

ARZ019

Crawford

0600CST 0900CST

# National Weather Service Storm Data and Unusual Weather Phenomena



October 1998 Path Length (Miles) Number of Persons led Injured Time Local Path Width Estimated Damage v Crops Date Character of Storm (Yards) Standard ARKANSAS, Northwest **Benton County** 0140CST Maysville 05 0 0 0.10KThunderstorm Wind Large tree limbs were blown down. **Benton County** Garfield 05 0230CST 0.10KThunderstorm Wind A large tree was blown down over a road. **Benton County** 05 Thunderstorm Wind (G57) Gentry 0300CST 0 **Madison County** Pettigrew 05 1430CST 0 0 0.10KThunderstorm Wind Large tree limbs were blown down. **Carroll County** Thunderstorm Wind (G52) 05 1445CST 0 Busch Later at Berryville, half-inch diameter hail was reported. Summary of events for October 5 1998: Two separate severe thunderstorms associated with a large severe weather outbreak over Oklahoma moved east into Benton County during the early morning of October 5. The main threat from these storms was wind strong enough to blow down several trees and tree limbs. Both storms weakened below severe limits by the time they moved east to Carroll County. These storms formed in advance of a slow-moving cold front with the approach of a powerful upper level storm system. By sunrise on the 5th, flooding was becoming the main threat as a solid line of thunderstorms made very slow progress across northwest Arkansas. See the separate flash flood event entry for more details on the flooding. By the afternoon of the 5th, daytime heating allowed several thunderstorms along the front to become marginally severe over Madison and Carroll Counties. **Benton County** 0430CST 0 Flash Flood Countywide 05 Several low-water crossings were flooded in and around Rogers. Several county roads near Maysville were flooded. There was residential street flooding in Rogers by early afternoon. **Washington County** 0900CST Flash Flood Countywide 05 0 1700CST Water covered AR Hwy 45 near Cane Hill. **Sebastian County** 1300CST Flash Flood Countywide 05 1900CST Several streets were flooded in Mansfield. Several streets in Fort Smith were closed during the evening by high water. Franklin County Countywide 1500CST 2000CST Flash Flood Several streets were flooded in Charleston. Summary of flash flood events for October 5 1998: A slow-moving solid line of thunderstorms took most of the day on October 5 to move from the northwest corner of Arkansas to the area south of Fort Smith. Rainfall amounts of 3 to 5 inches were common over a large area, leading to flash flooding along small creeks and streams as well as street flooding in urban areas. Some storm-total rainfalls from October 5 include (in inches): Prarie Grove...5.35, Drake Field in Fayetteville (FYV)...4.90, Devils Den State Park...4.90, Cincinnati\_2NE...4.37, Huntsville...3.85, St. Paul...3.77, Berryville...3.70, Greenwood...3.68, Natural Dam ...3.55, Mountainsburg...3.43, Fort Smith Regional Airport (FSM)...3.11, and Bentonville\_4S...3.08.

The Arkansas River at Van Buren rose above the flood stage of 22 feet to crest at a level of 24.1 feet at 9 PM CDT on October 6.





October 1998 Path Length (Miles) Number of Persons led Injured Time Local Path Width Estimated Damage v Crops Date Character of Storm (Yards) Standard ARKANSAS, Northwest **Benton County** 2020CST 0 0.10K3 S Cave Spgs 16 0 Thunderstorm Wind A large tree was blown down. Franklin County Alix 16 2210CST 0 25K Thunderstorm Wind Seven power poles were blown down within a half-mile area between Alix and Denning, causing a two-hour power outage in Altus, Coal Hill and Hartman. Several permanent structures sustained roof damage, and several outbuildings were destroyed. One barn was nearly destroyed. Summary for October 16 1998: Strong southerly winds brought a rapid return of warm air and moisture to northwest Arkansas during the day on October 16. This helped to destabilize the atmosphere, causing isolated severe thunderstorms to form that evening. The two significant storms of the evening included one that formed over Adair County Oklahoma and moved east into Benton County Arkansas, producing marginally severe winds. The other storm developed a bow echo radar signature and produced strong damaging winds as it moved across southern **OKLAHOMA**, Eastern **Osage County** 0 Northwest Portion 02 Flash Flood A road was closed by high water 3 miles west of Shidler. The NWS Cooperative Observer at Foraker measured 5.40 inches of rain in the 24 hours ending at 700 AM CDT. **Mcintosh County** 7 W Checotah 02 2027CST 0 Hail (0.88) Location: OK Hwy 150 and I-40 Summary of events for October 2 1998: Early on the morning of the 2nd, a band of thunderstorms developed over central Oklahoma and moved as far as northwest Osage County before turning up stationary. Flash flooding commenced, and radar indicated 5 to 7 inches of rain over northwest Osage By the evening of the 2nd, the northward movement of warm air at the surface and the approach of an upper level disturbance kicked off scattered thunderstorms. One thunderstorm became severe as it moved across northern McIntosh County, producing hail as large as nickels. OKZ058 Ottawa 0900CST 0 Flood 03 The Neosho River at Commerce rose above its flood stage of 15 feet and reached a flood crest of 21.8 feet at 11 AM CDT on October **Osage County** 2 E Bowring 04 0640CST 0.10KThunderstorm Wind Large tree limbs were blown down **Washington County Bartlesville Arpt** 0704CST 04 0 0 Thunderstorm Wind (G60) A gust to 67 mph was measured by the observer at the Bartlesville Airport (BVO) at 804 AM CDT. The winds were accompanied by

half-inch diameter hail from 802 to 812 AM CDT.

Summary of events for the morning of October 4 1998:

A strong warm front in its developing stages lifting northward early on the morning of Sunday, October 4, and the initial approach of an upper level system kicked off a cluster of thunderstorms north of Tulsa. Two of these thunderstorms became severe, producing strong thunderstorm winds and hail that remained under the size of dimes. The cluster of thunderstorms moved north into Kansas by 900 AM CDT.



