

OKLAHOMA MONTHLY CLIMATE SUMMARY

DECEMBER 2004



Oklahoma Climatological Survey

Overview

Despite the occurrence of a rare white Christmas for parts of the state, an uncommon event made even more remarkable due to its proximity in southern Oklahoma, December 2004 was a decidedly unremarkable month weather-wise. Warm temperatures and a lack of significant precipitation were the main storylines. The month finished as the 19th driest on record, a contrary punctuation on the 20th wettest year the state observed since record-keeping began in 1895. The temperatures, on the other hand, fell into lock-step with the warmer than normal readings so prevalent during the previous 11 months, ending as the 28th warmest in the state's record books.

The state's tornado tally for 2004 was slightly above normal with a preliminary total of 62, bettering the average twister count since 1950 by eight. Fortunately, most of those tornadoes fell into the "weak" category, rated either F0 or F1 on the Fujita Intensity Scale for tornadoes. Specifically, 60 of the tornadoes were considered weak, whereas two were rated at F2 and the remaining tornado was an F3.

Precipitation

Virtually the entire western two-thirds of the state failed to receive at least an inch of precipitation, while the remaining one-third barely exceeded an inch. The far northwest was practically without precipitation, measuring less than a quarter of an inch, on average. That meager total was the 26th driest December on record for that area, approximately one-half of an inch below normal. The statewide-averaged total fell more than an inch below the established normal for the month; the associated ranking indicative of the dry nature of the first winter month. In the continuation of a year-long trend, the southeast corner of the state was the driest statistically at nearly three inches below normal, the 9th driest such period on record. For the year, that region was well over four inches below normal, and by no small margin the only section of the state to finish below normal for the year. The area with the smallest surplus for the year was central Oklahoma at over an inch above normal, enough to finish as the 26th wettest year on record. Several areas of the state had significant precipitation surpluses for the year. The Panhandle and west central regions ranked in the top ten wettest years on record at well over four and seven inches above normal for the year, respectively.

Temperature

The statewide-averaged temperature reached nearly three degrees above normal for the month, spurring an already warm statewide-averaged annual temperature to rank as the 33rd warmest in the record books. West central Oklahoma, as with the precipitation totals, appeared to be the recipient of the greatest temperature anomaly at well over four degrees above normal for the month, the 11th warmest December on record for that area of the state. The numbers were similar for the annual temperatures as the same region finished over one degree above normal to rank in the top-quarter warmest such periods on record.

December 2004 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	78°F	Altus, Retrop	December 20th
Low Temperature	-12°F	Goodwell	December 24th
High Precipitation	1.97 in.	Okemah	
Low Precipitation	0.06 in.	Slapout	

December Daily Highlights

December 1-4: Seasonable weather greeted 2004's final month. The first four days provided plenty of sunshine with lows falling as low as the teens in the far northwest to 30s and 40s in the southeast. Highs followed the same pattern as temperatures rose into the 40s and 50s in the northwest, whereas the southeast saw 50s and 60s. The winds were generally light during this period, although the winds on the 4th whipped smartly around to the south at 10-20 mph.

December 5-7: Moisture borne northwards on the strong southerly winds eventually allowed a few showers to develop in eastern Oklahoma on the 5th, although amounts were generally light. The state's only real bout with severe weather occurred on the 6th, although even that was tame by Oklahoma standards. A few instances of wind damage in Love and McIntosh counties were reported by local residents, while an instance of moderate-sized hail was reported in Harmon County near Hollis. Rainfall amounts of over an inch were recorded by Oklahoma Mesonet sites at Okemah and Pryor, with similar amounts recorded at

several locations in eastern portions of the state. Highs on the 6th reached into the upper 60s, with a 70 degree reading being recorded at the Idabel Mesonet site. The state was cut in half by differing air masses on the 7th as dry, cool air filtered into the far northwest. Lows that morning were in the 20s in the far northwest, but managed to remain in the upper 30s and 40s in the moist air in the southeast.

December 8-12: A deepening low pressure system at the surface across southwest Kansas kept winds from the south at 10-20 mph with higher gusts. Lows on the 8th were 10 degrees warmer than the previous day across most parts of Oklahoma, dropping only into the 40s. Overall, the weather was pleasantly warm throughout these five days. High temperatures were mainly in the 50s and 60s, although a few areas in western Oklahoma managed to reach the mid-to-upper 70s on the 11th. A weak cold front moved through on the 12th, but temperatures behind the front were only a few degrees cooler than ahead of the front. The front did switch winds around to a northerly direction at 5-15 mph. This period began a string of 13 consecutive days in which no precipitation was reported in the state.

December 13-20: The string without precipitation continued for another eight days, similar to the previous five. The temperatures cooled down for the 13th-16th behind northerly winds, allowing wind chills to drop into the upper teens in the northwest, and the 20s elsewhere. The temperatures rebounded back into the 50s and 60s on the 17th with the winds switching around to a southerly direction in advance of an upper-level storm system spinning over the southwestern U.S. A fast-moving cold front pushed through on the 19th. Low temperatures fell into the low-mid 20s across the northern half of the state, and the 30s elsewhere. Highs were 10-20 degrees cooler than the previous day, with the northern section remaining in the 30s. As the upper-level storm approached from the west, the southerly winds increased and high temperatures exploded into the upper 70s across southern Oklahoma. The Altus and Retrop Mesonet sites recorded the highest temperatures of the month on the 20th at 78 degrees.

December 21-24: The coldest weather of the season thus far arrived just in time for the holiday season. A strong cold front blasted through the state on the 22nd, bringing a rare snowstorm to southern Oklahoma. Amounts ranged from trace amounts in central Oklahoma to four inches at Durant. Temperatures plummeted throughout this period. Lows reached into below-zero territory in northwestern Oklahoma on the 23rd and 24th, with Goodwell suffering through a bone-chilling -12 degrees on Christmas Eve. The sun returned on that day, but highs remained below freezing in most locations.

December 25-31: That was pretty much it for the precipitation for the month, although southern Oklahoma enjoyed a rare treat with snow remaining on the ground on Christmas day. The temperatures rebounded quite nicely on the holiday with highs rebounding into the upper 50s and 60s. Temperatures continued

to inch up the next couple of days, finally reaching the 60s and 70s again on the 28th. The strong southerly winds that helped boost the temperatures also carried plenty of moisture up over the state, although no precipitation resulted from that moisture. The remainder of the year played out similarly, with temperatures 10-20 degrees above normal in addition to the strong southerly winds.

December 2004 Statewide Statistics			
Temperature			
	Average	Depart.	Rank (1892-2004)
Month (December)	41.8°F	2.8°F	28th Warmest
Year-to-Date (Jan-Dec)	60.2°F	0.6°F	33rd Warmest
Precipitation			
	Total	Depart.	Rank (1892-2004)
Month (December)	0.74 in.	-1.28 in.	19th Driest
Year-to-Date (Jan-Dec)	39.61 in.	2.92 in.	20th Wettest
Depart. = Departure from 30-year normal			

December 2004 Severe Weather

Significant Tornadoes (F2 or greater)

No tornadoes of F2 strength or greater were reported in the state during December

Hail (2 inches in diameter or greater)

No hail greater than 2 inches in diameter was reported in the state during December

