from recent rains, flash flooding developed quickly over the south portion of the county.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
TEXAS, South Central									
Caldwell County									
Countywide	04	0430CST 0600CST			0	0	15K	0	Flash Flood
General 1 to 2 inch rains fell over the county, with totals near 5 inches just north of Luling. Soils over the county had remained saturated from recent rainfall, and flash flooding developed quickly across much of the county.									
Lee County									
West Portion	04	0430CST 0600CST			0	0	5K	0	Flash Flood
General 2 to 3 inch rainfall over Lee County west of a line from Giddings to Lexington. Combined with the already saturated soils, the rainfall was sufficient to produce brief flash flooding across the western part of the county.									
Guadalupe County									
North Portion	04	0500CST 0600CST			0	0	10K	0	Flash Flood
Guadalupe County received general 2 inch rains in the early morning hours, with up to 4 inches between Kingsbury and Luling. With soils still saturated from recent rain, brief flash flooding took place across the northern half of the county.									
Gonzales County									
North Portion	04	0530CST 0630CST			0	0	10K	0	Flash Flood
The northern half of Gonzales County received a general 1 to 2 inch rainfall between 2 am and 4 am CST, with totals of nearly 4 inches between Belmont and Thompsonville. Soils had remained saturated from recent rainfall, allowing brief flash flooding to develop in the northern half of the county.									
TXZ208									
Caldwell									
	04	1141CST 2229CST			0	0			Flood
The San Marcos River crested at Luling at 24.62 feet on December 4 at 1700CST, where flood stage is 20.0 feet.									
Bexar County									
Northeast Portion	09	0430CST 0530CST			0	0	5K	0	Flash Flood
Up to 2 inches of rain fell over the northeast part of Bexar County in just under two hours. Soils across the area had remained completely saturated from rainfall since November and flash flooded developed immediately. Minor damage was reported to city and county roads.									
TXZ225									
Lavaca									
	13	0330CST			0	0			Flood
	14	0145CST							
The Navidad River crested at Sublime at 26.90 feet on December 13 at 1445CST, where flood stage is 24.0 feet.									
TXZ225									
Lavaca									
	14	0242CST 1740CST			0	0			Flood
The Navidad River crested at Speaks at 24.91 feet on December 14 at 1048CST, where flood stage is 24.0 feet.									
TXZ225									
Lavaca									
	15	0330CST			0	0			Flood
	16	0345CST							
The Navidad River crested at Strane Park at 25.13 feet on December 15 at 2115CST, where flood stage is 24.0 feet.									
Burnet County									
Buchanan Lake	23	0400CST 0410CST			0	0	0	0	Hail (1.75)
Travis County									
(Bsm)Bergstrom Afb A	23	0625CST 0630CST			0	0	10K		Thunderstorm Wind
Severe thunderstorm winds knocked down power poles and caused power outages in the Austin-Bergstrom Airport Area.									
Travis County									
1 SE Manor to 5 NE Manor	23	0704CST 0712CST	5.5	200	0	1	200K		Tornado (F1)
This tornado, rated F1, touched down 1 mile southeast of Manor shortly after 7 am, and moved northeastward to 5 miles northeast of Manor before dissipating. Rated as an F1, it damaged nearly a dozen homes and mobile homes and two businesses. It destroyed four mobile homes and overturned several vehicles as well. A young woman suffered a shoulder separation injury as the tornado blew over her mobile home.									
Lavaca County									
3 NW Shiner to 4 E Moulton	23	0840CST 0850CST			0	0	80K		Thunderstorm Wind
Trees were blown over and power lines were knocked down in the northwest part of the county.									

Storm Data and Unusual Weather Phenomena

December 2002

Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)	Number of Persons Killed	Injured	Estimated Damage Property	Crops	Character of Storm
TEXAS, South Central									
Fayette County 3 S Ledbetter to Ledbetter	23	0845CST 0850CST	3	100	0	0	150K		Tornado (F1)
The small tornado touched down 3 miles south of Ledbetter near FM1291 and dissipated after striking the town. As it reached the town, it damaged the roofs of businesses and homes, knocking over a windmill, toppling large trees and moving a wooden church five feet off its foundation of concrete blocks. It also rolled over a vehicle. No one was injured.									
Fayette County 5 SW Schulenburg	23	0915CST 0917CST			0	0			Funnel Cloud
Lee County Giddings to Lexington	23	0925CST 0935CST			0	0	50K		Thunderstorm Wind
Trees were knocked down and damage was reported to outbuildings between Giddings and Lexington as a result of severe thunderstorm winds.									
Kerr County Hunt	23	1740CST 1750CST			0	0			Hail (1.75)
Bexar County 10 W San Antonio	23	1835CST 1840CST			0	0	50K		Thunderstorm Wind
Trees were blown down by severe thunderstorm winds at the west edge of the city of San Antonio near the intersection of Marbach Road and Loop 410.									
Comal County Bracken to New Braunfels	23	1900CST 1930CST			0	0	50K		Thunderstorm Wind
Power was knocked out over much of the county as tree limbs and trees were blown over along the southern half of the county.									
Lee County Lexington	23	1900CST 1910CST			0	0	150K		Hail (4.50)
Damage was reported to roofs and windows of buildings as well as to vehicles in the Lexington area by the softball-sized hail.									
Bexar County 3 N Elmendorf	23	1903CST 1910CST			0	0	50K		Hail (4.50)
Spotty damage was reported to vehicles and to the roofs and windows of buildings in the Calaveras Lake area.									
Wilson County 12 NW Sutherland Spgs Stockdale	23	1909CST 1935CST			0	10	300K		Hail (2.00)
Widespread damage was reported to vehicles, as well as the roofs, walls and windows of buildings over the northern half of Wilson County. The hail ranged from 1 to 2 inches in diameter. The larger size fell around Stockdale, killing birds that were roosting in trees and piling up in the city streets 6 inches deep. Residents reported that the sound of the hail was almost deafening. Damage to city-owned properties in Stockdale alone was estimated at \$100,000. Hail broke windows at one nursing home, with minor injuries to some residents.									
Guadalupe County New Braunfels	23	1914CST 1925CST			0	0			Hail (1.00)
Lee County Lexington	23	2000CST 2010CST			0	0			Hail (1.75)
Bexar County 3 NE Helotes to 3.2 NE Helotes	30	1437CST 1439CST	0.2	20	0	0			Tornado (F0)
A small tornado was spotted by a Helotes Fireman who was also a Skywarn Amateur Radio Spotter. It was small and dipped down briefly before lifting and dissipating. No damage was indicated.									
Hays County 3 E San Marcos to 5 NE San Marcos	30	1525CST 1528CST	1.2	50	0	0			Tornado (F0)
A small tornado was spotted by a member of the Austin Police Department 3 miles east of San Marcos. The tornado was on the ground around five minutes as it moved northeastward to near the Caldwell County line before dissipating. No damage was reported.									

Storm Data and Unusual Weather Phenomena

December 2002

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									
Hays County									
7 W San Marcos	30	1543CST 1550CST			0	0			Hail (1.50)
Comal County									
3 NE New Braunfels	30	1602CST 1610CST			0	0			Hail (0.88)
Guadalupe County									
New Braunfels	30	1603CST 1610CST			0	0			Hail (0.88)
Caldwell County									
4 NW Lockhart to 5 N Lockhart	30	1610CST 1612CST	0.6	20	0	0			Tornado (F0)
A short-lived and small F0 tornado was spotted by an Amateur Radio Operator in an open area 4 miles northwest of Lockhart. The tornado remained on the ground for approximately two minutes, while traveling toward the northeast. It dissipated without causing any significant damage.									
Williamson County									
5 NW Georgetown	30	1610CST 1620CST			0	0			Hail (0.75)
Wilson County									
Floresville to 3 W Stockdale	30	1630CST 1645CST			0	0	30K		Hail (1.75)
Minor damage was reported to windows and roofs of buildings as well as vehicles in the Floresville area.									
Lee County									
Giddings	30	1730CST 1740CST			0	0	20K		Thunderstorm Wind
High winds blew down trees in the Giddings area.									
Fayette County									
6 S La Grange to 5.5 S La Grange	30	1735CST 1737CST	0.8	50	0	0	20K		Tornado (F0)
The tornado, as surveyed by the Fayette County Emergency Manager, touched down along East Radhost School Road, approximately 6 miles south of LaGrange at 1735 CST and moved for three-fourths of a mile toward the northeast. It was estimated at 50 yards wide and damaged a 20 foot by 20 foot carport and a 15 foot by 20 foot wooden building before dissipating near 1740CST. The tornado was rated F0 on the Fujita Scale.									
Lavaca County									
7 W Hallettsville	30	1850CST 1855CST			0	0	80K		Thunderstorm Wind
Severe thunderstorm winds damaged the walls and screen of an outdoor drive-in theater and destroyed several outbuildings just west of Hallettsville.									