Osage County Hominy

# National Weather Service Storm Data and Unusual Weather Phenomena



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

			(======)	()				
OKLAHOMA, Easte	<u>ern</u>							
<b>Pawnee County</b>								
Pawnee	04	1838CST 1839CST	0.4	125	0	0	800K	Tornado (F1)
	homes Pawne was b	nado briefly touched d led northeast for 0.4 n s receiving minor roof ee due to strong winds	niles and had a , window, and in the vicinity winds. Dam	a width of 1 porch dam y of the torn age from th	25 yards. age. One ado know e tornado	Many tree mobile hor m as a "rear and the wir	s were downed ne was destroy r flank downdr nds combined v	DT near 6th Street and Ash. The tornado or snapped along the path with about fifty ed. Widespread wind damage also occurred in aft". The roof at the high school auditorium were nearly \$2 million. (The official damage
	speeds 2 mile the ho observ home	s near 85 mph. The to es from downtown Pav ouse, measured wind g vations.) The open pro-	ornado lifted b wnee received usts as high as airie, the assoc determine if t	efore reach F1 damage s 80 mph. (S ciated lack o ornadic dan	ing US Hy . The Pay See the sep of tracers ( nage occu	vy 64. How whee meson parate Thur (wind-blow rred at/near	wever, an isolated net site, located nderstorm Winderstorm winderstorm these location	imate of the most intense winds reaching the dome downstream of the tornado path and 3 miles ENE of Pawnee and 0.4 miles north of entry for more information on the mesonet the mesonet site, and the isolated nature of the strength of the tornado damage in Pawnee,
Pawnee County								
Pawnee	04	1839CST			0	0	1.1M	Thunderstorm Wind
	style t Specif Munic in the overtu	ous garage was also da fically, several big oak cipal Hospital, large to Lusk Addition. A tra	amaged. Man a trees were blaces along Bou iler home just the wind and to	y trees and own down a older Street northwest	power line at the Paw were blow of Pawnee	es were dov nee Agency on down, or was scatte	vned or snappe y, including on ne falling onto red about by th	he high school campus. An adjacent metal- d by the winds throughout Pawnee. e blown onto the pre-school. Near the Pawne a mobile unit. Tree damage was also reported e storm, and a nearby cattle trailer was r more information on the nearby tornado, see
<b>Pawnee County</b>								
3 ENE Pawnee	excess passag - 740 - 745 - 750 - 755	s of 50 kts (57 mph) for ge of a supercell thunce PM CDT: 67 mph gu PM CDT: 79 mph gu PM CDT: 78 mph gu PM CDT: 60 mph gu PM CDT: 60 mph gu	or over 20 mir derstorm (rotat ast from the ea ast from the wo ast from the no	nutes. The ching thunder state outh est orthwest	clockwise	veering of	such strong win	Thunderstorm Wind (G70)  e Pawnee mesonet site measured wind gusts i  nds on this time scale clearly shows the
<b>D</b> C 4	- 800	PM CDT: 80 mph gu	ist from the no	ortn				
Pawnee County Cleveland	04	1904CST			0	0		Thunderstorm Wind (G52)
Osage County Osage	04	1905CST			0	0		Hail (1.00)
Osage County Osage	04	1905CST			0	0		Thunderstorm Wind (G52)
Pawnee County Hallett	04	1939CST			0	0		Hail (1.75)
	Locati	ion: intersection of U	S Hwy 412 an	nd OK Hwy	99			
Pawnee County Hallett	04	1939CST			0	0		Thunderstorm Wind (G52)
Creek County 3 N Oilton	04	1940CST			0	0		Hail (1.75)

Winds of 60 to 80 mph reported in Hominy.

1944CST

04

Location: intersection of OK Hwy 99 and 51  $\,$ 

0

0

Thunderstorm Wind (G70)





1965								-70-7
Location	Date	Time Local/ Standard	Path Length (Miles)	Path Width (Yards)		ber of sons Injured	Estimated Damage Property Crops	October 1998 Character of Storm
OKLAHOMA, Eastern	<u>1</u>							
	-							
Pawnee County 8 E Hallett	04	1946CST			0	0		Hail (1.75)
Osage County								
6 E Osage	04	1947CST			0	0		Hail (1.75)
Osage County 1 SSW Barnsdall to 1 SSE Barnsdall								Tornado (F0) received minor damage. However, three 12-inch tree limbs knocked out of them.
Osage County								
5 NE Barnsdall	04	2010CST			0	2	50K	Thunderstorm Wind
	west o		ide Osage Co	unty. The W				in this incident. The location was 2 miles ent Director reported that the damage
Nowata County		*04 <b>*</b> GGT					277	
3 S Nowata	04	2015CST			0	0	3K	Thunderstorm Wind
	A hor	ne sustained roof d	amage.					
Nowata County Nowata	04	2015CST			0	0	1.5K	Thunderstorm Wind
Nowata			1' 11	, .		U	1.5K	Thunderstorm wind
W. II. A. G. A	Sever	al trees and a powe	er line were bl	own down in	Nowata.			
Washington County Ochelata	04	2015CST			0	0	0.30K	Thunderstorm Wind
Ochciata			own down in t	Ochalata	v	v	0.50K	Thunderstorm wind
D	Large	tree limbs were bl	own down iii '	Ochelata				
Rogers County Oologah	04	2020CST			0	0	10K	Thunderstorm Wind
		andoned mobile h	ome was flinn	ed over Not				
Tulsa County	7 111 00	andoned moone n	ome was mpp	ca over. Tvoi	c. The mot	one nome	was not trea down.	
6 W Collinsville	04	2020CST			0	0		Thunderstorm Wind (G52)
	Locat	ion: Intersection o	f OK Hwy 20	and US Hw	v 75.			, ,
Osage County	Lova	10111 111101 90011011 9	20111111	una ob 11	, , , , ,			
2 NW Osage	04	2023CST			0	0		Hail (1.00)
Pawnee County 7 ENE Terlton	04	2040CST			0	0		Thunderstorm Wind (G52)
	Locat	ion: in the commu	nity of Westp	ort				
Nowata County								
2 NE Watova to	04	2105CST	8	50	0	0	50K	Tornado (F0)
10 ESE Nowata	contin 26 an there, the to	nued east, destroyir d 416 lost most of the tornado most l	ng the old one- its roof. Porti ikely crossed I shed, damaged	room Terrell ons of the roo Lake Oologa I a house, da	l School Bu of were wra th and conti	ilding near pped arour nued to an	r Section Roads 27 nd trees over one hu area 3 miles north	barn on Section Road 27. The tornado and 415. A mobile home at Section Roads indred yards southeast of the home. From of New Alluwe by 1015 PM CDT, where trees. The tornado was actually seen by a
Osage County 4 SE Pearsonia	04	2115CST			0	0		Thunderstorm Wind (G52)
<b>Washington County</b>								
1 S Vera	04	2117CST			0	0		Funnel Cloud
	Spotte	ers reported a funn	el cloud. The	parent storm	later went	on to prod	uce an F0 tornado r	orthwest of Collinsville.
Tulsa County 3 NW Collinsville	04	2119CST	0.5	50	0	0		Tornado (F0)