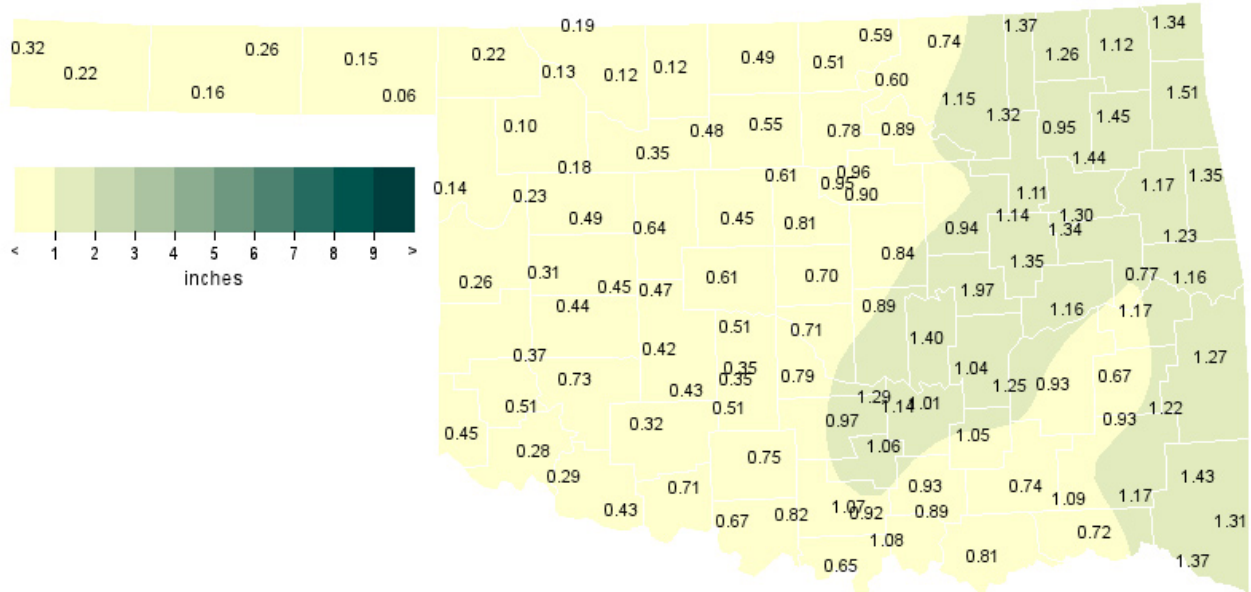
Wind Gusts (70 mph or greater)