TEXAS, South Panhandle

TXZ021>024-027

Parmer - Castro - Swisher - Briscoe - Bailey

23 0300CST

0 0

Winter Storm

24 0900CST

A closed upper level low pressure system translated across the Southern Rockies and into the Southern Plains on the 23rd and 24th. Cold air was already in place over West Texas ahead of the system so when precipitation developed across the region at around 300 am CST on the 23rd, it quickly changed to snow over the southwestern Texas Panhandle and northwestern South Plains. By mid morning, up to eight inches of snow had accumulated in Parmer County, six inches had fallen in Castro and Briscoe Counties, and four inches had fallen in Bailey and northern Swisher Counties. Some convective snow was observed during the event, resulting in two to three inch per hour snowfall rates. The heavy snow resulted in a number of road closures. Light snow continued intermittently through the early morning hours of the 24th.

TEXAS, Southeast

Jefferson County

Port Arthur

04 0700CST
0900CST

0 0

50K

Flash Flood

Several homes were flooded in Port Arthur as a result of excessive rain over a two day period.

Orange County

Orange

04 0730CST
0900CST

0 0

10K

Flash Flood

A few rural roads were impassable due to deep water.

Hardin County

Lumberton

23 2250CST

0 0

5K

Thunderstorm Wind

Storm Data and Unusual Weather Phenomena

December 2002

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, Southeast</u>									
Trees were blown down near the high school.									
Jasper County									
Jasper	23	2303CST			0	0	5K		Thunderstorm Wind
Several trees were blown down.									
Orange County									
Orange	23	2310CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down near Orange.									
Jefferson County									
Port Arthur	23	2315CST			0	0	5K		Thunderstorm Wind
SKYWARN spotter reported trees and power lines down.									
Jasper County									
Jasper	30	2143CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
Tyler County									
Woodville	30	2203CST			0	0			Hail (0.75)
Jefferson County									
Port Arthur	30	2245CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
Orange County									
Vidor	30	2250CST			0	0	5K		Thunderstorm Wind
Trees and power lines were blown down.									
<u>TEXAS, West</u>									
NONE REPORTED.									
<u>TEXAS, Western North</u>									
Clay County									
Henrietta	30	0720CST			0	0			Hail (0.75)
Clay County									
Vashti	30	0730CST			0	0			Hail (1.00)
<u>UTAH, East</u>									
UTZ022>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							
Occasional storms brought precipitation to much of extreme eastern Utah during the month. However, precipitation amounts were not significant enough to have a major impact on the extreme drought conditions that persisted across the area. See the January 2003 Storm Data publication for a continuation on this drought situation for extreme eastern Utah.									
UTZ024	Eastern Uinta Basin								
	01	2300MST			0	0			Fog
	02	0900MST							
The Utah Highway Patrol reported widespread dense fog across the eastern Uinta Basin with visibilities less than 200 feet along U.S. Highway 40 from Vernal to Roosevelt.									
UTZ024	Eastern Uinta Basin								
	02	2000MST			0	0			Fog
	03	1000MST							
Widespread dense fog was reported across the eastern Uinta Basin. The visibility was reduced to less than 1/4 mile at the Vernal ASOS.									
UTZ024	Eastern Uinta Basin								
	03	1800MST			0	0			Fog
	04	1000MST							
Widespread dense fog was reported across the eastern Uinta Basin. Spotters indicated visibilities less than 1/4 mile in the Fort Duchesne and Roosevelt areas, and the Vernal ASOS indicated the visibility less than 1/4 mile.									
UTZ024	Eastern Uinta Basin								
	04	2130MST			0	0			Fog
	05	0800MST							
Widespread dense fog was reported across the eastern Uinta Basin, with visibilities reduced to 1/4 mile or less.									
UTZ023>025-028	Eastern Uinta Mountains - Eastern Uinta Basin - Tavaputs Plateau - La Sal & Abajo Mountains								
	16	1400MST			0	0			Winter Storm
	18	2100MST							

Storm Data and Unusual Weather Phenomena

December 2002

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

UTAH, East

An upper trough followed by a moist northwest flow produced the heaviest and most widespread snowfall of the season so far in the Mountains of eastern Utah and the eastern Uinta Basin. Snowfall amounts in the mountains generally ranged from 12 to 16 inches. The heaviest amount noted at the higher elevations was 20 inches at the Camp Jackson SNOTEL in the La Sal Mountains. The eastern Uinta Basin generally received 5 to 8 inches of new snow. Winds gusting 40 to 50 MPH accompanied the snow in the higher elevations, resulting in blowing and drifting of snow.

UTZ027

Grand Flat And Arches

30	0400MST				0	0			Fog
	0900MST								

Widespread dense fog developed across the Colorado River valley in extreme east central Utah. The Canyonlands ASOS indicated visibilities below 1/4 mile.

UTZ024

Eastern Uinta Basin

30	2100MST				0	0			Fog
	0200MST								

A moist and stable airmass entrenched in the eastern Uinta Basin resulted in widespread dense fog. The Vernal airport ASOS indicated the visibility down to 1/4 mile.

UTAH, West and Central

UTZ007>008

Wasatch Mountains I80 North - Wasatch Mountains South Of I80

15	0600MST				0	0	0	0	High Wind (G76)
	1800MST								

An approaching storm brought strong winds to many mountain locations. Some of the peak wind gusts recorded were 87 mph (76 kts) on Mt. Ogden, 76 mph (66 kts) on Jupiter Peak, and 68 mph (59 kts) on Hidden Peak.

UTZ002>010-017

Northern Wasatch Front/Brigham City/Ogden Bountiful - Salt Lake And Toole Valleys - Southern Wasatch Front/Lehi/Provo/Nephi - Great Salt Lake Desert And Mountains/Wendover/Snowville - Wasatch Mountain Valleys/Huntsville/Park City/Heber - Wasatch Mountains I80 North - Wasatch Mountains South Of I80 - Western Uinta Mountains - Wasatch Plateau/Book Cliffs - Central And Southwest Mountains

16	0600MST				0	0	0	0	Winter Storm
	1100MST								

The juiciest storm to hit the Beehive State in over a month pounded Utah with strong winds, much needed heavy mountain snow, and thunderstorms. Snow pellets the size of marbles pelted areas around Layton and Salt Lake City. Frontal wind gusts of 60-80 mph were noted in the mountains, with 40-55 mph in the valleys. Snow amounts reported included 36 inches on Ben Lomond Peak, 34 inches at Alta and Farmington Canyon, 30 inches at Brighton, 27 inches at Brian Head and 25 inches at Hayden Fork in the Uintas. In the lower elevations, Helper reported 10 inches, Coalville 7 inches, Manti 6 inches, Heber City and Cedar City 5 inches, and Kanab had 4 inches.

UTZ002-006>008

Northern Wasatch Front/Brigham City/Ogden Bountiful - Wasatch Mountain Valleys/Huntsville/Park City/Heber - Wasatch Mountains I80 North - Wasatch Mountains South Of I80

25	0600MST				0	0	0	0	Heavy Snow
	1800MST								

Those dreaming of a White Christmas woke up smiling along the Wasatch Front, as Mother Nature made many wishes come true. Though not a huge storm, it was a pleasant surprise to say the least. Snow totals in the mountains included 8 inches at Snowbasin, 7 inches at Alta and 6 inches at Powder Mountain. Snow totals for the valleys included 3 inches in Centerville, East Layton and Pineview, and 2 inches in South Ogden and Salt Lake City.