Time Path Path Number of Estimated October 1998
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

#### OKLAHOMA, Eastern

	Sever	al spotters reported	a brief tornad	o touchdown	in a rural	area.		
Nowata County 11 SE Nowata	04	2120CST			0	0	4K	Thunderstorm Wind
	Five t	o six power lines we	ere blown dov	vn near New	Alluwe			
Tulsa County 1 E Collinsville	04	2124CST			0	0		Funnel Cloud
	Locat	ion: near the interse	ection of US I	Hwy 169 and	OK Hwy	20		
Craig County Centralia	04	2130CST			0	0		Thunderstorm Wind (G52)
Okfuskee County 2 SE Boley to 2 NE Okfuskee	04	2137CST 2204CST	25	1408	0	4	500K	Tornado (F2)

A significant long-track tornado occurred on the evening of October 4, following a 27-mile track from 2 miles southeast of Boley in Okfuskee County to 3 miles southwest of Nuyaka in Okmulgee County. The tornado first touched down in Okfuskee County at 1037 PM CDT and lifted over Okmulgee County at 1108 PM CDT. (This Tornado entry covers that part of the track in Okfuskee County. See the separate Tornado entry for details on the portion in Okmulgee County.) The most significant damage to structures occurred near the communities of IXL and Haydenville, while much of the damage in the rural areas across which the tornado tracked consisted of downed/uprooted trees.

In the small community of IXL, located on OK Hwy 48 north of Okemah, nearly every structure sustained at least some damage. An NWS Storm Survey revealed F2 damage at IXL, where a house and two mobile homes were destroyed. Pieces of one mobile home were found one-half mile away. A local newspaper also reported four businesses and a public building at the IXL Park were destroyed. Six houses and two more mobile homes sustained major damage, while another 21 houses and one mobile home sustained minor damage.

In Haydenville, located north of Okemah on OK Hwy 56, two single-family houses and a mobile home were destroyed. Three houses, three mobile homes, and one public building (the Haydenville Fire Station) sustained major damage. Five houses and one business (the Haydenville Store) sustained minor damage. An NWS Storm Survey revealed F2 damage just southwest of Haydenville, where a mobile home was completely destroyed. Four people inside the trailer were injured, one of them critically. The tie-downs on the double-wide trailer were snapped, and the home appeared to have travelled a significant distance before disintegrating.

This tornado was unusual for the fact that it covered such a large area. A survey showed that the damage path was at times 3 miles wide, lending credence to the idea that there were several smaller tornadoes circulating around the larger tornado. The larger tornado reached as wide as 8/10 of a mile.

Okfuskee County 5 S Welty	04 Much	2140CST	rred specifics	Ily trees were	0	0 a mobile	50K	Thunderstorm Wind yed, a cinder block building was destroyed, a	
		e was destroyed, and		•			nome was desiro	yed, a cinder block building was destroyed, a	
Creek County									
Slick	04	2200CST			0	0	0.10K	Thunderstorm Wind	
	Several large tree limbs were blown down								
Washington County 1 S Vera	04	2200CST			0	0		Thunderstorm Wind (G52)	
Okmulgee County									
5 SW Nuyaka to	04	2204CST	2	1408	0	0	5K	Tornado (F2)	
3 SW Nuyaka	2208CST This tornado track is the continuation of the same tornado that tracked through Okfuskee County earlier in the evening, producing F2 damage. In Okmulgee County, the tornado only produced F0 damage in the form of numerous trees downed/uprooted along its path. When all was said and done, this tornado tracked 27 miles from 2_SE Boley to 3_SW Nuyaka, and it injured four people in Okfuskee County.								
Okmulgee County Nuyaka	04	2210CST			0	0	28K	Thunderstorm Wind	





