



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

Alfalfa County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Blaine County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Caddo County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Canadian County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Dewey County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Garfield County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Grady County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Grant County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Kay County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Kingfisher County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Lincoln County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Logan County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Major County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Noble County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Oklahoma County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Payne County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Pottawatomie County									
Countywide	01 02	0000CST 2359CST			0	0			Flood
Woods County									
Countywide	01 02	0000CST 2359CST			0	0			Flood



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

Woodward County
Countywide

01	0000CST								
02	2359CST				0	0			Flood

Very heavy rain fell over much of northern Oklahoma during late October and early November. Precipitation totals between 3 and 11 inches were recorded during the three-day period of October 31-November 2, 1998 at locations in west-central, northwestern, central and north-central Oklahoma. Some of the heaviest rain fell over river basins in northern Oklahoma where soil moisture was already very high due to recent precipitation events in early and mid October.

Major to record flooding was seen in north-central Oklahoma along the Salt Fork of the Arkansas and Chikaskia Rivers. Moderate to major flooding plagued the Cimarron river basin in northwestern and central Oklahoma while minor flooding was observed along the North Canadian and Canadian Rivers in west-central and central Oklahoma. Crests above flood stage were recorded at a total of 16 forecast points and 6 data points in the HSA. In total, 17 counties were affected. All of the river crests occurred on the 1st and 2nd of November. The river gage site at Blackwell on the Chikaskia River recorded a new record crest of 34.40 feet at 1630 CST on November 2. Flood stage is 29 feet. The previous record was 34.31 feet set on May 10, 1993. The Salt Fork of the Arkansas River at Tonkawa crested at 26.29 feet, which is the fifth highest crest at the site.

One fatality and one injury occurred during the flood event in Alfalfa County. A 19 year-old woman drowned when floodwaters from Eagle Chief Creek swept her car off of State Highway 8B just east of Aline in southwestern Alfalfa County. The victim was eight months pregnant at the time of the accident. The accident occurred at about 2200 CST on Saturday, October 31st, while heavy rain was falling in the area. The driver, who was the 45 year-old mother of the flood victim, managed to take refuge in a tree and was not rescued until 0900 CST on Monday, November 2nd. She sustained leg and arm injuries and was also treated for hypothermia.

Emergency management officials said that a total 35 homes in the counties of Kay and Grant received major damage, while 22 homes incurred minor damage. Fifty-one of these homes were located in the city of Blackwell in Kay County while the remaining 6 homes were located in Grant County in the city of Jefferson near the Salt Fork of the Arkansas River. Approximately 166 residents were evacuated from the eastern and northern portions Blackwell during the event. Another 15 people were evacuated from areas in Kay County including the area south of White Eagle near the Salt Fork of the Arkansas River. Seven families were evacuated near the city of Tonkawa.

In northwestern Alfalfa County, rainfall amounts of 8 to 13.5 inches caused a diversion dike on Stink Creek to break along the northwestern and southern sections of the town of Burlington at 0230 CST on Sunday, November 1st. Approximately 50 people from 25 houses were forced to evacuate to the Burlington City Hall and the Burlington Little Gym. Residents were unable to leave Burlington for most of Sunday as State Highway 8 was flooded. Some unofficial storm total amounts included 13.5 inches 1 mile west of Burlington, 12 inches just north of Burlington and 11.5 inches in Burlington.

In Kay County, numerous farm roads were washed away, and 4 bridges were destroyed. In Alfalfa County, a highway detour on State Highway 11 just west of Burlington was washed away for the second time in 1998 when 10 inches of rain fell in the area. Numerous county bridges were also washed out near Burlington, and the bridge approach on State Highway 11 west of Cherokee in Alfalfa County was destroyed. At about 0600 CST on November 1st, a truck pulling a trailer filled with more than 100 cattle drove off the State Highway 8 bridge at Driftwood Creek, about 4 miles west-northwest of Burlington in northwestern Alfalfa County. The driver survived, but almost all of the cattle drowned.