UTZ003-005>008-017

Salt Lake And Toole Valleys - Great Salt Lake Desert And Mountains/Wendover/Snowville - Wasatch Mountain Valleys/Huntsville/Park City/Heber - Wasatch Mountains I80 North - Wasatch Mountains South Of I80 - Central And Southwest Mountains

29	0600MST				0	0	100K	0	Winter Storm
	2300MST								

A cold front brought strong winds and decent amounts of snow to the mountains of Utah. Tooele recorded a wind gust of 82 mph (71 kts), damaging shingles and siding in town. Snowfall totals included 13 inches at Solitude, 12 inches at Alta, 11 inches at Snowbird, 8 inches at Snowbasin and Brian Head, 5 inches in Beaver, 4 inches in Heber City and 3 inches in Morgan.

UTZ002>004-006>008

Northern Wasatch Front/Brigham City/Ogden Bountiful - Salt Lake And Toole Valleys - Southern Wasatch Front/Lehi/Provo/Nephi - Wasatch Mountain Valleys/Huntsville/Park City/Heber - Wasatch Mountains I80 North - Wasatch Mountains South Of I80

31	1200MST				0	0	0	0	Heavy Snow
	2300MST								

The year finished off with a nice snowstorm that dumped 1 to 2 feet of fresh powder in the mountains of Northern Utah, and generally 4-8 inches along the Wasatch Front.

VERMONT, North and Central

VTZ010>012

Orange - Rutland - Windsor

12	0400EST				0	0	30K		Winter Storm
	0900EST								

Storm Data and Unusual Weather Phenomena

December 2002

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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VERMONT, North and Central

An area of low pressure off the South Carolina coast Wednesday morning, December 11th, moved northeast to near Cape Cod by Thursday morning, December 12th. The system continued moving northeast thereafter. Snow developed across the area during the night and became heavy at times after midnight into the early morning of December 12th. Snow accumulations were generally between 5 and 10 inches, with the greatest amounts along and east of the Green Mountains.

VTZ004-007>009

Essex - Caledonia - Washington - Addison

12	0700EST 1000EST				0	0	40K	Winter Storm
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An area of low pressure off the South Carolina coast Wednesday morning, December 11th, moved northeast to near Cape Cod by Thursday morning, December 12th. The system continued moving northeast thereafter. Snow developed across the area during the night and became heavy at times after midnight into the early morning of December 12th. Snow accumulations were generally between 5 and 12 inches, with the greatest amounts in the Green Mountains.

VTZ010>012

Orange - Rutland - Windsor

25	1700EST				0	0	45K	Winter Storm
26	0300EST							

A storm system along the coast of Virginia early on Wednesday, December 25th, moved northeast just south of New England. Snow spread across southern and eastern Vermont during Christmas Day and became heavy at times during the afternoon and night. Total accumulations ranged from 10 to 20 inches, with the heaviest amounts in the mountains. In Orange county, Thetford reported 14 inches, while in Windsor county, South Woodstock received 23 1/2 inches and Springfield had 15 inches. In Rutland county, East Wallingford reported 20 inches. Portions of northern Windsor county reported localized amounts of more than 2 feet. Local travel was difficult.

VTZ008>009

Washington - Addison

25	2300EST				0	0	20K	Winter Storm
26	0300EST							

A storm system along the coast of Virginia early on Wednesday, December 25th, moved northeast just south of New England. Snow spread across central Vermont during Christmas Day with difficult travel. Snow was heavy at times Christmas night across southern portions of Addison and Washington counties. There was a very tight gradient of snowfall across these counties. Total accumulations ranged from 6 to 8 inches across southern Addison and Washington, with between 2 and 5 inches across northern portions. In Addison county, Salisbury reported 8.1 inches.

VERMONT, South

VTZ014

Windham

11	2300EST				0	0	
12	0600EST						Winter Storm

A fast moving low pressure system tracked up along the eastern seaboard on December 11. While the surface low was fairly weak, it brought a nasty winter mix of precipitation to extreme southern Vermont. Following on the heels of the surface storm, a compact upper air low brought a burst of heavier snow across mainly Windham County, producing a swath of of snowfall exceeding 7 inches. Specifically, West Wardsboro reported 14.0 inches of snow while Marlboro reported 8.7.

VTZ013>014

Bennington - Windham

25	1600EST				0	0	Winter Storm
26	0400EST						

A low pressure area from the Mississippi Valley rapidly redeveloped along the North Carolina coast early on Christmas morning. The storm then tracked northeast, along the atlantic coast, reaching just south of eastern Long Island by late Christmas night, while deepening dramatically. With plenty of cold polar air in place, the stage was set for a major snowstorm across southern Vermont. The snow began in earnest during the early afternoon. During the late day and evening hours, snowfall rates averaged 1 to 3 inches per hour. A foot or more of snow accumulated across the region. Specific snowfall amounts included 16.2 inches in Sunderland, Bennington County and 16.5 at Marlboro, Windham County.

VIRGIN ISLANDS

St. Croix County

St. Croix

16	1700AST 1715AST				0	0	Funnel Cloud
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A pilot sighted three funnel clouds about 15 to 25 miles northwest of St. Croix.

VIRGINIA, East

VAZ048>049-060>064-067>069-072>075

Fluvanna - Louisa - Prince Edward - Cumberland - Goochland - Hanover - Caroline - Nottoway - Amelia - Powhatan - King William - King And Queen - Essex - Westmoreland

04	2200EST				0	0	Winter Storm
05	1430EST						

A winter storm produced 4 to 7 inches of snow along with less than 1/4 inch of ice across the piedmont of central Virginia and the Virginia northern neck. Some specific higher snow totals included: Louisa in Louisa county 7", Cumberland in Cumberland county 6", Goochland in Goochland county 5.5", Blackstone in Nottoway county 6", Ruther Glen in Caroline county 5", Farmville in Prince Edward county 5", Powhatan in Powhatan county 5.5", Palmyra in Fluvanna county 5", Amelia in Amelia county 5", Ashland in Hanover county 4.5", King William in King William county 5", Tappahannock in Essex county 5", and Montross in Westmoreland county 4". Local law enforcement agencies reported numerous accidents. Most, if not all schools in the area, were

Storm Data and Unusual Weather Phenomena

December 2002

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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VIRGINIA, East

VAZ065>066-070>071-076>083-085-087>090-092>093 closed Thursday, December 5th and Friday, December 6th due to very slippery road conditions.
Mecklenburg - Lunenburg - Chesterfield - Henrico - Richmond - Northumberland - Lancaster - Brunswick - Dinwiddie - Prince George - Charles City - New Kent - Middlesex - Greenville - Sussex - Surry - James City - Southampton - Isle Of Wight

04	2200EST	0	0	Winter Storm
05	1430EST			

A winter storm produced 1 to 4 inches of snow along with 1/4 to 1/2 inch of ice from southcentral Virginia northeast through the middle peninsula and Virginia northern neck. Some specific higher snow totals included: Chase City in Mecklenburg county 4", Victoria in Lunenburg county 4", Chesterfield in Chesterfield county 4", Short Pump in Henrico county 4", Richmond City 4", Warsaw in Richmond county 3.5", Heathsville in Northumberland county 3.5", Lawrenceville in Brunswick county 3.5", Kilmarnock in Lancaster county 3", Saluda in Middlesex county 3", Dinwiddie in Dinwiddie county 3", and New Kent in New Kent county 3". Numerous trees and power lines were reported down due to ice accumulations. This resulted in scattered power outages. Local law enforcement agencies also reported numerous accidents. Most, if not all schools in the area, were closed Thursday, December 5th and Friday, December 6th due to power outages and very slippery road conditions.

VAZ084-086-091-094-096-099 **Gloucester - Mathews - York - Newport News - Suffolk - Accomack**

04	2200EST	0	0	Winter Storm
05	1430EST			

A winter storm produced around 1 inch of snow and a light ice accumulation across portions of the middle peninsula, peninsula, and eastern shore of Virginia. Local law enforcement agencies reported several accidents. Some schools in the area were closed Thursday, December 5th due to slippery road conditions.