#### OKLAHOMA, Eastern

OKLAHOMA, Eastern											
	ground		teeple blowr	away. A tra	iler had sh			Sheet metal from barns and sheds lay on the and the barn that stood in front of it was			
Okmulgee County	0.4	221E/CCT		100	0	0	FIZ	T 1 (F1)			
2 E Nuyaka to 3 ENE Nuyaka	04	2217CST 2218CST	1	100	0	0	5K	Tornado (F1)			
	Wildli	A seasoned storm chaser on an aerial survey of the area reported a one-mile damage track through a forested area in the Okmulgee Wildlife Management Area just east of Nuyaka. The degree of tree damage suggested the tornado was F1 intensity. Damage in this impopulated area consisted of numerous trees blown over.									
Okmulgee County Preston	04	2221CST			0	0		Hail (0.75)			
Okmulgee County Preston	04	2229CST			0	0		Hail (1.75)			
Okmulgee County											
Hector	04	2241CST			0	0		Hail (1.75)			
Okmulgee County Okmulgee	04	2243CST 2247CST			0	0	600K	Hail (2.25)			
	Very large golfball to baseball-sized hail caused extensive damage throughout the city of Okmulgee. The combination of very large hail and strong thunderstorm winds knocked out numerous windows. Several hundred homes and business sustained roof damage. The Okmulgee Times daily newspaper quoted the police chief as saying that the hailstorm "knocked out about half the windows in town." Windows were knocked out of many cars in the Wal-Mart parking lot, and many city vehicles had their windows knocked out. Two buildings at OSU-Okmulgee were extensively damaged. Other buildings on the campus had broken windows, while the campus greenhouse was nearly destroyed by the large hail and wind.										
	to the f	floor. The Board bu side was damaged.	ilding suffer	ed extensive	glass break	age and ro	oof damage. Fift	suffered extensive roof damage and damage teen buses received damage, and the steel roof igh school had minor roof damage to its new			
Craig County White Oak	04	2245CST			0	0	0.50K	Thunderstorm Wind			
	A roof	was blown off of an	outbuilding								
Okmulgee County											
Okmulgee	04	2245CST			0	0	20K	Thunderstorm Wind			
	combin							as not injured. When the strong winds were mulgee. See the separate preceding Hail entry			
Creek County 5 SW Depew	04	2310CST			0	0		Hail (0.88)			
Mcintosh County 8 NW Checotah	04	2310CST			0	0	0.50K	Thunderstorm Wind			
	Severa	l trees were blown a	cross OK H	wy 72 on the	Muskogee	McIntosh	County line one	mile south of Council Hill.			
Muskogee County											
1 S Council Hill	04	2310CST			0	0	0.50K	Thunderstorm Wind			
	Severa	l trees were blown a	cross OK H	wy 72 on the	Muskogee	McIntosh	County line.				
Tulsa County 3 E Bixby	04	2310CST			0	0		Hail (0.88)			
Muskogee County 3 N Muskogee	04	2327CST			0	0		Funnel Cloud			
	Location	on: along US Hwy	69 at the Ark	ansas River							
Wagoner County 3 S Tullahassee	04	2327CST			0	0		Funnel Cloud			
	т	1 110.11	(O ) (I ) A 1	D.							

Location: along US Hwy 69 at the Arkansas River





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

#### **OKLAHOMA**, Eastern

Wagoner County												
1 SE Tullahassee	04	2327CST	0.8	50	0	0	5K	Tornado (F0)				
	more	short-lived tornado ju ed roof damage to one	ist southeast o	f Tullahass	ee. The tor	rnado itsel	f produced a swa	and Okmulgee Counties produced another ath of damage through a forested area and ocked down trees in Tullahassee around 1230				
<b>Wagoner County</b>												
Tullahassee	04	2330CST			0	0	0.80K	Thunderstorm Wind				
	Trees	s were uprooted and a	skylight was l	broken.								
Muskogee County												
1 NE Muskogee	04	2348CST			0	0	1K	Thunderstorm Wind				
		Quite a few trees were blown down at OK Hwy 16 and US Hwy 62. There was apparently a 100-foot wide swath of damage. These winds were produced by the same thunderstorm that produced a tornado near Tullahassee.										
Cherokee County												
Hulbert	04	2350CST			0	0	0.50K	Thunderstorm Wind				
	Sever	ral trees were blown d	own.									
Okmulgee County	0.5	0000 CCT						T 11 (0.00)				
Morris	05	0000CST			0	0		Hail (0.88)				
Okmulgee County Morris	05	0000CST			0	0		Thunderstorm Wind (G52)				
Cherokee County	02	0000051			v	Ū		munderstorm (vind (302)				
10 N Tahlequah	05	0015CST			0	0	10K	Thunderstorm Wind				
	A bar	rn was blown away.										
Creek County		•										
Depew	05	0020CST			0	0	0.10K	Thunderstorm Wind				
	Sever	ral large tree limbs we	re blown dow	'n.								
Muskogee County												
Haskell	05	0020CST			0	0		Hail (0.88)				
<b>Adair County</b>												
Christie	05	0030CST			0	0	0.10K	Thunderstorm Wind (G52)				
	Large	e tree limbs were blow	n down.									
Delaware County		00.20 CCF					477	77 17 (4.00)				
Oaks	05	0030CST			0	0	4K	Hail (1.00)				
	Quar	ter-sized hail caused d	lamage to seve	eral cars in	Oaks.							
Ottawa County Commerce	05	0030CST			0	0	0.10K	Thunderstorm Wind				
Commerce			11	1	U	U	0.10K	Thunderstorm wind				
<b>T</b>	Sever	ral large tree limbs we	re blown onto	a road.								
Wagoner County 2 S Porter	05	0030CST			0	0		Hail (1.00)				
Craig County		00 4 <b>5</b> GGT					0.4077					
Welch	05	0045CST			0	0	0.10K	Thunderstorm Wind				
	Large	e tree limbs were blow	n down.									
Mayes County	05	0055CST			0	0	40K	Lightning				
Pryor			main Duva: 1:	oordin o o 11				all. The force of the lightning strike sent				
	Light	anng mi a dank duildi	ng m rrvor. 16	zaviny a nol	ie uie size c	л а ѕонда	n m n outside wa	an. The force of the hynthing strike sent				

Lightning hit a bank building in Pryor, leaving a hole the size of a softball in it outside wall. The force of the lightning strike sent bricks flying, one of which sailed through the bank's sign. Most of the computer terminals at the bank were lost.