In Kingfisher County, the Gould Bridge was washed out 12 miles northeast of Kingfisher, and the county road leading to the bridge was heavily damaged. In the city of Kingfisher, sewer drain damage occurred, and four business buildings and homes sustained damage. In Payne County, floodwaters from the Cimarron River and its tributaries destroyed several bridge approaches and flooded many secondary roads near the cities of Stillwater, Perkins and Ripley. Some of the major rivers and creeks which flooded in central and northern Oklahoma include the Cottonwood and Kingfisher Creeks, and the Canadian, Chikaskia, Cimarron, Deep Fork, North Canadian, and Salt Fork of the Arkansas Rivers. In addition, other minor tributaries and streams also overflowed their banks in some areas of the HSA and produced minor to moderate flooding. These streams include the Black Bear, Bloody, Deer, Driftwood, Dead Indian, Eagle Chief, Red Rock, Skeleton and Stink Creeks in Oklahoma.

Many local, state and federal highways were closed in portions of Oklahoma due to the flooding, and widespread areas of agricultural lands and rural roads were also inundated. Some of the road and highway closures included:

Alfalfa County
State Highway 11 - U.S. 64 junction closed east of Cherokee to State Highway 38
State Highway 8B from Cherokee to Aline
State Highway 8 in Burlington

Grant County
State Highway 74 south of Lamont



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

U.S. 60 between Lamont and Pond Creek
 State Highway 132 closed 5 miles north of the State Highway 11 junction
 U.S. 81 north of Pond Creek

Kay County
 Old U.S. 60 near Tonkawa
 U.S. 177 between Blackwell and the Kansas State line
 Hubbard Road between Ponca City and Blackwell
 State Highway 156 south of U.S. 60
 13th Street and Hubbard between Tonkawa and Blackwell
 U.S. 77 and Fountain Road south of Tonkawa
 Old U.S. Highway 60 to State Highway 156
 156 extension between old and new U.S. 60
 Interstate 35 - traffic reduced to one lane in the southbound lanes for 12 hours from 4 a.m. to 4 p.m. 11/2/1998
 State Highway 156 between Ponca City and Marland, OK

Kingfisher County
 State Highway 51 between Hennessey and Okeene at the Cimarron River
 State Highway 33 in Kingfisher
 U.S. Highway 81 north of Kingfisher
 County Line Road west of Okarche

Logan County
 State Highway 33 west from Guthrie
 U.S. 77 north of Guthrie
 Broadway between Guthrie and Edmond

Noble County
 State highway 15 near Red Rock Creek

Oklahoma County
 Waterloo Road and May Avenue
 U.S. 74 in northwest Oklahoma County (4 feet of water over the road)

Payne County
 12th Street in Stillwater
 Intersection of 21st and Sangre in Stillwater
 100 Block of Knoblock in Stillwater
 Prairie Road 1.5 miles south of State Highway 51
 River Road east of Perkins
 Range Road 1.5 miles north of State Highway 33

Alfalfa County									
Burlington	09	1805CST			0	0	0.01K		Thunderstorm Wind
Garfield County									
Lahoma	09	1923CST			0	0			Hail (0.75)
Garfield County									
Drummond	09	1925CST			0	0			Hail (1.00)
Garfield County									
Drummond	09	1925CST			0	0			Thunderstorm Wind (G61)
Garfield County									
Enid	09	1930CST			0	0	0.20K		Lightning
Kay County									
3 W Tonkawa	09	1945CST			0	0			Hail (1.00)
Kay County									
3 W Tonkawa	09	1945CST			0	0			Thunderstorm Wind (G52)
Tillman County									
Frederick	09	1953CST			0	0			Thunderstorm Wind (G58)