No wind gusts greater than 70 mph were reported in the state during December

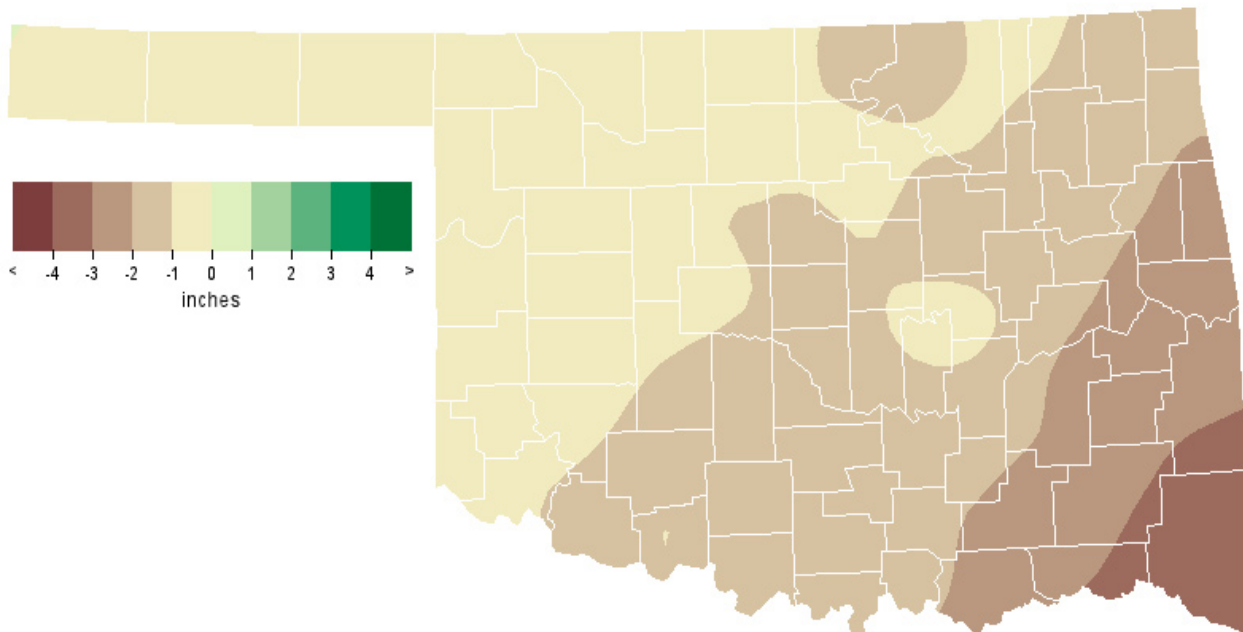
Flooding

No flooding was reported in the state during December

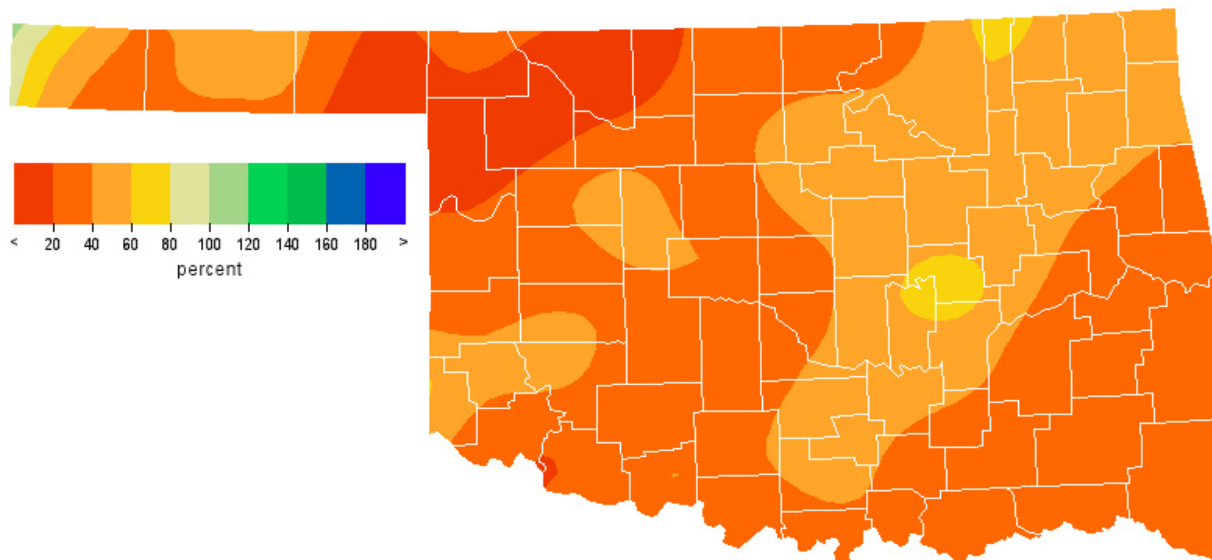
December 2004 Observed Precipitation



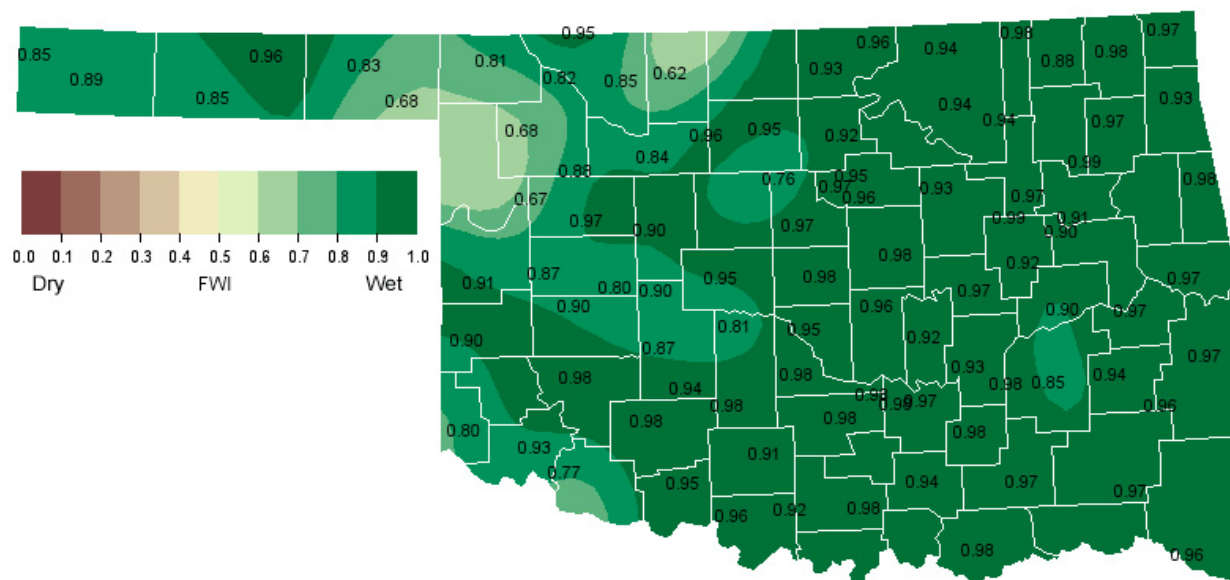
December 2004 Departure from Normal Precipitation



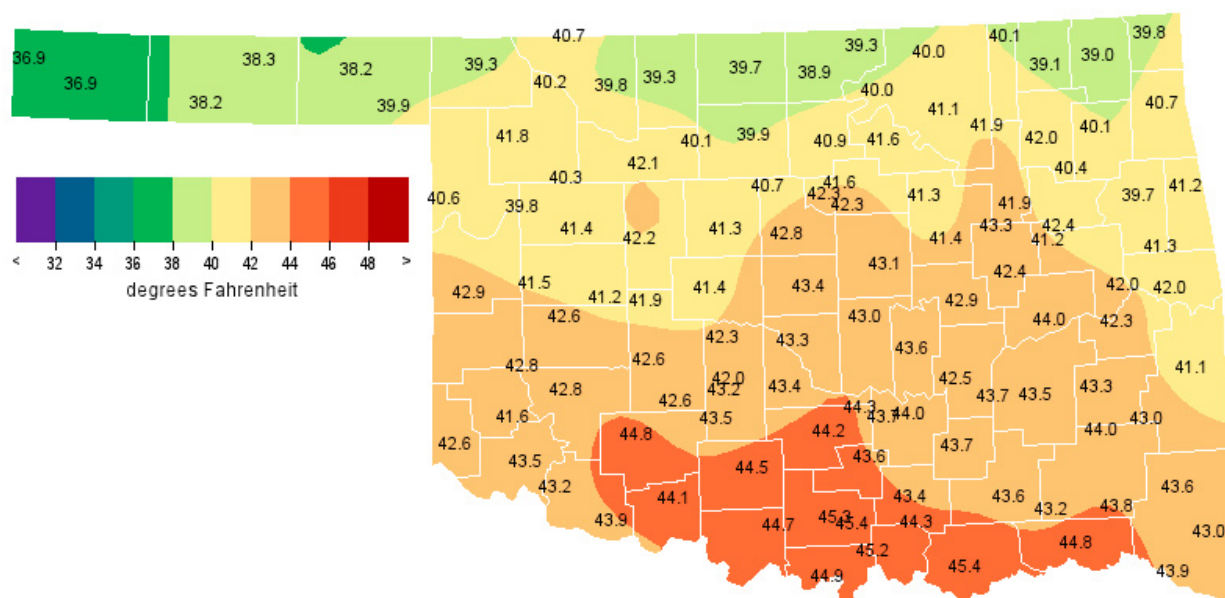
December 2004 Percent of Normal Precipitation



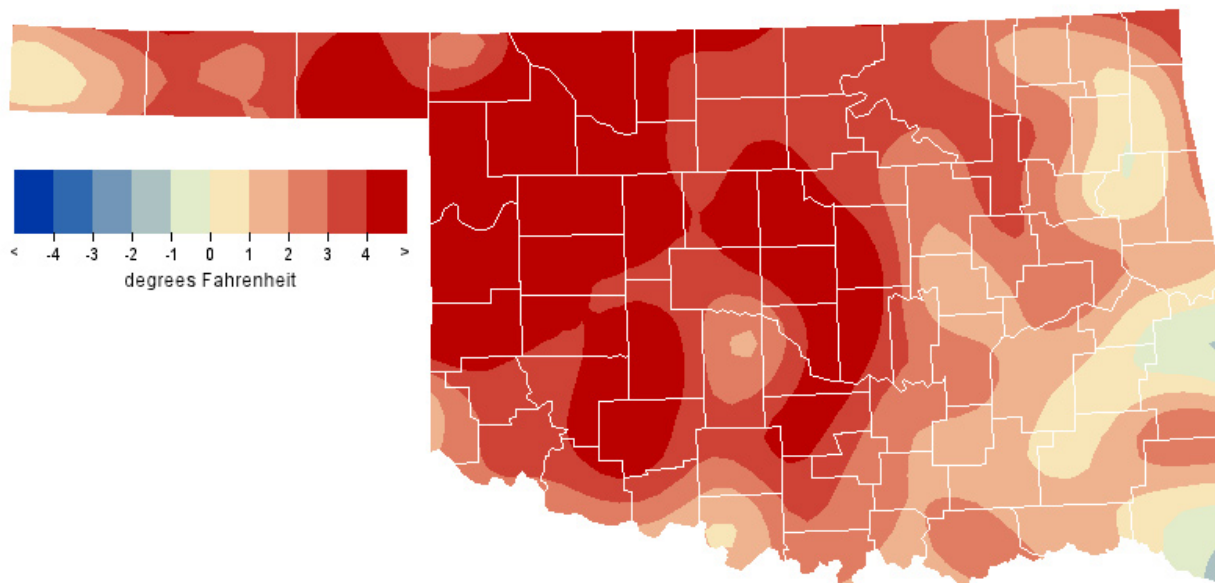
December 2004 Average Soil Moisture at 25cm