Time Path Path Number of Estimated October 1998
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

OKLAHOMA	, Eastern
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Cherokee County Tahlequah	05	0110CST	0	0	0.10K	Thunderstorm Wind			
	A larg	ge tree was blown down.							
Delaware County Colcord	05	0115CST	0	0	2K	Thunderstorm Wind			
	The re	oof was partially blown off of a mobile home.							
<b>Delaware County</b>									
Kansas	05	0130CST	0	0	1K	Thunderstorm Wind			
	Severa	al trees were uprooted, and large tree limbs block	ted a roady	way.					
Delaware County	05	0120007	0	0	51/	Th 1			
1 S Kansas	05 The	0130CST	-	0	5K	Thunderstorm Wind			
Consile Consider	i ne ro	oof was blown off of a storage building at a lumb	er yard.						
Creek County Depew	05	0200CST	0	0	1K	Thunderstorm Wind			
•	Wind	blew away part of a condemned building.							
Delaware County		71							
5 W Leach	05	0245CST	0	0	0.50K	Thunderstorm Wind			
	Power	r lines were blown down along the Mayes/Delaw	es were blown down along the Mayes/Delaware County line.						
<b>Delaware County</b>									
Kansas	05	0255CST	0	0	0.50K	Thunderstorm Wind			
	The ro	oof was blown off of a tool shed.							
Delaware County 1 SW Colcord	05	0300CST	0	0	1K	Thunderstorm Wind			
1 SW Colcord		orch roof and skirting of a mobile home were blo		U	IK	i nunderstorin vvind			
Le Flore County	rne p	oren 1001 and skirting of a mobile nome were bic	owii away.						
Zafra	05	1530CST	0	0		Hail (0.88)			
Haskell County									
Mc Curtain	05	1650CST	0	0	0.30K	Thunderstorm Wind			
	Severa	al trees were blown down.							
Sequoyah County									
Vian	05	1700CST	0	0	0.10K	Thunderstorm Wind			
	Large	tree limbs were blown down.							
Le Flore County Poteau	05	1715CST	0	0	1.5K	Thunderstorm Wind			
Tottau		port and part of a fence were damaged on Conser		U	1.5K	Thunderstorm wind			
Pushmataha County	A cal	port and part of a refice were damaged on Conser	Jucci.						
Antlers	05	1900CST	0	0	3K	Lightning			
	Lightı	ning hit a home in Antlers, blowing a hole throug	h a wall, c	lestroyir	g two TV sets and catch	ning a set of curtains on fire.			
Pushmataha County		_							
Honobia	05	1900CST	0	0	0.10K	Thunderstorm Wind			

A tree was blown over.

Summary of tornado/severe events for October 4 PM - October 5 1998:

Oklahoma's worst-ever October tornado outbreak took place on the evening of October 4. At least 22 tornadoes occurred throughout Oklahoma, of which seven were in northeast Oklahoma. This outbreak of severe weather resulted as a powerful upper level storm system moved across the central plains and surface low pressure developed over southwest Oklahoma. Warm humid air quickly





October 1998 Estimated Damage erty Crops Time Local/ Standard Path Length (Miles) Number of Persons led Injured Path Width Date (Yards) Character of Storm

#### **OKLAHOMA**, Eastern

invaded the area on the morning of October 4 and then collided with a cold front moving southward by evening. The threat from these storms ran the full range of possibilities from destructive tornadoes to damaging winds to very large hail up to the size of baseballs.

Numerous storms occurred on the evening of October 4, mainly north of Interstate 40. The two most significant storms both moved eastward out of central Oklahoma. One produced an F1 tornado that passed through Pawnee. The other produced a 27-mile track F2 tornado that started in Okfuskee County and ended in Okmulgee County. This second storm later went on to produce considerable hail

	upper eveni line o gradu	level winds in excess of 100 knots. The ng that gradually spread eastward to the f thunderstorms that sat over nearly the s	se storms moved Arkansas state lin ame area of north	into north e. After r east Okla	east Oklahoma, nidnight, the sto homa through th	the evening in central Oklahoma, fanned be causing additional severe weather late in the causing additional severe weather late in the congealed and became a slow-moving the overnight hours. The severe threat the information on the flooding, see the separation of the conditions and the contraction of the contraction	the g
		te on the afternoon of October 5, the slow				lahoma and flared up during the heat of the	ne
Washington County			•		C		
South Portion	04 05 Sever	2200CST 1100CST al creeks were over roads in and near Ve	<b>0</b> ra.	0		Flash Flood	
Osage County							
East Portion	04 05	2300CST	0	0		Flash Flood	
	Quap					to be evacuated. Water flooded a gravel nools in Avant were closed on October 5.	
Pawnee County							
East Portion	04 05	2300CST 0500CST	0	0	38K	Flash Flood	
	A par			•	een Pawnee and	Skedee. Several creeks rose out of their	
Creek County							
Countywide	04 05 Low-	2330CST 0530CST lying areas across Creek County were flo	0 noded In Bristow	0 low spot	120K	Flash Flood ets were flooded	
	evacu boat o high v	capsized in the rain-swollen waters of the	1 st was closed due Polecat Creek 7 refighters rescued a	e to high v	water. Two teen th of Sapulpa. A	ded, and residents of the area had to be age boys had to be rescued when their fish motorist had to be rescued when strander in the area of South Independence south of	d by
Craig County							
Countywide	05	0000CST 0600CST	0	0		Flash Flood	
	Nume	erous streets and county roads were close	d in and near Vin	ita. A co	unty road off of	US Hwy 169 near Big Cabin was flooded	
Rogers County							
Countywide	05	0000CST 0900CST	0	0	11K	Flash Flood	
				from their	r vehicles, includ	ling a woman and her two children whose	van
	In Cla	aremore, several residences near 7th and	Muskogee Streets	had to be	e evacuated. Sev	veral streets in the city of Claremore were	_

closed by high water, including Lynn Riggs at JM Davis, Blue Starr, and Patti Page near the courthouse. Water flooded over US Hwy 169 between Oologah and Talala.