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

Kay County Blackwell	09	1955CST			0	0			Hail (0.75)
Caddo County Gracemont	09	2005CST			0	2	2K		Lightning
Kay County Blackwell	09	2005CST			0	0			Hail (0.88)
Kay County Blackwell	09	2005CST			0	0			Thunderstorm Wind (G52)
Comanche County Lawton	09	2010CST			0	0			Thunderstorm Wind (G52)
Caddo County 5 N Cyril	09	2015CST			0	0	1K		Lightning
Comanche County 4 SE Sterling	09	2020CST			0	0	25K		Thunderstorm Wind
Canadian County Yukon	09	2027CST			0	0			Thunderstorm Wind (G54)
Grady County Chickasha	09	2034CST			0	0	6K		Thunderstorm Wind
Grady County 2 SSE Chickasha	09	2035CST			0	0			Thunderstorm Wind (G54)
Logan County Guthrie	09	2040CST			0	0	0.50K		Thunderstorm Wind
Stephens County Duncan	09	2045CST			0	0	2K		Thunderstorm Wind
Payne County 5 W Stillwater	09	2049CST			0	0	0.50K		Thunderstorm Wind
Oklahoma County Spencer	09	2053CST 2145CST			0	0	0.10K		Thunderstorm Wind
Canadian County Oklahoma City	09	2054CST			0	0	0.01K		Thunderstorm Wind
Oklahoma County Oklahoma City	09	2054CST			0	0	0.01K		Thunderstorm Wind
Stephens County 10 E Duncan	09	2055CST			0	0			Thunderstorm Wind (G52)
McClain County Blanchard	09	2100CST			0	0	0.10K		Thunderstorm Wind
Oklahoma County Edmond	09	2100CST			0	0	0.01K		Thunderstorm Wind
Oklahoma County Oklahoma City	09	2100CST			0	0	1K		Lightning
Cleveland County Norman	09	2105CST			0	0	0.10K		Thunderstorm Wind
McClain County Purcell	09	2115CST			0	0	0.10K		Lightning
McClain County 1.5 SW Purcell to 1 E Purcell	09	2115CST 2118CST	2.5	125	0	0	100K		Tornado (F1)



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

Cleveland County									
1 W Lexington to 1 NE Lexington	09	2118CST 2120CST	2	125	0	0	10K		Tornado (F0)
Garvin County									
1 SW Pauls Valley	09	2135CST			0	0	20K		Thunderstorm Wind
Carter County									
Milo	09	2140CST			0	0	4K		Thunderstorm Wind
Carter County									
Lone Grove	09	2154CST			0	0	0.50K		Thunderstorm Wind
Murray County									
3 E Davis	09	2155CST			0	0	0.50K		Thunderstorm Wind
Murray County									
4 S Davis	09	2155CST			0	0	0.50K		Thunderstorm Wind
Murray County									
Sulphur	09	2155CST			0	0	0.50K		Thunderstorm Wind
Carter County									
Ardmore	09	2159CST			0	0			Thunderstorm Wind (G69)
Pontotoc County									
11 W Ada	09	2159CST			0	0			Thunderstorm Wind (G52)
Pontotoc County									
2 W Roff	09	2159CST			0	0	20K		Lightning
Pontotoc County									
1 W Roff	09	2203CST			0	0			Thunderstorm Wind (G57)
Seminole County									
Seminole	09	2207CST			0	0	1K		Thunderstorm Wind
Johnston County									
Mill Creek	09	2209CST			0	0	1K		Thunderstorm Wind
Pontotoc County									
Ada	09	2209CST			0	0	35K		Thunderstorm Wind
Seminole County									
Sasakwa	09	2210CST			0	0	0.50K		Thunderstorm Wind
Love County									
Marietta	09	2214CST			0	0	50K		Thunderstorm Wind

A long line of severe thunderstorms moved across most of western and central Oklahoma during the evening of the 9th producing 1 tornado, widespread straight-line wind damage, and large hail. As the line of thunderstorms moved into northwest Oklahoma, large limbs were downed in Burlington in Alfalfa County. Lightning then started 3 fires as the line of thunderstorms moved east. Lightning first struck a power pole in Enid in Garfield County, causing a power outage and a small fire. Lightning then struck a fence in Gracemont in Caddo County destroying it. Two young boys who were playing next to the fence were injured and needed to be hospitalized. An oil tank battery then exploded 5 miles north of Cyril, also in Caddo County, when lightning struck it. A small fire then started but was quickly extinguished.