December 2004 Average Temperature



December 2004 Departure from Normal Temperature



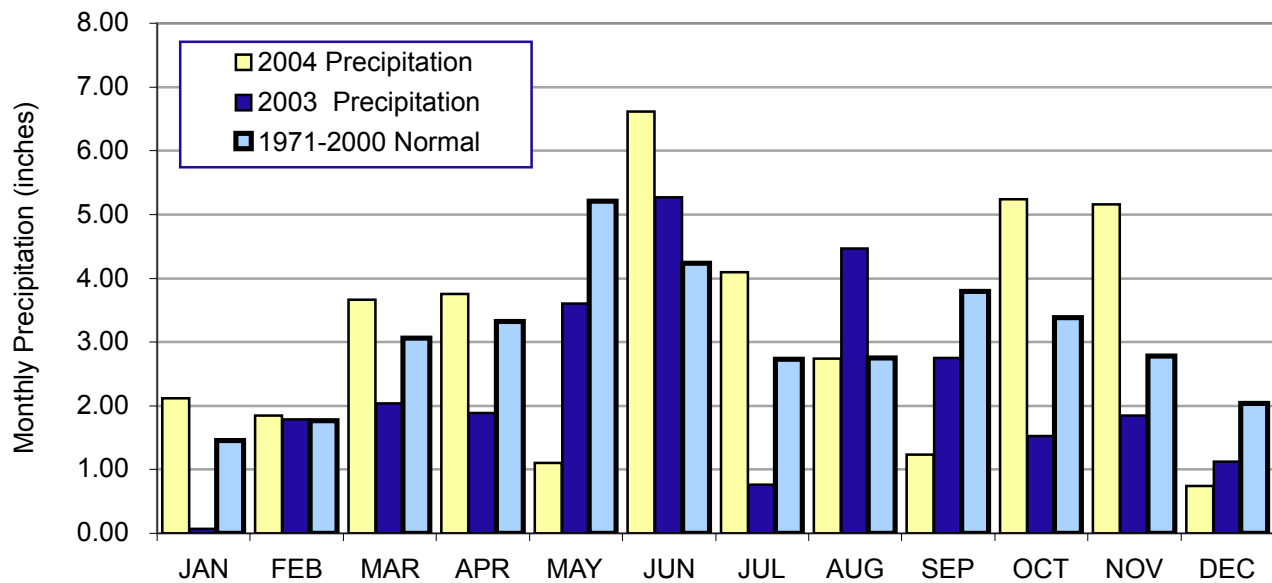
Mesonet Monthly Summary for December 2004

NAME	MEAN HIGH		LOW		HDD	CDD	TOT HIGH			NAME	MEAN HIGH		LOW		HDD	CDD	TOT HIGH				
	TEMP	TEMP	DAY	TEMP			DAY	PPT	24-HR		DAY	TEMP	TEMP	DAY			TEMP	DAY	PPT	24-HR	DAY
PANHANDLE																					
Arnett	40.7	73	20	-3	24	754	0	.14	.07	5	Goodwell	38.3	72	11	-12	24	828	0	.16	.08	5
Beaver	38.2	72	29	-8	24	829	0	.15	.12	5	Hooker	38.3	71	20	-8	24	827	0	.26	.19	5
Boise City	36.9	76	11	-7	24	871	0	.22	.22	25	Kenton	36.9	77	11	-10	24	872	0	.32	.21	25
Buffalo	39.3	72	30	-3	24	796	0	.22	.15	5	Slapout	39.9	71	20	-5	24	778	0	.06	.05	5
NORTH CENTRAL																					
Blackwell	38.9	71	30	3	24	811	0	.51	.36	6	Medford	39.7	71	30	6	24	785	0	.49	.36	5
Breckenridge	39.9	70	30	4	24	778	0	.55	.48	6	Newkirk	39.4	70	30	5	24	795	0	.59	.30	5
Cherokee	39.3	75	30	4	24	796	0	.12	.09	5	Red Rock	40.9	71	31	6	24	746	0	.78	.64	6
Fairview	42.2	76	30	6	24	708	0	.35	.18	6	Seiling	40.3	74	30	-1	24	764	0	.18	.11	6
Freedom	40.2	73	30	-1	24	768	0	.13	.09	5	Woodward	41.8	73	30	-3	24	718	0	.10	.08	5
Lahoma	40.1	72	30	4	24	772	0	.48	.29	6	Alva	39.8	75	30	3	24	780	0	.12	.11	5
May Ranch	40.7	73	30	1	24	755	0	.19	.12	5											
NORTHEAST																					
Bixby	41.8	72	31	9	24	719	0	1.11	.78	6	Pryor	40.1	72	31	6	24	771	0	1.45	1.08	6
Burbank	40.0	72	30	3	24	776	0	.60	.37	6	Skiatook	41.8	71	30	5	24	718	0	1.32	.80	6
Copan	40.1	72	30	5	24	772	0	1.37	.57	5	Vinita	39.0	70	31	4	24	806	0	1.12	.64	6
Foraker	40.0	71	30	4	24	776	0	.74	.48	6	Wynona	41.1	72	30	6	24	742	0	1.15	.62	6
Jay	40.7	72	31	3	24	754	0	1.51	.81	6	Porter	42.4	73	31	9	24	701	0	1.30	.68	6
Miami	39.8	71	31	6	24	782	0	1.34	.86	6	Inola	40.4	73	31	7	24	764	0	1.44	.95	6
Nowata	39.1	73	30	4	24	803	0	1.26	.83	6	Claremore	42.0	72	31	7	24	714	0	.95	.59	6
Pawnee	41.6	73	31	5	24	724	0	.89	.53	6											
WEST CENTRAL																					
Bessie	42.6	73	20	5	24	694	0	.44	.40	6	Putnam	41.3	75	30	2	24	734	0	.49	.40	6
Butler	41.6	76	30	4	24	726	0	.31	.27	6	Retrop	42.7	78	20	6	24	692	0	.37	.33	6
Camargo	39.8	75	30	-1	24	782	0	.23	.15	6	Watonga	42.3	69	30	6	24	705	0	.64	.57	6
Chyenne	42.9	74	20	2	24	686	0	.26	.18	6	Weatherford	41.2	68	30	6	24	737	0	.45	.38	6
Erick	*****	***	***	***	***	*****	*****	*****	*****	***											
CENTRAL																					
Bowlegs	43.7	73	31	10	24	661	0	1.40	.88	6	Okemah	42.9	71	31	10	24	686	0	1.97	1.31	6
Bristow	41.4	71	31	8	24	732	0	.94	.65	6	Perkins	42.2	72	31	8	24	706	0	.90	.73	6
Chandler	43.2	72	31	8	24	676	0	.84	.62	6	Shawnee	43.0	70	31	9	24	681	0	.89	.60	6
Chickasha	42.0	71	31	11	24	714	0	.35	.27	6	Spencer	43.4	70	31	6	24	669	0	.70	.62	6
El Reno	41.3	70	30	6	24	733	0	.61	.54	6	Stillwater	41.6	72	30	6	24	726	0	.96	.76	6
Guthrie	42.8	71	31	7	24	687	0	.81	.58	6	Washington	43.4	71	31	9	24	669	0	.79	.61	6
Kingfisher	41.2	71	30	7	24	737	0	.45	.34	6	Ninnekah	43.2	70	31	10	24	675	0	.35	.29	6
Marena	42.2	72	31	6	24	706	0	.95	.74	6	Acme	43.5	71	31	6	24	667	0	.51	.36	6
Minco	42.3	69	31	8	24	704	0	.51	.39	6	Norman	43.3	71	31	9	24	****	****	.71	.49	6
Oilton	41.3	72	31	5	24	736	0	*****	*****	***	Marshall	40.7	70	31	6	24	752	0	.61	.50	6
EAST CENTRAL																					
Calvin	42.6	72	31	10	23	695	0	1.04	.66	6	Stigler	42.3	75	31	10	24	706	2	1.17	.78	6
Cookson	41.4	73	31	7	24	733	1	1.23	.80	6	Stuart	43.7	73	31	7	23	661	1	1.25	.91	6
Eufaula	44.0	72	31	11	24	650	0	1.16	.71	6	Tahlequah	39.6	70	31	7	24	787	0	1.17	.61	6
Haskell	41.2	72	31	9	24	739	0	1.34	.74	6	Webbers Falls	41.9	75	31	13	24	717	1	.77	.59	6
McAlester	43.5	72	31	10	24	666	1	.93	.56	6	Westville	41.2	72	31	7	24	737	0	1.35	.79	6
Okmulgee	42.3	73	31	10	24	703	1	1.35	.88	6	Hectorville	43.3	72	31	10	24	674	0	1.14	.75	6
Sallisaw	42.0	76	31	13	23	714	0	1.16	.71	6											
SOUTHWEST																					
Altus	43.4	78	20	10	24	669	0	.28	.25	6	Medicine Park	44.7	72	20	9	24	629	0	.32	.24	6
Fort Cobb	42.5	71	20	9	24	697	0	.42	.37	6	Tipton	43.2	74	20	12	24	676	0	.29	.22	6
Hinton	41.8	69	30	6	24	720	0	.47	.42	6	Walters	44.1	73	31	11	23	649	0	.71	.50	6
Hobart	42.7	74	20	8	24	690	0	.73	.66	6	Apache	42.6	69	20	9	24	694	0	.43	.39	6
Hollis	42.6	77	20	8	24	695	0	.45	.43	6	Grandfield	43.8	71	31	12	24	****	****	.43	.34	6
Mangum	41.4	77	20	5	24	****	****	.51	.45	6											
SOUTH CENTRAL																					
Ada	44.0	72	31	9	23	652	0	1.01	.67	6	Ringling	44.7	73	31	10	23	630	0	.82	.62	6
Burneyville	44.8	73	20	6	23	625	0	.65	.52	6	Sulphur	43.6	72	31	8	23	664	0	1.06	.75	6
Byars	44.3	71	31	7	23	640	0	1.29	.96	6	Tishomingo	43.3	72	31	7	23	****	****	.93	.67	6
Centrahoma	43.7	73	31	9	23	661	0	1.05	.80	6	Waurika	*****	***	***	***	***	****	****	.67	.56	6
Durant	45.4	72	20	12	23	608	1	.81	.41	5	Vanoss	43.7	72	31	8	24	660	0	1.14	.72	6
Ketchum Ranch	44.5	72	31	10	24	637	0	.75	.51	6	Bee	44.2	72	20	11	23	643	0	.89	.57	6
Lane	43.6	72	31	11	23	664	1	.74	.35	6	Newport	45.3	73	20	12	23	612	0	1.07	.72	6
Madill	45.2	73	20	12	23	614	0	1.08	.76	6	Ardmore	45.3	72	20	12	23	609	0	.92	.69	6
Pauls Valley	44.2	73	31	10	23	644	0	.97	.69	6											
SOUTHEAST																					
Antlers	43.3	75	31	8	23	676	3	1.09	.46	5	Mt Herman	43.6	69	31	7	23	664	1	1.43	.64	6
Clayton	44.0	74	31	9	23	654	4	.93	.44	6	Talihina	43.0	71	31	8	25	686	2	1.22	.55	6
Cloudy	43.8	72	31	10	24	659	2	1.17	.52	6	Wilburton	43.3	74	31	11	23	675	2	.67	.34	6
Hugo	44.0	71	31	10	23	****	****	.62	.52	5	Wister	41.1	72	31	9	25	742	1	1.27	.64	6
Idabel	44.1	72	30	12	25	****	****	1.37	.44	6	Broken Bow	43.0	71	31	11	25	683	1	1.31	.58	6