VAZ048>049-060>064-069 **Fluvanna - Louisa - Prince Edward - Cumberland - Goochland - Hanover - Caroline - Powhatan**

11	0300EST	0	0	Winter Weather/Mix
	1000EST			

Freezing rain caused minor ice accumulations on trees, power lines, bridges and overpasses across portions of the central Virginia Piedmont. A few power outages and accidents were reported.

VIRGINIA, Extreme Southwest

VAZ001>002-005>006-008 **Lee - Wise - Scott - Russell - Washington**

04	0000EST	0	0	Winter Storm
	2000EST			

Snowfall accumulations of two to six inches were reported across most of southwest Virginia.

Storm Data and Unusual Weather Phenomena

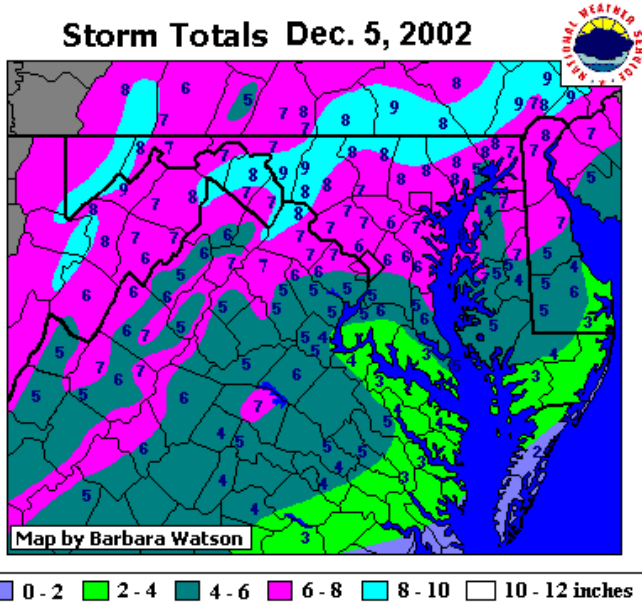
December 2002

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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VIRGINIA, North
VAZ021-025>031-036>042-050>057

Highland - Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Nelson - Albemarle - Greene - Madison - Rappahannock - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Arlington - Stafford - Spotsylvania - King George
05 0000EST 0 0 Winter Storm
1500EST

Storm Totals Dec. 5, 2002



Snow and sleet accumulation map from December 5, 2002

Low pressure moved from North Carolina to the Delmarva Peninsula between midnight and 3 pm on the 5th. This storm produced accumulating snowfall across the entire region as it moved by. Across the Central Piedmont and Fredericksburg area, freezing rain and sleet was mixed in with the snow. The snow and sleet accumulations ranged from 4 to 6 inches in this area. Along the Blue Ridge Mountains and the Central Shenandoah Valley, snowfall accumulations ranged from 5 to 7 inches. Across the Northern Shenandoah Valley and Northern Virginia, snowfall totals between 5 and 8 inches were reported.

VAZ021-025>031-036>042-050>053-055>057

Highland - Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Nelson - Albemarle - Greene - Madison - Rappahannock - Fauquier - Loudoun - Orange - Culpeper - Prince William - Fairfax - Stafford - Spotsylvania - King George
07 0000EST 0 0 Extreme Cold/Wind Chill
0900EST

Long standing low temperature records were set on the morning of the 7th as a fresh snow pack, calm winds, and clear skies allowed temperatures to plummet around 20 to 30 degrees below normal overnight. At Dulles International Airport at 7:25 AM the temperature fell to 1 degree above zero. This smashed the previous record of 18 degrees set in 1977. Other low temperatures recorded across Northern Virginia include 12 degrees in Fredericksburg and Manassas, 8 in Charlottesville and Great Falls (Fairfax Co.), zero in Edinburg (Shenandoah Co.) and at Shenandoah Valley Airport (Augusta Co.), 1 below at Lincoln (Loudoun Co.) and Winchester (Frederick Co.), and 4 below at the National Weather Service Office in Sterling (Loudoun Co.). At Washington Reagan National Airport, the low temperature only fell to 18 degrees due to the urban heat island effect. The record low for December 7th is 10 degrees set in 1882.

VAZ021-025>031-036>042-051>053

Highland - Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Nelson - Albemarle - Greene - Madison - Rappahannock - Fauquier - Loudoun - Culpeper - Prince William - Fairfax
11 0000EST 0 0 Ice Storm
1200EST

Storm Data and Unusual Weather Phenomena

December 2002

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

VIRGINIA, North
VAZ050-055>056

Orange - Stafford - Spotsylvania

11	0000EST 0900EST				0	0			Winter Weather/Mix
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View of a country road on the Virginia/West Virginia border on the morning of December 11, 2002 (photo by Mark Clausen)

An area of low pressure that tracked across the region on the 11th produced between 1 and 2 inches of rainfall. Unfortunately while rain was falling during the morning hours, ground temperatures were below freezing across much of Northern Virginia. This caused the rain to freeze on contact with the ground and several locations reported significant ice accumulations. Across the Potomac Highlands, the Northern and Central Shenandoah Valley, the Central Foothills, and the Northern Virginia D.C. suburbs, ice accumulations ranged from 1/4 to 1/2 inch. Roads and sidewalks became treacherous and numerous trees and power lines were downed by the heavy ice accumulations. Around 149,000 customers across the northern half of Virginia lost power as a direct result of the storm. In Orange, Spotsylvania, and Stafford counties, ice accumulations of a trace to 1/8 of an inch were reported before temperatures rose above freezing by mid-morning. Icy spots were reported on roads and sidewalks through noon.

VAZ021-025>031-040>042-052>053

Highland - Augusta - Rockingham - Shenandoah - Frederick - Page - Warren - Clarke - Rappahannock - Fauquier - Loudoun - Prince William - Fairfax

24	1600EST				0	0			Winter Weather/Mix
25	1500EST								

Low pressure passed directly over the region between the evening of the 24th and midday on the 25th. This system brought a mixed bag of precipitation including snow, sleet, rain, and freezing drizzle. The largest snowfall totals occurred in the Northern Shenandoah Valley and across the Northern Virginia suburbs of D.C. where between 2 and 4 inches was reported. Across the Central Shenandoah Valley, freezing drizzle and rain were the primary weather types. Patchy ice was reported on roads and sidewalks. Only a slushy inch of snow and sleet was reported. The amount of snow that fell from this storm was enough to give the region an official "White Christmas". According to Washington D.C. historical records, measurable snowfall has only occurred 6% of the time on December 25th. In addition, Northern Virginia only has a 13% chance of having snow on the ground on the 25th. Winds increased to 20 to 30 mph with gusts to 45 MPH after the low passed by on the afternoon of the 25th. Isolated power outages and downed trees were reported.

VIRGINIA, Northwest
VAZ003

Dickenson

04	1200EST 1730EST				0	0			Heavy Snow
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Snow quickly accumulated 3 to 6 inches, before changing to sleet and freezing rain. Only a thin layer of ice was deposited from the freezing rain.

Storm Data and Unusual Weather Phenomena

December 2002

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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VIRGINIA, Southwest

VAZ007-009>020-022>024-032>035-043>047-058>059 Tazewell - Smyth - Bland - Giles - Wythe - Pulaski - Montgomery - Grayson - Carroll - Floyd - Craig - Alleghany - Bath - Roanoke - Botetourt - Rockbridge - Patrick - Franklin - Bedford - Amherst - Henry - Pittsylvania - Campbell - Appomattox - Buckingham - Halifax - Charlotte

04 1300EST 0 0 Winter Storm
05 0700EST

Snow during the afternoon of the 4th through early morning of the 5th accumulated from 5 to 10 inches across the area. In addition, ice accretions of a quarter of an inch or more occurred in Carroll and Floyd counties. Numerous accidents were reported on snow and ice covered roads.

VAZ016-020-023>024-034>035-045>047-059 Carroll - Bath - Botetourt - Rockbridge - Bedford - Amherst - Campbell - Appomattox - Buckingham - Charlotte

11 0130EST 0 0 Ice Storm
0700EST

Freezing rain during the predawn hours of the 11th resulted in accretions of a quarter of an inch of ice.

VAZ016>017-032-034 Carroll - Floyd - Patrick - Bedford

13 1215EST 0 0 Winter Storm
1800EST

Freezing rain during the afternoon of the 13th resulted in ice accretions of between a quarter of an inch and a third of an inch.