Father south in Comanche County, thunderstorm winds produced a 1/4 mile swath of damage 4 miles south of Sterling. A mobile home was destroyed, and several barns were damaged. A house porch was also destroyed. Near Chickasha in Grady County, a storage building was destroyed; another building was damaged, and a portion of a roof from a local tavern was damaged. Trees were blown down across a road in Guthrie in Logan County, while in Duncan in Stephens County, a roof was blown off a storage shed; an airport hangar was damaged, and power lines were downed. Numerous trees were uprooted 5 miles west of Stillwater in Payne County. Numerous large tree limbs were downed on the Oklahoma/Canadian County line and in Spencer and Edmond in Oklahoma County. Lightning also struck a house in the 5000 block of NW 20th St. in Oklahoma City in Oklahoma County causing a fire. Trees were downed in Blanchard in McClain County; a pear tree was blown down in Norman in Cleveland County, and lightning struck a tree in Purcell in McClain County, destroying it.

A small and fast moving tornado, rated an F1, embedded in the line of thunderstorms, then touched down near Purcell in McClain



National Weather Service

Storm Data and Unusual Weather Phenomena



November 1998

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

OKLAHOMA, Western, Central and Southeast

County at S 10th St. and W Brule St., then tracked east-northeast to the main downtown business district. Tree damage was extensive in the southwest part of the city where a barn and home were also damaged. Damage in the downtown business area included collapse of a brick wall, tar roofs blown off, shingle damage, broken windows, and destroyed signs. Tree damage, downed power lines, and minor roof damage was observed in Cleveland County near Lexington.

Two semi-trucks were blown over by straight-line winds on Interstate 35, 1 mile southwest of Pauls Valley in Garvin County, while in Milo in Carter County, the Baptist Church roof was damaged; windows were blown in at the house next to the church, and a twenty-one inch diameter tree was blown down. Also in Carter County in Love Grove, large tree limbs and power lines were downed. Trees were downed and blocked roads in Murray County 3 miles east of Davis, 4 miles south of Davis, and in Sulphur. Lightning also sparked a fire 2 miles west of Roff in Pontotoc County, that consumed 20 large bales of hay. In Ada, also in Pontotoc County, numerous trees were uprooted; roofs were blown off of a house, garage, and 2 barns; a tree was blown into a house, and a well and well house were heavily damaged. In Seminole County, numerous trees were uprooted in the city of Seminole along with a carport being damaged, while in Sawakwa, also in Seminole County, trees were downed and blocked many roads. Minor damage occurred to a house in Mill Creek in Johnston County. Numerous tree limbs and power lines were also downed. The last report of damage came from Marietta in Love County where widespread wind damage occurred in the city of Marietta including damage to house roofs, cars and businesses. Numerous trees were downed, and 80 percent of the city was left without power. A semi-truck was also blown over.

Garfield County (End)Vance Afb Enid	10	1940CST			0	0	1K		Thunderstorm Wind (G50)
Payne County 8 W Cushing	29	2000CST			0	0	1K		Thunderstorm Wind
Payne County 3.5 NNW Cushing to 4 N Cushing	29	2010CST 2015CST	2	100	0	0	20K		Tornado (F0)

A small tornado touched down northwest of Cushing and remained on the ground for 2 miles damaging trees, storage buildings, and several rural residences. Five sheet metal storage buildings and barns were either damaged or destroyed. Minor damage also occurred to a house and mobile home. The house had a porch, shutters, and roof shingles missing. The mobile home had many windows blown out. In addition to the tornado, straight-line winds caused minor damage to a rural home in southern Payne County 8 miles west of Cushing.

TEXAS, Western North

Hardeman County Chillicothe	09	1905CST			0	0	1K		Thunderstorm Wind
Wilbarger County Vernon	09	1914CST			0	0	0.20K		Lightning
Wilbarger County 13 N Vernon	09	1914CST			0	0	0.20K		Thunderstorm Wind
Wichita County Electra	09	1952CST			0	0	2K		Thunderstorm Wind
Wichita County Sheppard Afb	09	2044CST			0	0			Thunderstorm Wind (G53)

A line of severe thunderstorms moved across western portions of North Texas during the evening of the 9th, causing wind damage in many areas. Numerous trees and power poles were downed in Chillicothe in Hardeman County; a utility pole was blown down 13 miles north of Vernon in Wilbarger County, and a carport was destroyed in Electra in Wichita County. Lightning also struck a power pole in Vernon causing a power outage.