In Inola, flooding was apparent throughout the town as water overflowed the usual drainage system. Water was reported in at least one building. About twelve houses had water up to their doors, especially in the area of East Commercial near the railroad tracks and on West Commercial. Inola Creek, located one-half mile west of town, closed a roadway to traffic.

Near Oologah, water flowed over the bridge on E-W section line road 38 just east of US Hwy 169.

**Tulsa County** 0000CST 2359CST (Tul)Tulsa Intl Arpt 05 **Heavy Rain** 





October 1998 Path Length (Miles) Number of Persons led Injured Time Local/ Path Width Estimated Damage Date (Yards Character of Storm Standard **OKLAHOMA**, Eastern Rainfall for the calendar day of October 5 totaled 4.80 inches. This breaks the record as being the most rainfall on record at the Tulsa International Airport for October 5. The storm total for this rainfall event was 5.30 inches. **Wagoner County** 05 0000CST 97K Countywide Flash Flood OK Hwy 16 between Wagoner and Okay had to be closed because of high water. In the city of Wagoner, several houses and business were flooded. The old Verdigris River bridge south of Okay (no longer in use) had 70 feet of its remaining structure collapse into the river. Across southeastern Wagoner County, several of the county's wooden bridges sustained damage. In Coweta, many residents had to be evacuated due to rising water. Several residents of Coweta had to be rescued after being stranded in either their homes or their vehicles. **Mayes County** 05 0100CST 35K Flash Flood Countywide Several county roads near Pryor were closed by flooding. Several cars were stranded in high water. Water blocked the entrance to a manufacturing plant, closing the plant for the day. A man driving a pickup truck was swept away by floodwaters and was finally rescued from a tree that he had climbed for safety. A school bus on its early morning run stalled in high water. Several businesses in Locust Grove had up to one foot of water in them. Schools in Locust Grove and Salina let out early for the day. **Nowata County South Portion** 05 0100CST 5K Flash Flood A county road was washed out 2 miles northeast of New Alluwe. **Okmulgee County** Countywide 05 0100CST 0 193K Flash Flood In Morris, several streets were flooded. In Okmulgee, the railroad underpass near McDonald's on US Hwy 75 was closed. The only road in and out of the small community of Quail Creek was washed out, leaving residents of the community stranded. Schools in Beggs were closed. **Tulsa County** 05 0100CST 30K Flash Flood Countywide 0700CST Serious flooding took place throughout Tulsa County. In Jenks, several roads were closed due to street flooding. Jenks schools were closed for the day. Water entered three downtown businesses. There was damage to the carpet at the Jenks Public School Central Campus. In Tulsa, many street intersections were flooded, including 31st and Yale, 96th and Sheridan, and 2 feet of water over the road at 28th and 129th East Avenue. There was major street flooding across the city of Tulsa. A person was trapped in a car by high water at 800 N. Lewis. The basement of the Southwestern Bell telephone building in downtown Tulsa took on water, causing the loss of phone service across much of Tulsa for several hours and temporarily disabling 911 emergency service. Cell phones, pagers, and 911 emergency services across much of eastern Oklahoma also experienced interrupted service due to the flooding at the Southwestern Bell building. The economic impact of the phone service interruption is not included in the dollar damage estimate. In Broken Arrow, many city streets were flooded and impassable. One woman had to be rescued from her car on a bridge near 101st and Garnett when her car stalled in four feet of water. Two other women had to be rescued when they tried crossing a swollen creek on foot on 81st Street near the Oak Creek subdivision. In Glenpool, several streets were closed by high water, including 121st at US Hwy 75, 131st at US Hwy 75, and Caspar from 146th to 148th Streets. A woman and her daughter had to be rescued when their car stalled in high water near 141st and Fern. Two cars stalled out at US Hwy 75 and 201st Street, where only the cars' roofs were visible. Several residents had to be evacuated, and two downtown businesses received flood damage. **Mcintosh County** Countywide 0 0 51K Flash Flood

10

Flooding reported at Fountainhead State Park. Infrastructure damage resulting from flash flooding countywide estimated at \$51,000.