VAZ033 Franklin

14 1100EST 0 0 3K High Wind
1500EST

High winds during the late morning and afternoon downed trees and damaged a barn in Rocky Mount, Franklin County.

VAZ007-009>020-022>024-032>035-045 Tazewell - Smyth - Bland - Giles - Wythe - Pulaski - Montgomery - Grayson - Carroll - Floyd - Craig - Alleghany - Bath - Roanoke - Botetourt - Rockbridge - Patrick - Franklin - Bedford - Amherst - Campbell

25 1230EST 0 0 20K High Wind
2000EST

High winds during the afternoon of the 25th downed numerous trees and power lines across the area. A tree was downed onto a house in Roanoke, causing damage to the roof and crushing the front porch.

WASHINGTON, Northeast

WAZ041-043>044 Wenatchee Area - Okanogan Valley - Waterville Plateau

12 1400PST 0 0 Heavy Snow
13 0300PST

Cold air trapped along the Cascade east slopes helped bring about heavy snow. Four inches of new snow fell at both Waterville and Tonasket.

WAZ037>038 Northeast Mountains - Okanogan Highlands

26 0500PST 0 0 Heavy Snow
27 0500PST

Heavy snow fell across much of northern and central Washington starting the day after Christmas. Snowfall totals include: Mount Spokane Ski Area...10", Republic...6.2", 49 North Ski Area...10", and Chewelah...6".

WAZ036>038-041-043>044 Spokane Area - Northeast Mountains - Okanogan Highlands - Wenatchee Area - Okanogan Valley - Waterville Plateau

27 1600PST 0 0 Heavy Snow
28 0600PST

Heavy snow fell across much of northern and central Washington. Snowfall totals include: Entiat...12", Waterville...8", Mount Spokane Ski Area...8", Cashmere...8", Republic...6.2", Northport...6", Boundary Dam...5", Chief Joseph Dam...5", Davenport...4", Chesaw...4", Williams Lake...4", Springdale...4", Colville...4-5", Tonasket...4", and Wenatchee...3.3".

WAZ031-037>038-044 Northeast Blue Mountains - Northeast Mountains - Okanogan Highlands - Waterville Plateau

31 0000PST 0 0 Heavy Snow
1500PST

Heavy snow fell across parts of eastern Washington on New Years Eve. Snowfall totals include: Sourdough Gulch SNOTEL...10", 49 North Ski Area...19", Colville...9", Chewelah...9", Williams Lake...8", Northport...7", Bodie Mountain...6", Waterville...6", Boundary Dam...5.3", Republic...5.3", Chesaw...5", and Gifford...4",

WASHINGTON, Northwest

WAZ016 Central Coast

14 0900PST 0 0 35K High Wind (G50) ^M
1500PST

High winds toppled trees and knocked out power to about 3500 customers along the central coast. The timing of the power outages was particularly bad for business in Ocean Shores, as it happened late on a Saturday morning.

WAZ016 Central Coast

15 1400PST 0 0 10K High Wind (G62) ^M
1800PST

Storm Data and Unusual Weather Phenomena

December 2002

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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WASHINGTON, Northwest

WAZ004			High winds downed a few trees and knocked out power to about 1000 homes.						
			Central Casade Foothills						
	19	1000PST			0	0	380K		High Wind (G56) ^M
		1500PST							
WAZ001>002-011			High winds, which gusted to 65 mph, blew down trees and power lines in the cascade foothills, damaging vehicles, blocking roads and cutting power to 13,000 homes. Over a dozen trees were downed and one fell on top of an empty police vehicle, damaging it.						
			San Juan - Western Whatcom - Southwest Interior						
	25	0700PST			0	0	80K		High Wind (G50) ^M
		1300PST							
WAZ006>008-010>011-016			High winds downed trees and knocked out power to about 7000 homes.						
			Everett And Vicinity - Seattle Metropolitan Area - Tacoma Area - Hood Canal/Kitsap Peninsula - Southwest Interior - Central Coast						
	27	0600PST			0	1	3.3M		High Wind (G52) ^M
		1500PST							

High winds knocked out power to around 300,000 homes throughout western Washington. Dozens of trees were downed, some fell on houses and others blocked roadways. Two barges broke free from their moorings in Elliot bay, and the Tacoma Narrows bridge was closed when a trucks semi trailer was blown over. The storm also contributed to the death of a 10 year old boy, in Thurston county, who became entangled in a downed power line and was electrocuted. In downtown Seattle, a man was knocked unconscious by a flying truck canopy.

WASHINGTON, Southeast

WAZ027			Yakima Valley						
	01	0950PST			1	1			Fog
			Freezing fog led to icy road conditions throughout the Yakima Valley. A Montero vehicle rolled over after hitting a patch of ice on Interstate 82 between Zillah and Granger near milepost 54, leading to one fatality, and one injury.						
			F22VE						
WAZ029			Blue Mountain Foothills						
	14	0900PST			0	0	1K		High Wind (G44) ^M
		1700PST							
			A peak wind gust to 51 MPH and a record high of 66 degrees was recorded at the Walla Walla Airport. A few trees were knocked down throughout the area. A falling maple tree knocked down some power lines and came within inches of hitting a new truck. Two power poles had to be repaired after knocking out power to 40 homes.						
WAZ029			Blue Mountain Foothills						
	15	2000PST			0	0	150K		High Wind (G60) ^M
	16	1200PST							
			High winds led to numerous reports of damage in the Walla Walla area. Numerous trees fell down, knocking down power lines which led to thousands of power outages. A few of the downed trees fell onto homes. The downed power lines were also blamed for a grass fire. In city parks, 16 trees were knocked down due to the winds. Some homes received roof damage, including two chimneys collapsing under the pressure of the wind.						
WAZ026			Kittitas Valley						
	26	2145PST			0	0			Heavy Snow
	27	0546PST							
			Four inches of snow fell in the city of Ellensburg.						
WAZ028			Lower Columbia Basin						
	27	0610PST			0	0			High Wind (G55) ^M
			A peak wind gust of 63 MPH from the southwest was measured at KHMS (Hanford Meteorological Station, Hanford, WA).						
WAZ025			East Slopes Southern Cascades						
	29	1330PST			1	1			Avalanche
			An avalanche was triggered by a skier near Crystal Mountain where a skier was killed after being buried in five feet of snow. Three others were partially buried, with one injury reported.						
			M37OT						

WASHINGTON, Southwest

WAZ021			South Coast						
	13	1200PST			0	0			High Wind (G52) ^M
	14	1500PST							
			Both Ilwaco and Bay Center reported wind gusts to 60 mph as a series of cold fronts moved through the area.						
WAZ021			South Coast						
	15	1200PST			0	0			High Wind (G52) ^M
	16	0200PST							
			Ilwaco reported gusts to 60 mph.						

Storm Data and Unusual Weather Phenomena

December 2002

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

WASHINGTON, Southwest

WAZ021

South Coast

24 1500PST

0 0

High Wind (G53) ^M

25 1800PST

Cape Disappointment reported sustained winds of 61 mph.

WAZ020>021-039

Southwest Interior - South Coast - Vancouver Area

26 1400PST

0 0

High Wind (G57) ^M

27 1200PST

A Pacific storm moving across the area produced strong winds that downed trees and caused widespread power outages. Ilwaco reported gusts to 65 mph. Cathlamet reported gusts to 66 mph which ripped off metal roofs and downed trees. County wide power outages were reported in Wahkiakum County. The Columbian reported a gust of wind blew the 555 foot grain ship, "Pacific Trader", off its anchor and pushed it into a dock at Berth 8. Trees were reportedly downed in the Vancouver-Salmon Creek-Hazel Dell areas, damaging two homes and disrupting traffic. No injuries were reported.