December 2004 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Dec-03
Panhandle	0.19	-0.51	26th Driest	2.55 (1913)	0.00 (1922)	0.44
North Central	0.35	-0.95	22nd Driest	4.55 (1913)	0.00 (1922)	1.40
Northeast	1.17	-1.11	38th Driest	6.72 (1984)	0.16 (1950)	2.59
West Central	0.40	-0.74	34th Driest	4.03 (1932)	0.00 (1908)	0.82
Central	0.80	-1.21	33rd Driest	6.67 (1984)	0.00 (1908)	1.30
East Central	1.16	-1.82	26th Driest	8.95 (1987)	0.21 (1908)	1.38
Southwest	0.46	-0.92	34th Driest	4.94 (1991)	0.00 (1908)	0.33
South Central	0.93	-1.60	27th Driest	7.01 (1932)	0.07 (1950)	1.06
Southeast	1.12	-2.95	9th Driest	12.76 (1971)	0.25 (1917)	1.68
Statewide	0.74	-1.28	19th Driest	4.98 (1984)	0.10 (1950)	1.25

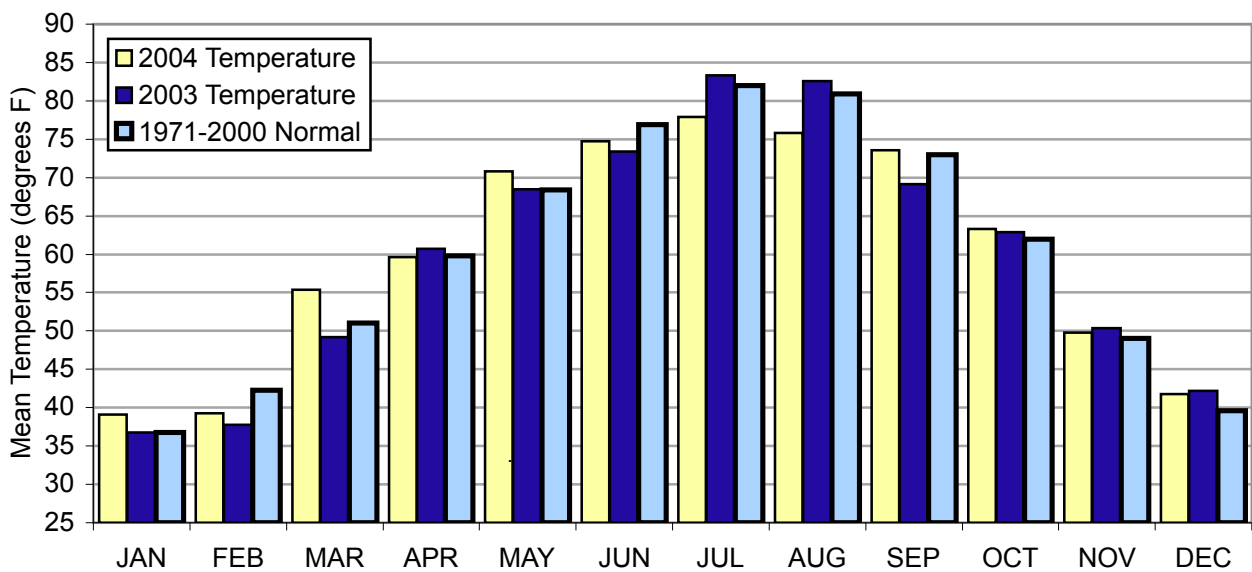
2003 and 2004 Statewide Precipitation Monthly Totals vs. Normal



December 2004 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Dec-03 (F)
Panhandle	38.5	3.5	18th Warmest	41.6 (1933)	22.6 (1983)	39.1
North Central	40.2	3.7	17th Warmest	43.7 (1965)	21.9 (1983)	39.2
Northeast	40.7	2.5	33rd Warmest	45.1 (1931)	24.3 (1983)	41.8
West Central	41.8	4.4	11th Warmest	44.2 (1965)	24.0 (1983)	41.0
Central	42.4	3.1	24th Warmest	46.4 (1965)	25.3 (1983)	42.6
East Central	42.2	1.6	41st Warmest	47.6 (1933)	27.4 (1983)	43.6
Southwest	43.1	3.3	21st Warmest	46.7 (1965)	27.5 (1983)	43.6
South Central	44.4	2.3	35th Warmest	48.5 (1965)	29.2 (1983)	45.0
Southeast	43.4	1.0	48th Warmest	50.7 (1984)	30.7 (1983)	43.6
Statewide	41.8	2.8	28th Warmest	45.4 (1965)	25.8 (1983)	42.1

2003 and 2004 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for December 2004