30K

Flash Flood

1200CST

0800CST

05

Ottawa County Countywide





Storm Data and Unusual Weather Phenomena October 1998 Path Length (Miles) Number of Persons led Injured Time Local/ Path Width Estimated Damage v Crops Date (Yards Character of Storm Standard **OKLAHOMA**, Eastern In Miami, there was extensive flooding throughout the city. The Neosho River overflowed its banks, flooding Riverview Park and the Miami fairgrounds. Tar Creek overflowed into several homes in the Skyranch subdivision of northeast Miami and caused flooding along Elm Street. OK Hwy 125 was closed for a time west of town. Near Cardin, a stranded motorist had to be rescued when her van stalled in high water. Another motorist had to be rescued from the Tar Creek Bridge when the water level rose quickly over the road. Nearby, an elderly woman had to be evacuated from her home when water flooded her home near the Tar Creek at Cardin. Another woman had to be rescued from her vehicle just east of Commerce. Water had filled all but the top few inches of the passenger compartment. **Cherokee County** 0500CST 1100CST Countywide 05 149K Flash Flood A family of four had to be rescued when their van started floating near Teresita. One of the rescuers, a member of the Oaks Fire Department, broke his arm when the van unexpectedly started floating away as the rescuers were approaching the vehicle. OK Hwy 80 was closed by flooding between Hulbert and Fort Gibson. In Tahlequah, six streets were closed by high water. Near Peggs, OK Hwy 82 was closed when waters from Blackbird Creek flowed over the road. Five locations along Shilo Road north of Gideon were washed away. Littlefield Bridge north of Peggs was washed away, and another road was washed out just south of Teresita. **Delaware County** Countywide 05 0600CST 5K Flash Flood High water washed across many roads countywide. There was lots of street flooding, especially near Grove. Cherokee Street north of Grove had to be closed when a tributary of Wolf Creek overflowed. Grove City Park was flooded. OK Hwy 25 near Grove was under one foot of water. There was street flooding in West Siloam Springs. Five school buses were stranded in high water when school let out early around noon CDT in the Jay school district. **Muskogee County** 0630CST 1000CST Countywide 05 30K Flash Flood In Muskogee, some streets were closed by flooding. A low-water crossing one mile southwest of Council Hill was covered by water. In Fort Gibson, there was some street flooding. In Haskell, residents of the Haskell Manor Nursing Home were evacuated due to flooding. Two buildings in downtown Haskell were flooded. Several rural roads were closed, and one rural bridge was washed out. US Hwy 64 at the Ash Creek bridge southeast of Haskell was closed by rising waters. At least one woman had to be rescued from a van after she drove the vehicle into high running water on Duncan Road. **Okfuskee County** 05 118K Countywide Flash Flood A road was closed south of Bearden due to high water. Damage to roads and bridges countywide reported at \$118,000. **Haskell County** Countywide 1600CST Several creeks rose out of their banks. A road was closed due to high water. Some roads near Lequire were flooded. Street flooding noted near Quinton. **Adair County** Countywide 05 15K Flash Flood Water crossed US Hwy 59 in several low-lying areas between Stilwell and Baron. On the US Hwy 59 bypass near Stilwell, several vehicles stalled out in high water. A pickup truck was washed off of Section Line Road northwest of Stilwell around noon CDT. **Pittsburg County** Countywide 05 1100CST Flash Flood 1800CST Several streets in McAlester flooded when manhole covers popped their lids. Two streets in the city had to be closed for a time. **Sequoyah County** Countywide 05 30K Flash Flood

05 1300CST 2000CST

Several city and county roads near Wilburton were closed by high water. At least two vehicles in Wilburton were stranded by high

Small roads were washed out by Cato Creek 1.5 miles northeast of Blackgum. Water covered the road near Tenkiller Dam.

1800CST

water. Parts of US Hwy 270 were partially under water.

Latimer County Countywide





Time Local/ Standard Path Length (Miles) Number of Persons Killed Injured Estimated Damage erty Crops October 1998 Path Width (Yards) Location Date Character of Storm

OKLAHOMA, Easter	<u>n</u>							
Le Flore County Countywide	05	1300CST 2000CST		0	0	10K	Flash Flood	
		covered the main road in Potes e west of Panama.	au, causing several	cars to sta	II. Ther	e was major str	reet flooding in Zafra. Wate	er covered a road
Pushmataha County								
Countywide	05 Creeks	1400CST 2000CST overflowed low-water bridges	s in rural areas off o	<b>0</b> of OK Hwy	<b>0</b> y 144 w	est of Nashoba.	Flash Flood	
	Summa	ary of flooding events for Octo	ober 4-5 1998:					
	steady to line of through Some of causing thunder county  Several River a Bear Cr.  Some r6.45,5.59, Tahleque Talihin	tarted out as Oklahoma's worstrain of supercell thunderstorms thunderstorms early on the month the overnight and pre-dawn I of the heaviest rain fell in the Tiglesser but still heavy rain amoustorms reached the southeast in eastern Oklahoma not to see mainstem rivers rose above for the Lenapah, the Neosho River area at Pawnee, and the Poleca ainfall totals from October 4-5 Pryor 4N6.21, Bristow 45 Jay 4N5.46, Tulsa International Land 18 Jay 4N5.46, Tulsa International Assertion 18 Jay 4N5.46, Tulsa International 48E3.68, McCurtain 18	ns moving across norning of October 5 nours of October 5, Tulsa metro area. A ounts of 3 to 5 incheorner of Oklahom the flash flooding was lood stage from the at Commerce and C at Creek at Sapulp 5 include (in inches E6.08, Welty_15 tional Airport (TUI 7E (Vinita mesone	ortheast Old. This line, dumping values across sea on the evalues Choctawall Phage 2. SSE6.00, L)5.30, Kt)4.46, C	klahoma of thun widesprose, the lissoutheas rening of county county ns, incluse Poteau s. SE7.1 Lyons_ Kansas_ Clayton.	n on the evening derstorms remarked rainfall arme of thunderstorm to and eastcentrate of October 5, rainfall ding the Bird Cu River at Panarket Pan	g of October 4 congealed intained nearly stationary roug ounts of 5 to 7 inches along orms started a slow southea: al Oklahoma. By the time t infall rates were not as inten II amounts were generally 2. Creek at Sperry and Owasso ama, the Deep Fork River at NW6.69, Jenks Riverside VS Tulsa (NE Tulsa)5.88, Iiami_2NE5.17, Wilburto 2ENE4.02, Webbers Falls	to a slow-moving hly along I-44 the I-44 corridor. stward drift, he line of se. Thus, the only 5 inches or less.  the Verdigris Beggs, the Black  Airport (RVS)  Wynona_2S  n_9ENE5.06,  s3.90,
	Okema	h2.79.		7-		_	,	,
OKZ059	Pawnee 05	0300CST		0	0		Flood	
	The Bla	2200CST ack Bear Creek at Pawnee ros	e above its flood st	age of 17 f	eet to re	ach a flood cre	est of 19.7 feet at 9 AM CD	Γ on October 5.
OKZ064	Creek							
	05 06 The Po	0300CST 2300CST lecat Creek at Sapulpa rose al	pove its flood stage	of 21 feet	0 and read	ched a flood cre	Flood est of 26.8 feet at 9 AM CD	T on October 5.
OKZ060	Tulsa							
	05 06	0300CST 2300CST		0	0		Flood	
OV7050		lecat Creek at Jenks rose abov	e its flood stage of	17 feet an	d reache	ed a flood crest	of 19.2 feet at 9 AM CDT of	on October 5.
OKZ058	Ottawa 05	0500CST		0	0		Flood	
	08 The Ne	1200CST cosho River at Quapaw rose al	ove its flood stage	of 20 feet	and read	ched a flood cre	est of 25.5 feet at 10 AM CI	OT on October 7.
OKZ060	Tulsa							
	05 06	0800CST 1500CST		0	0	1 (1 1	Flood	0.1.6
OKZ060		rd Creek at Owasso rose abov	e its flood stage of	25 feet and	i reache	d a flood crest o	of 29.5 feet at 12 AM CDT	on October 6.
OKZ000	Tulsa 95	0800CST		0	0		Flood	
	<b>06</b> The Bir	1000ĈŜT rd Creek at Sperry rose above	its flood stage to re	each a floo	d crest o	of 24.8 feet at 6	PM CDT on October 5.	
OKZ066	Okmulg							
	05 12	1300CST 2000CST		0	0		Flood	
	The De 10.	ep Fork River at Beggs rose a	bove its flood stage	e of 18 feet	and rea	iched a flood cr	rest of 22.6 feet at 12 AM C	DT on October