WEST VIRGINIA, East

WVZ048>055

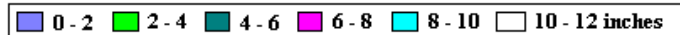
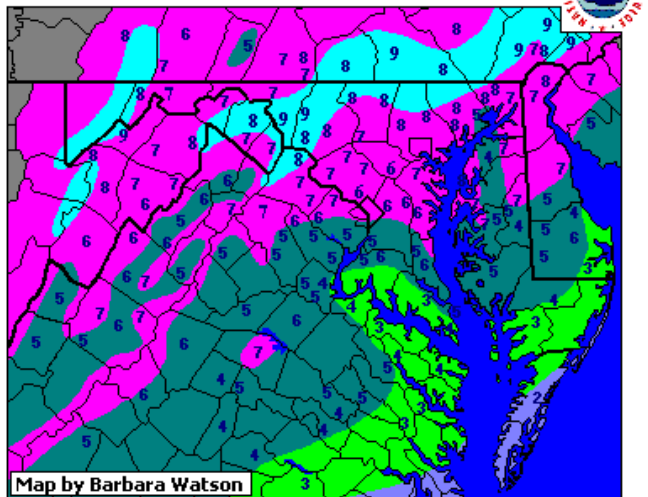
Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy

05 0000EST

0 0

Winter Storm

Storm Totals Dec. 5, 2002



Snow and sleet accumulations from December 5, 2003

Low pressure moved from North Carolina to the Delmarva Peninsula between midnight and 3 pm on the 5th. This storm produced accumulating snowfall across the region as it moved by. A total of 6 to 8 inches of snowfall was recorded across the Eastern Panhandle of West Virginia.

WVZ048>055

Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy

07 0000EST

0 0

Extreme Cold/Wind Chill

0900EST

Long standing low temperature records were set on the morning of the 7th as a fresh snow pack, calm winds, and clear skies allowed temperatures to plummet around 20 to 30 degrees below normal overnight. At Martinsburg Regional Airport the temperature fell to 2 degrees. This exceeded the previous record of 12 degrees set in 1928. Other low temperatures recorded across included 7 degrees at Berkeley Springs, 5 at Sugar Grove, 2 at Keyser and Lost River, zero at Romney, and 6 below at Moorefield.

Storm Data and Unusual Weather Phenomena

December 2002

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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WEST VIRGINIA, East

WVZ048>055 **Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy**
 11 **0000EST** **0** **0** **Ice Storm**
 1200EST



View of a country road on the Virginia/West Virginia border on the morning of December 11, 2002 (photo by Mark Clausen)

An area of low pressure that tracked across the region on the 11th produced between 1 and 2 inches of rainfall. Unfortunately while rain was falling during the morning hours, ground temperatures were below freezing across the Eastern Panhandle of West Virginia. This caused the rain to freeze on contact with the ground and several locations reported ice accumulations between 1/4 to 1/2 inch. Roads and sidewalks became treacherous and numerous trees and power lines were downed by the heavy ice accumulations. Nearly 8,500 customers in Berkeley and Jefferson counties lost power as a direct result of the storm. A few severe slip and fall injuries were reported during the ice storm in Berkeley County.

WVZ048>055 **Grant - Mineral - Hampshire - Morgan - Berkeley - Jefferson - Pendleton - Hardy**
 24 **1600EST** **0** **0** **Winter Weather/Mix**
 25 **1800EST**

Low pressure tracked just southeast of the area between the evening of the 24th and midday on the 25th. This system dropped snow across the Eastern Panhandle of West Virginia which resulted in a relatively rare "White Christmas". Snowfall totals ranged from 3 to 8 inches, with the heaviest amounts falling around the ridge line of the Allegheny Mountains. Winds increased to 20 to 30 mph with gusts to 45 MPH after the low passed by on the afternoon of the 25th. Isolated power outages and downed trees were reported.

WEST VIRGINIA, North

WVZ004-023-041 **Marshall - Preston - Tucker**
 05 **0400EST** **0** **0** **Heavy Snow**
 1200EST

Snow fell during the night of Dec 4, until about noon Dec 5. The total snow in Marshall county was 8 inches; Preston and Tucker, 9 inches. Preston and Tucker reached 6 inches by 4 AM; Marshall county by 8 AM.

WVZ002-023-041 **Brooke - Preston - Tucker**
 11 **1000EST** **0** **0** **Ice Storm**
 2100EST

WVZ023-041 **Preston - Tucker**
 25 **1000EST** **0** **0** **Winter Storm**
 26 **1200EST**

WEST VIRGINIA, Southeast

WVZ042>045 **Mercer - Summers - Monroe - Greenbrier**
 04 **1400EST** **0** **0** **Winter Storm**
 05 **1100EST**

Snow across Mercer county accumulated 5 to 6 inches from the afternoon of the 4th through the morning of the 5th. In addition, ice accretions of a quarter of an inch or more occurred over Mercer, Summers, Greenbrier, and Monroe counties after the snow changed to freezing rain. Numerous accidents were reported on snow and ice covered roads.

Storm Data and Unusual Weather Phenomena

December 2002

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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WEST VIRGINIA, West

WVZ005-013-015-024>027 **Wayne - Lincoln - Kanawha - Mingo - Logan - Boone - Clay**

04	1400EST				0	0	3.5K		Winter Storm
05	0900EST								

Snow accumulated 1 to 3 inches, before changing to sleet and freezing rain. The freezing rain deposited a quarter inch of ice on trees and power lines. About 3,000 dwellings lost electricity, mostly in Wayne and Lincoln Counties. A large tree limb snapped off in Charleston, damaging 2 park cars.

WVZ006-014-016-018-029>030-039>040 **Cabell - Putnam - Roane - Calhoun - Gilmer - Lewis - Upshur - Barbour**

04	1600EST				0	0			Snow
05	1100EST								

Snow accumulated 2 to 4 inches.

WVZ034>038 **Wyoming - Raleigh - Fayette - Nicholas - Webster**

04	1600EST				0	0			Winter Storm
05	1400EST								

Snow left a 2 to 4 inch cover, before changing to freezing rain. A quarter inch of ice accumulated on trees and power lines. Elevations above 2800 feet saw as much as 6 inches of snow and a half inch of ice.

WVZ007>011-017-019>020-031>032 **Mason - Jackson - Wood - Pleasants - Tyler - Wirt - Ritchie - Doddridge - Harrison - Taylor**

04	1900EST				0	0			Snow
05	1300EST								

Snow accumulated 3 to 5 inches.

WVZ046>047 **Pocahontas - Randolph**

04	1900EST				0	0			Heavy Snow
05	1400EST								

Snow accumulated 3 to 8 inches.

WVZ032-034>036-039>040 **Taylor - Wyoming - Raleigh - Fayette - Upshur - Barbour**

25	1000EST				0	0			Snow
26	0200EST								

WVZ037>038-046>047 **Nicholas - Webster - Pocahontas - Randolph**

25	1000EST				0	0			Heavy Snow
26	0600EST								

On the 24th, a rain and snow mixture fell during the onset of a developing coastal storm. The mixture changed to mainly rain during Christmas Eve. As the coastal storm strengthened, backlash snows formed during Christmas morning. Snow accumulations of 3 to 12 inches occurred across Nicholas, Pocahontas, Randolph, and Webster Counties, with the upper range above 2800 feet. Valley Head and Pickens measured 7 inches, while Camden on Gauley had 8 inches. The higher terrain near Richwood had 10 inches of snow on the ground. Across Barbour, Fayette, Taylor, Raleigh, Upshur, and Wyoming Counties accumulations were on the order of 2 to 5 inches.

WISCONSIN, Northeast

WIZ022-050 **Door - Manitowoc**

02	1000CST				0	0			Heavy Snow
	2000CST								

Lake effect snow showers developed as cold air circulating around Canadian high pressure moved over the much warmer waters of Lake Michigan. Snow fell at the rate of about 2 inches per hour over parts of Door county and Manitowoc county. Highest snowfall totals were 6.1 inches at North Bay (Door co.) and 6.0 inches at Baileys Harbor (Door co.) and 3 miles northeast of Two Rivers (Manitowoc co.). Cold air moving over the much warmer waters of Lake Michigan.

WIZ005-010>012 **Vilas - Oneida - Forest - Florence**

17	2200CST				0	0			Ice Storm
18	0600CST								

Rain and some thunderstorms developed as south winds aloft carried warm air over a surface cold front that was across Illinois. The rain moved into northern Wisconsin where temperatures remained below freezing, resulting in an accumulation of around a quarter inch of ice. Ice accumulation was mainly confined to roads and sidewalks as brisk east winds at the surface kept much ice from developing on trees and power lines. Roads in Vilas, Oneida, Forest and Florence counties were ice covered and hazardous until surface temperatures warmed above freezing.