Climate Division	High Temp			Low Temp			High Monthly Rainfall			High Daily Rainfall	
	(F)	Day	Station	(F)	Day	Station	(inches)	Station	(inches)	Day	Station
Panhandle	77	11th	Kenton	-10	24th	Kenton	0.32	Kenton	0.22	25th	Boise City
North Central	76	30th	Fairview	-3	24th	Woodward	0.78	Red Rock	0.64	6th	Red Rock
Northeast	73	31st	Pawnee	3	24th	Burbank	1.51	Jay	1.08	6th	Pryor
West Central	78	20th	Retrop	-1	24th	Camargo	0.64	Watonga	0.57	6th	Watonga
Central	73	31st	Bowlegs	5	24th	Oilton	1.97	Okemah	1.31	6th	Okemah
East Central	76	31st	Sallisaw	7	24th	Westville	1.35	Okmulgee	0.91	6th	Stuart
Southwest	78	20th	Altus	5	24th	Mangum	0.73	Hobart	0.66	6th	Hobart
South Central	73	31st	Ringling	6	23rd	Burneyville	1.29	Byars	0.96	6th	Byars
Southeast	75	31st	Antlers	7	23rd	Mt Herman	1.43	Mt Herman	0.64	6th	Wister
Statewide	78	20th	Goodwell	-12	24th	Kenton	1.97	Okemah	1.31	6th	Okemah

January Climatological Outlook

The weather in Oklahoma during January, Oklahoma's coldest and driest month, is marked by many and rapid variations. Cold fronts move through the state on a regular basis, bringing air from colder regions of the earth, but cold weather rarely lasts for more than a few days at a time. The north or northwest winds that spread the colder air typically give way to a day or so of calm and sunshine, followed by a return to the prevailing southerly winds which dominate the state's weather throughout the year. The state is located within the range of the winter meandering of the jet stream. Oklahoma's proximity to both the warm waters of the Gulf of Mexico to the southeast and the mountain barrier to the west enhances the potential for the development of winter storms beneath the jet. The Gulf provides moisture and is a source of thermal energy that interacts with the areas of low pressure, which are initiated under the jet stream east of the mountains. This interaction often results in the development of winter storms. Many of the winter storms in the eastern half of the country are born in Oklahoma.

Temperature

Mean: 36.8 degrees
Warmest December: 1923 , 47.5 degrees
Coolest December: 1930, 24.9 degrees
Warmest location: Waurika, 41.9 degrees
Coolest location: Turpin, 30.7 degrees
Hottest recorded: 92 degrees, Cloud Chief, January 31, 1911
Coldest recorded: -27 degrees, Watts, January 18, 1930

According to National Weather Service cooperative network data from 1971 through 2000, the statewide-averaged normal temperature for the month is 36.8 degrees. Normal temperatures across Oklahoma range from 41.9 degrees at Waurika in the south to 30.7 degrees at Turpin in the eastern panhandle. Normal daily maximum temperatures vary between 54.0 degrees at Waurika, near the Red River at Oklahoma's southern border, down to 41.9 degrees at Newkirk, near the state's northern border. Normal daily minimum temperatures range from 30.8 degrees at Okemah to 16.7 degrees at Turpin. The coldest January temperature ever recorded in the state is -27 degrees, recorded at Watts on January 18, 1930. At the other extreme, Cloud Chief reported a daily maximum temperature of 92 degrees on January 31, 1911. The warmest and coldest Januarys, averaged statewide, were 47.5 degrees in 1923 and 24.9 degrees in 1930, respectively.

Oklahoma's normal monthly precipitation during January, averaged across the state, is 1.46 inches. Normal monthly precipitation for the month ranges from 3.49 inches in the southeast at Broken Bow to 0.29 inch in the panhandle at Goodwell. Most of the precipitation falls as rain, although snow, sleet, and freezing rain are all observed. The statewide-averaged normal snowfall (including sleet) is 2.4 inches, most of which falls in the northern half of the

state. The panhandle town of Boise City averages 7.0 inches of snow during January. On average, snowfalls of at least one inch occur on 2.5 January days at Boise City. The wettest January in the state's weather record is 1949, when the statewide average was 5.23 inches. The driest January was 1986, when the state's rain gauges collected an average of only 0.04 inches of precipitation. Smithville was deluged with 13.85 inches of precipitation during January 1950.

Precipitation

Mean: 1.46 inches
Wettest year: 1949, 5.23 inches
Driest year: 1986, 0.04 inches
Wettest location: Broken Bow, 3.49 inches
Driest location: Goodwell, 0.29 inches
Most recorded: 13.85 inches, Smithville, 1950

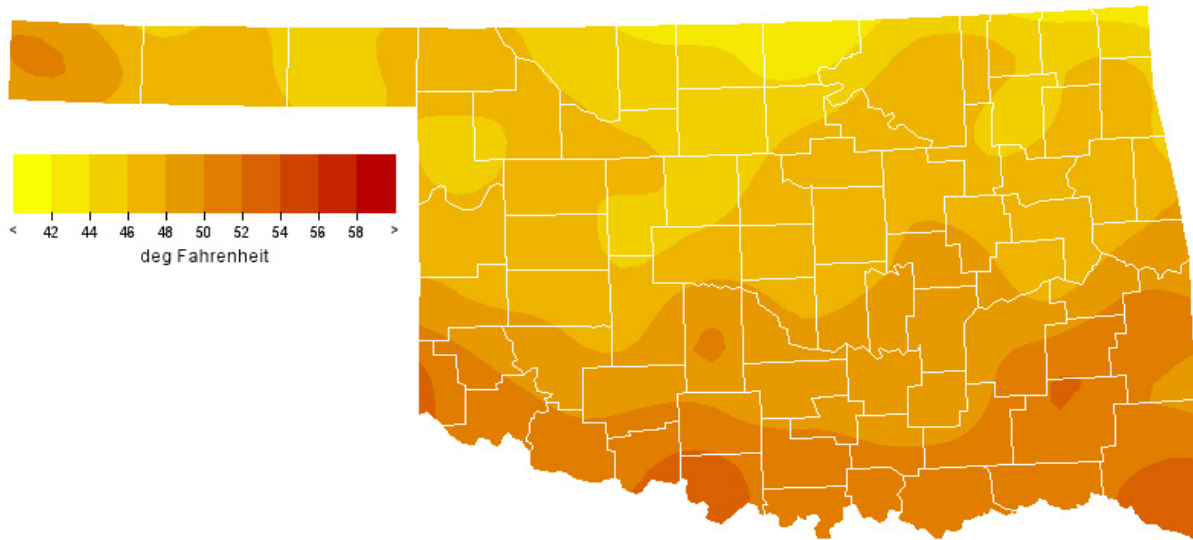
Snowfall records are not as reliable as those for temperature and total precipitation (which includes water obtained from melted snow), but the greatest January snowfalls appear to have been recorded in 1905, 1930, 1949, 1988, 1990, and 2001. Statewide information is somewhat sketchy regarding the 1905 event, but it is known that Fort Reno recorded a cumulative depth of 24.5 inches of snow over the course of the month. In January 1930, noted above for its extreme cold, 25.0 inches of snow fell at Jefferson, and the state's reporting stations averaged 11.7 inches for the month. The reported January 1949 snowfall totals include 30.1 inches at Union City and 25.3 inches at Ponca City. In 1988, most of the state was blanketed by 10 inches of snow (16 to 18 inches in some locales) in a major snowstorm that came on the heels of an ice storm during the previous month. Goodwell reported 16 inches on snow on January 19, 1990, accumulating 18 inches over a two-day period, in a snowstorm whose Oklahoma extent was mainly confined to the panhandle. The state record for January monthly snowfall is 32.7 inches, set at Kenton in 2001. Nearly half of that total (16 inches) was reported on the 16th.