Time Path Path Number of Estimated October 1998
Location Date Standard (Miles) (Yards) Killed Injured Property Crops Character of Storm

#### OKLAHOMA, Eastern

OKZ056	Nowata	a								
	05 07	2000CST 0700CST	0	0		Flood				
			lood stage of 30	feet and	reached a flood c	rest of 32.7 feet at 5 PM CDT on October 6.				
OKZ076	Le Flor									
	06 07	1400CST 2000CST	0	0		Flood				
	The Po	oteau River at Panama rose above its floor	d stage of 29 fee	t to reac	h a flood crest of 3	31.4 feet at 7 AM CDT on October 7.				
Adair County	16	1920CST	0	0		Heil (0.75)				
Stilwell	16	1920CS1	U	0		Hail (0.75)				
	Summ	ary for October 16 1998:								
	A surg Octobe	ge of moisture and warm air on the heels of er 16 to produce a severe thunderstorm ov	of strong souther over Adair County	ly winds y. The m	helped to destabil nain threat from th	ize the atmosphere enough on the evening of is storm was marginally severe hail.				
Tulsa County	15	ADDA CCIT	0	0		и в				
(Tul)Tulsa Intl Arpt	17	0000CST 2359CST	0	0	6.11.	Heavy Rain				
	The da	aily rainfall of 1.32 inches breaks the reco	ord as being the r	nost raın	ifall to occur at the	e Tulsa International Airport on this date.				
Osage County Hominy	17	1210CST	0	0		Thunderstorm Wind (G57)				
Osage County		1210001	v	v		Thunderstorm (Vina (Ge7)				
7 NE Barnsdall	17	1215CST	0	0	0.10K	Thunderstorm Wind				
	Large tree limbs were blown down at the Woolaroc Museum.									
Osage County										
4 E Hominy	17	1215CST	0	0	4K	Thunderstorm Wind				
	A pum	np house was blown out of a pasture and o	onto OK Hwy 20	).						
<b>Washington County</b>										
Copan	17	1305CST	0	0	0.10K	Thunderstorm Wind				
	Large	tree limbs were blown down in Copan.								
Osage County Wolco	17	1330CST	0	0		Thunderstorm Wind (G61)				
Osage County	17	1330031	v	U		Thunderstorm Wind (GOT)				
1 NW Skiatook	17	1400CST	0	0		Funnel Cloud				
<b>Pawnee County</b>										
Terlton	17	1400CST	0	0	0.10K	Thunderstorm Wind				
	Large	tree limbs were blown down in Terlton.								
<b>Washington County</b>										
Ochelata	17	1400CST	0	0		Thunderstorm Wind (G52)				
Washington County 1 E Ochelata	17	1400CST	0	0	10K	Thunderstorm Wind				
12 00		was destroyed just east of Ochelata. Pov								
Washington County	71 Ourn	was desiroyed just east of Generala. To	wer poies were u	iso snapi	ped on.					
2 W Vera	17	1405CST	0	0	6K	Thunderstorm Wind				
	Two ca	ars were blown off of US Hwy 75.								
<b>Washington County</b>										
Ramona	17	1420CST	0	0	2K	Thunderstorm Wind				
	The ro	of was blown off of a barn.								
Osage County										
Avant	17	1500CST	0	0	2K	Thunderstorm Wind				





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

#### **OKLAHOMA**, Eastern

Several power poles were blown down near Avant.

Summary of events for October 17 1998:

A cold front pushing across northeast Oklahoma and the tail end of an upper level disturbance moving across the northern plains on the afternoon of October 17 helped to kick off a few severe thunderstorms between Tulsa and the Kansas state line. Several rounds of thunderstorms moved across the affected area with one thunderstorm demonstrating strong rotation and containing a funnel cloud. Otherwise, the main threat from these storms was in the form of damaging winds and marginally severe hail.

OKZ058 Ottawa

18 0800CST 0 0 Floor 2100CST

The Neosho River at Commerce rose above its flood stage of 15 feet and reached a flood crest of 17.0 feet at 6 AM CDT on October 19.

OKZ060 Tulsa

28 0000CST 0 0 Excessive Heat

The low temperature at the Tulsa International Airport on October 28 was 62 degrees Fahrenheit. This ties for being the warmest low temperature on record in Tulsa for this date.