WISCONSIN, Northwest

WIZ004 **Iron**

01	1200CST				0	0			Heavy Snow
02	1800CST								

Lake effect snow brought eight to fourteen inches of snow to northeastern Iron County. The heaviest snow fell in the afternoon of

Storm Data and Unusual Weather Phenomena

December 2002

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

WISCONSIN, Northwest

December 1. Saxon, Hurley, and Montreal had 14 inches of snow.

WIZ001

Douglas

17 2300CST

0 0

Ice Storm

18 1500CST

Freezing rain, at times mixed with sleet and snow, began late at night and continued through most of the day. At least a quarter inch of ice accumulated on outside surfaces, making sidewalks and roads treacherous at times.

WISCONSIN, Southeast

NONE REPORTED.

WISCONSIN, Southwest

NONE REPORTED.

WISCONSIN, West

NONE REPORTED.

WYOMING, Central and West

WYZ017>018

Wind River Basin - Lander Foothills

05 0400MST

0 0

Fog

09 1100MST

An area of dense fog persisted for about 4 days across central Fremont county. The visibility was less than 1/4 of a mile for most of this time period. The dense fog was most extensive across the Wind River Basin, in an area from Hudson to Riverton to Shoshoni. A strong low level temperature inversion and some snow cover were the reasons for the dense fog persisting for 4 days. Also, hoar frost accumulations were 1 to 2 inches around Riverton.

WYZ017

Wind River Basin

17 1900MST

0 0

Heavy Snow

18 0300MST

A band of heavy snow developed across central Fremont county. The band of heavy snow occurred along a line from Riverton to Pavillion. Snowfall amounts ranged from 4 to 8 inches across this area.

WYZ001>002-012

Yellowstone National Park - Absaroka Mountains - Teton & Gros Ventre Mountains

26 1800MST

0 0

Heavy Snow

27 2359MST

Abundant pacific moisture and upslope flow brought heavy snow to northwest Wyoming. SNOTEL sites reported 12 to 14 inches of snow.

WYOMING, Extreme Southwest

NONE REPORTED.

WYOMING, North Central

WYZ099

Sheridan Foothills

04 1600MST

0 0

Heavy Snow

6 inches of new snow in Dayton

WYOMING, Northeast

WYZ055

South Campbell

29 0951MST

0 0 0

High Wind (G50) ^M

1551MST

A very strong cold front moved across northeast Wyoming during the morning and afternoon. Wind gusts reached near 60 mph behind the front.

WYOMING, Southeast

NONE REPORTED.

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

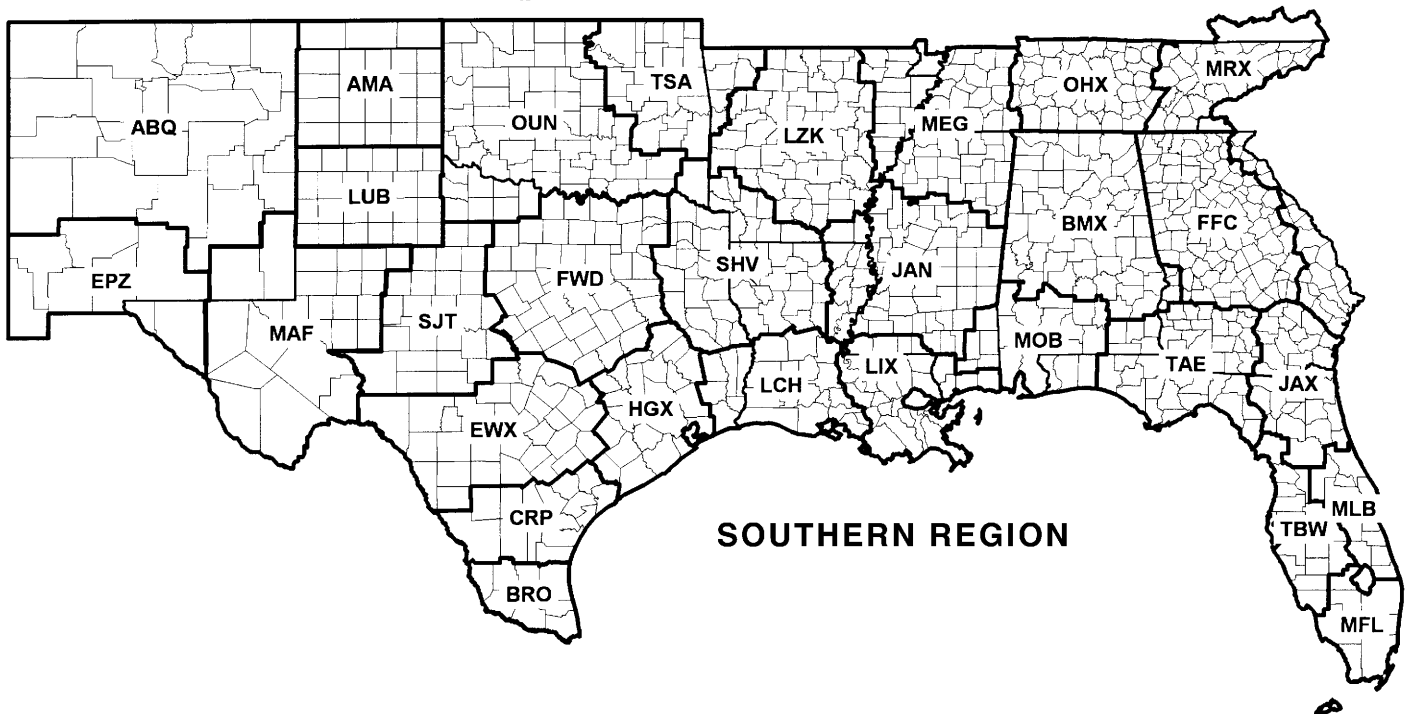
The asphalt surface has been peeled off of this road.

(All photographs courtesy of Brian Smith, Meteorologist, National Weather Service, Valley NE.)