Tornadoes are not usually a part of the January weather in Oklahoma, but the month is not immune to them. Reasonably reliable counts of tornadoes in the state are available since 1950. During that time, 12 tornadoes have occurred during January, including 4 each in 1957 and 1967. On January 4, 1917, an F3 tornado (severe damage, estimated wind speeds of 158-206 miles per hour) struck a Choctaw boarding school at Vireton (13 miles northeast of McAlester), killing 16 students and injuring 10 others.

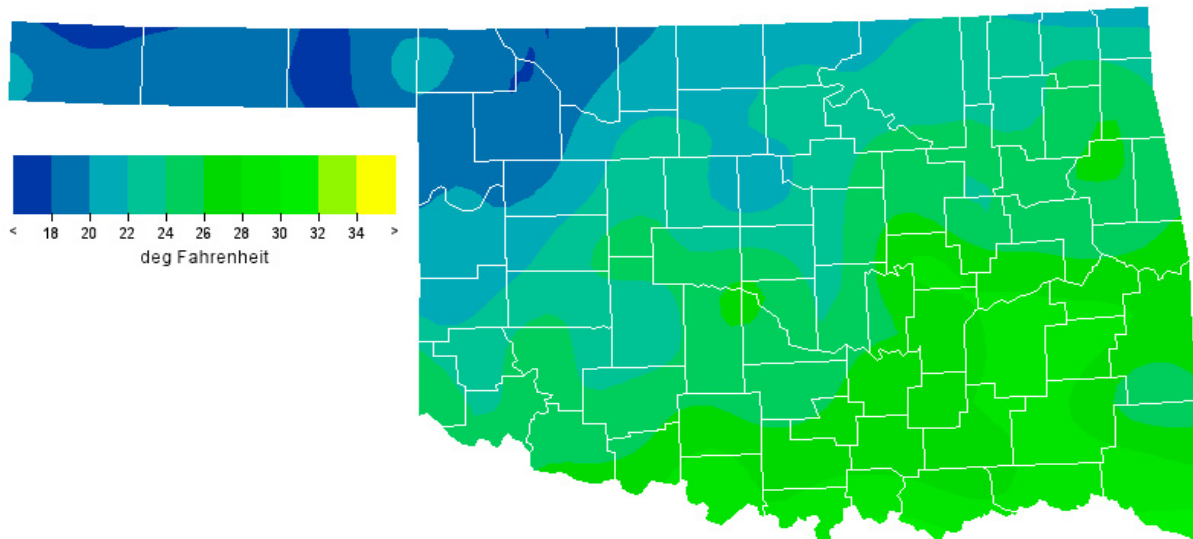
Tornadoes

Average January Tornadoes: 0.2
Most: 4 (1967)

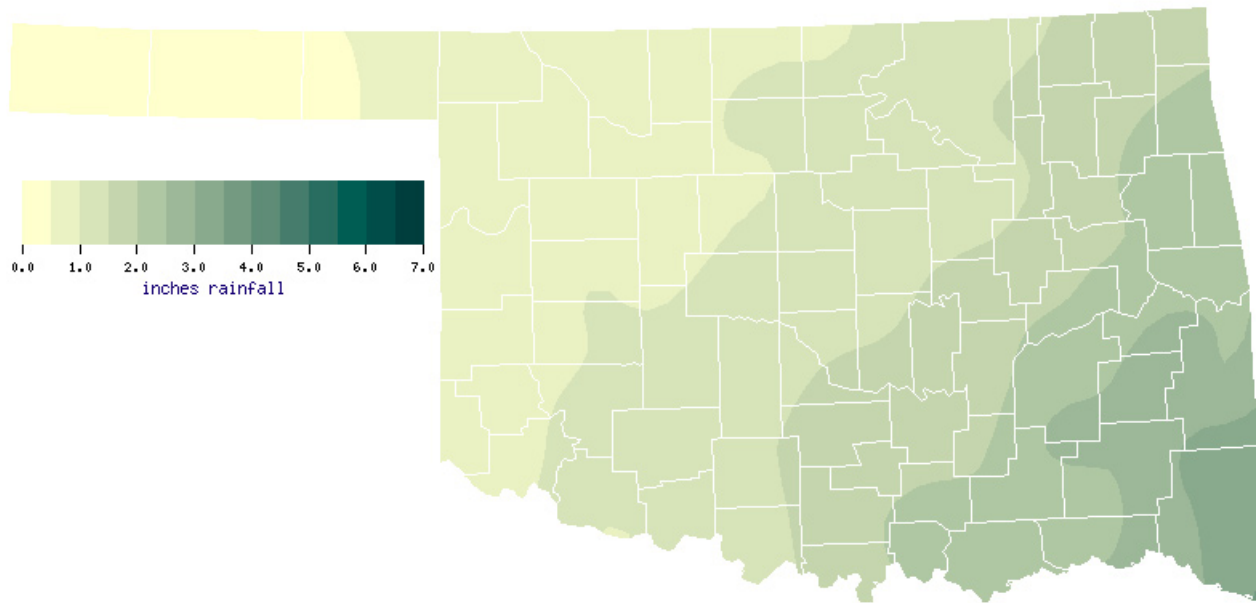
January Normal Monthly Maximum Temperature (1971-2000)



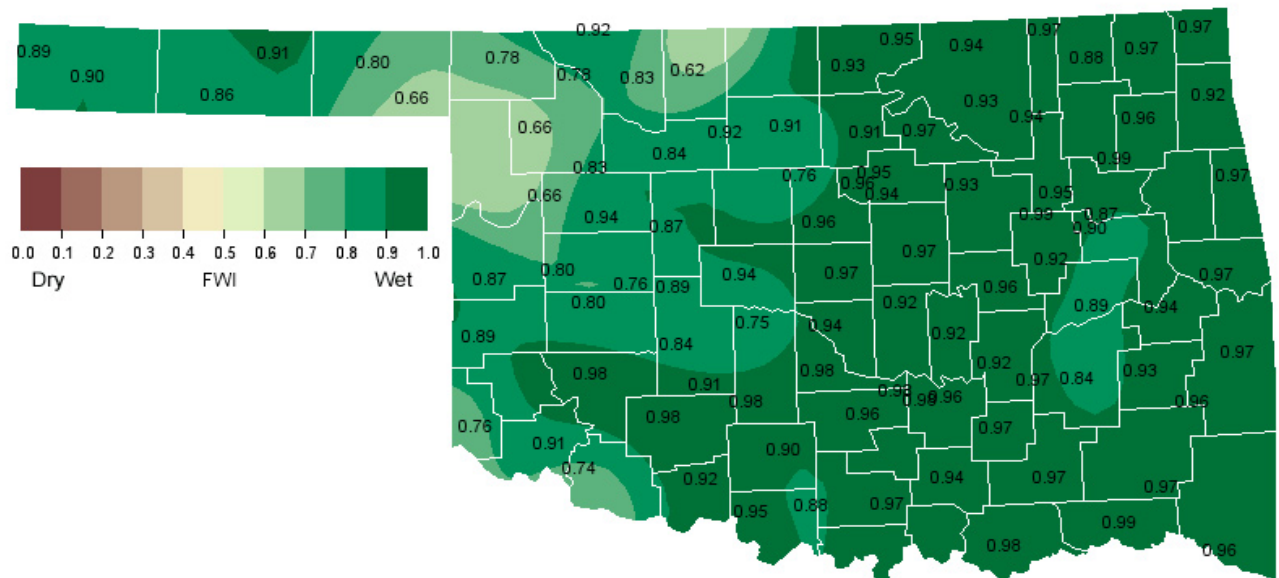
January Normal Monthly Minimum Temperature (1971-2000)