COUNTY WARNING & FORECAST AREAS - MODERNIZED NWS

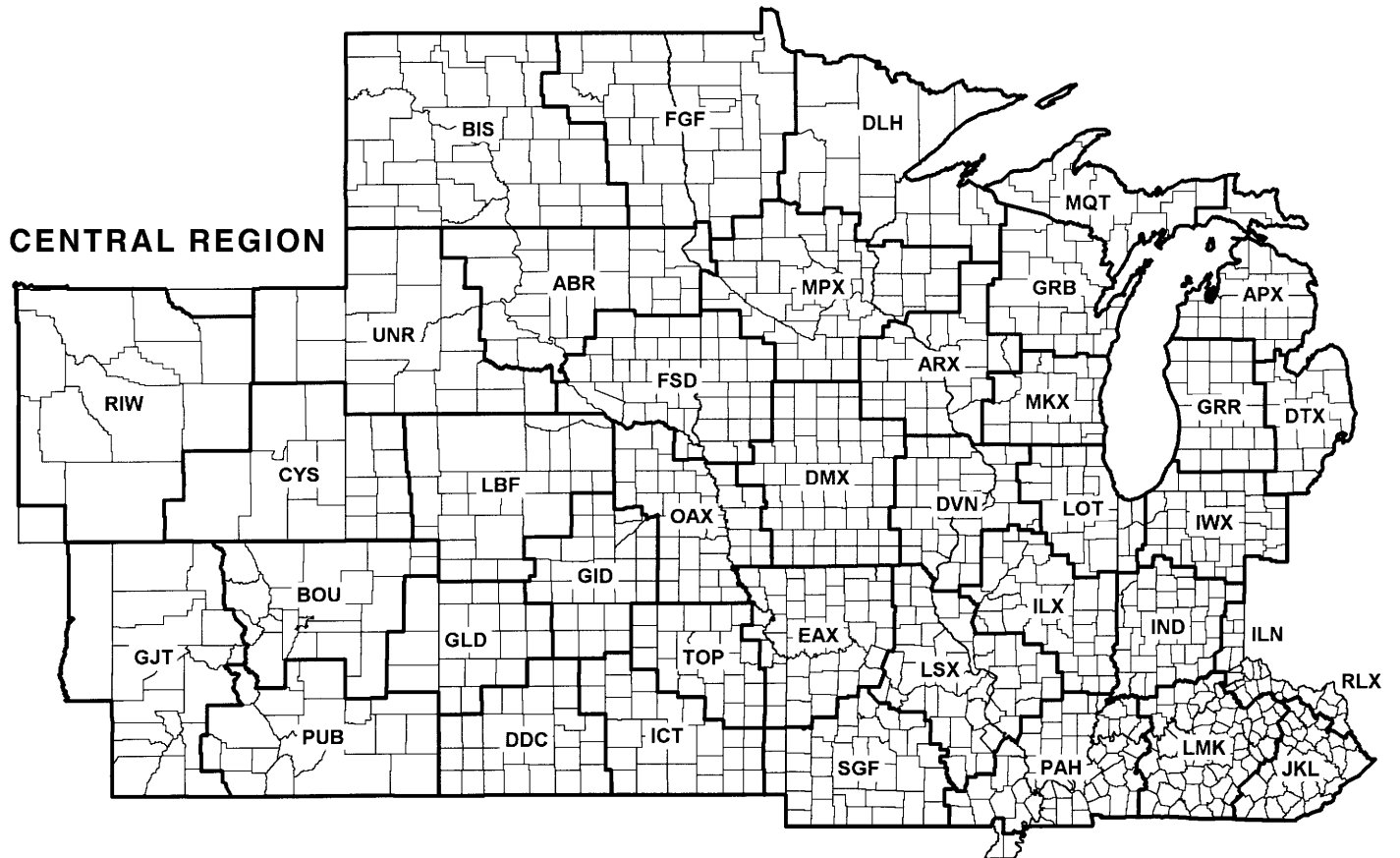
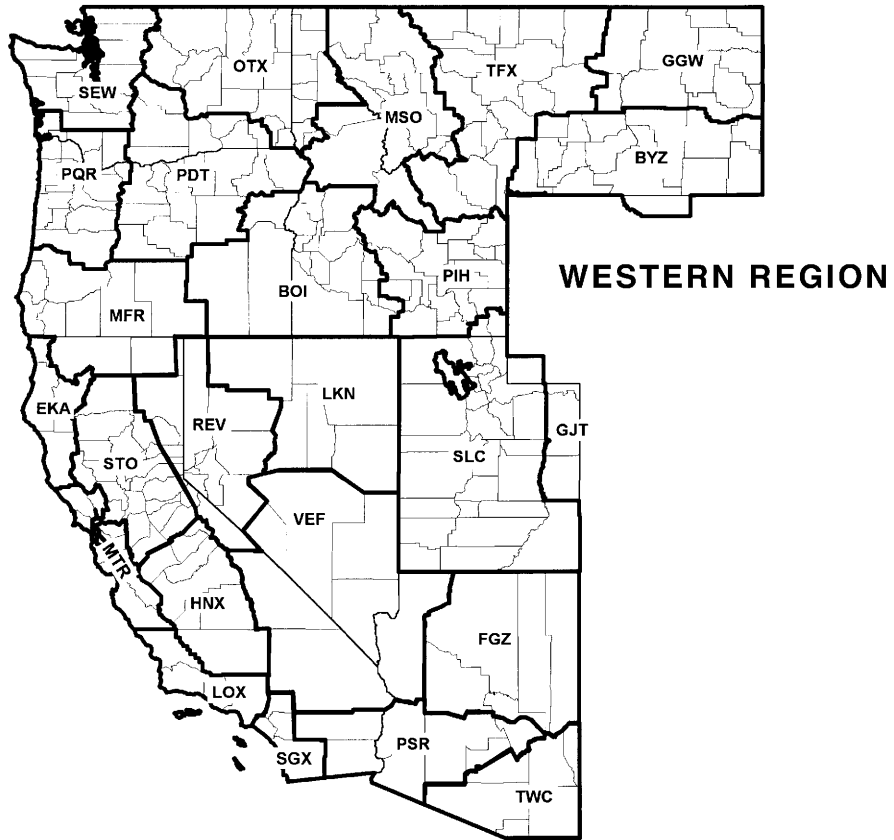


EASTERN REGION

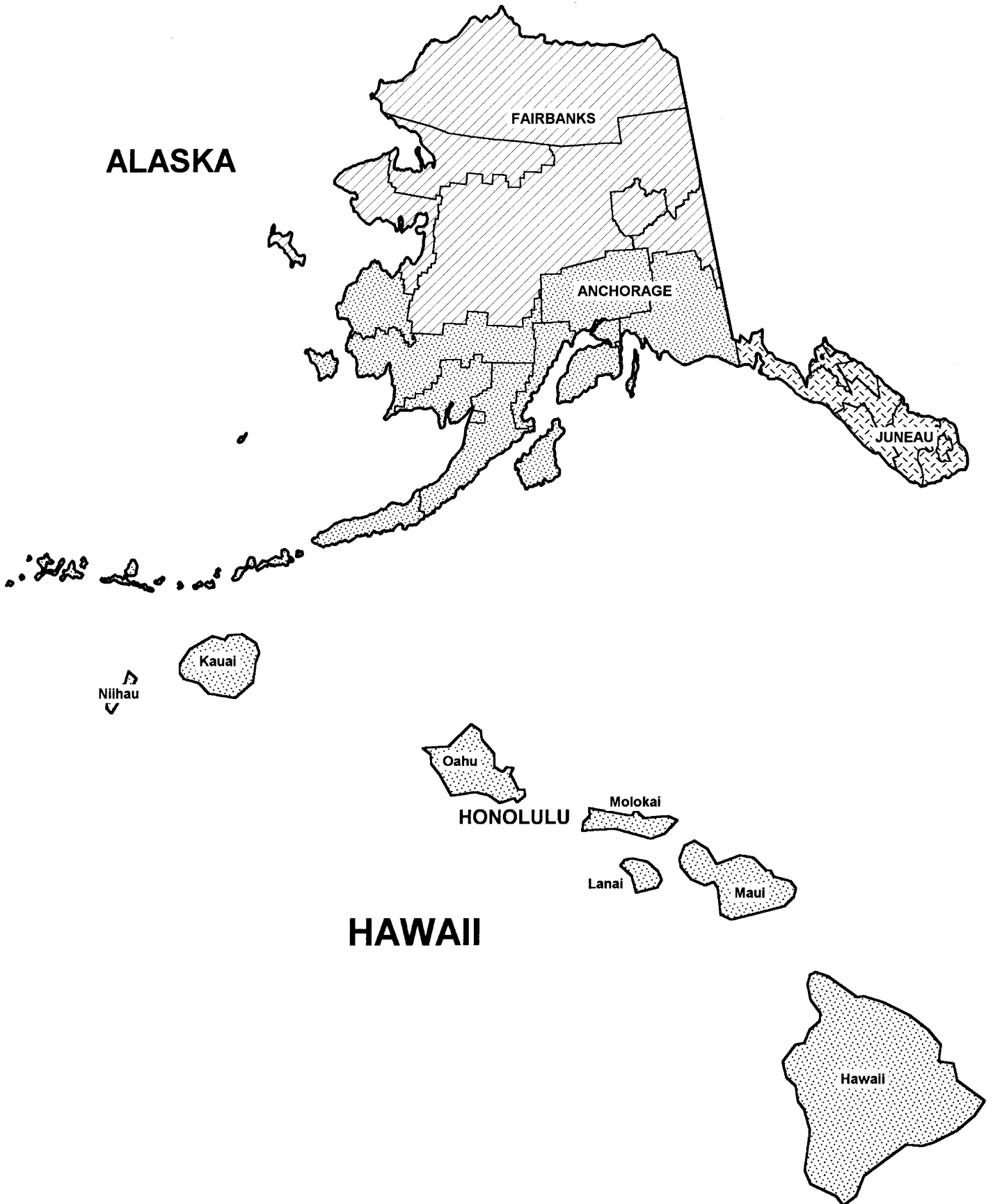


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COUNTY WARNING & FORECAST AREAS - MODERNIZED NWS



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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