January Normal Precipitation (1971-2000)

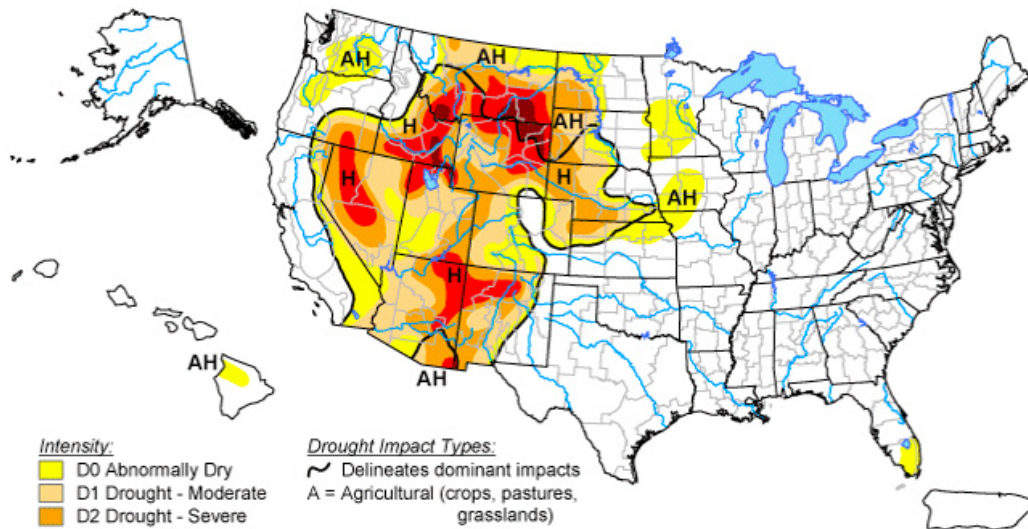


January 1, 2005 Soil Moisture Conditions at 25cm



U.S. Drought Monitor

January 4, 2005
Valid 7 a.m. EST



Intensity:
 D0 Abnormally Dry
 D1 Drought - Moderate
 D2 Drought - Severe
 D3 Drought - Extreme
 D4 Drought - Exceptional

Drought Impact Types:
 ~ Delineates dominant impacts
 A = Agricultural (crops, pastures, grasslands)
 H = Hydrological (water)
 (No type = Both impacts)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>

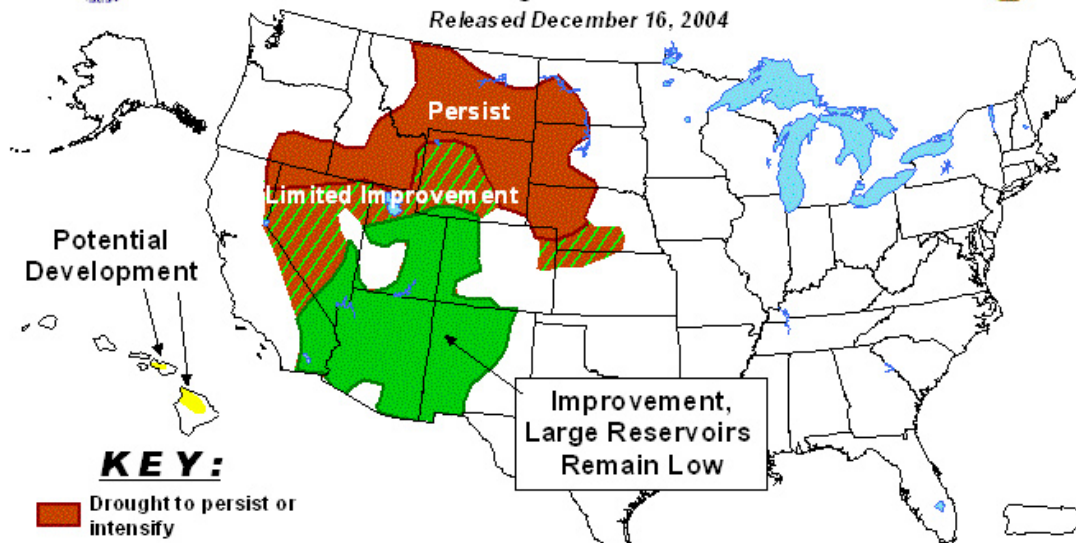


Released Thursday, January 6, 2005
Author: Mark Svoboda, NDMC



U.S. Seasonal Drought Outlook

Through March 2005
Released December 16, 2004

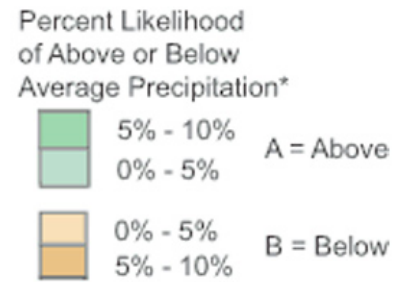
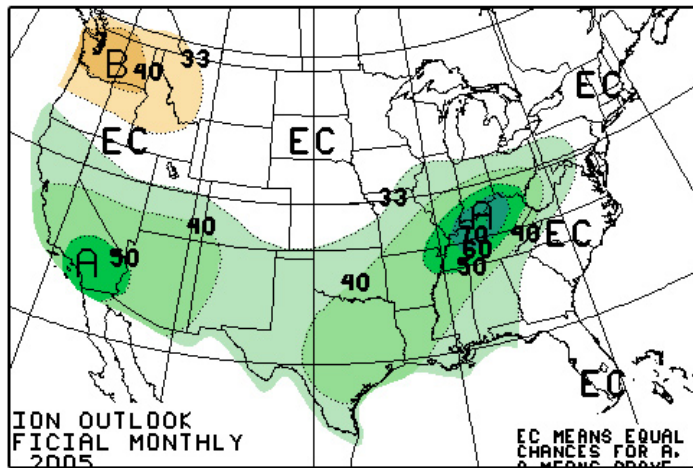


KEY:

- Drought to persist or intensify
- Drought ongoing, some improvement
- Drought likely to improve, impacts ease
- Drought development likely

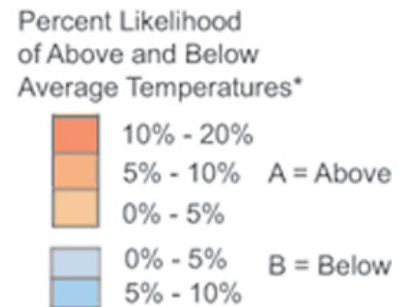
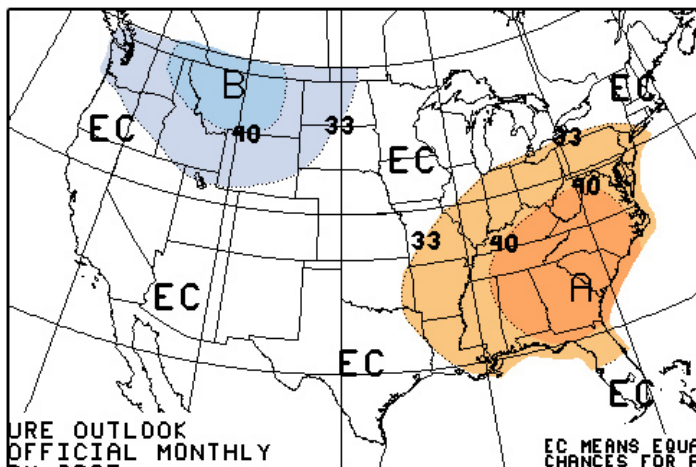
Depicts general, large-scale trends based on subjectively derived probabilities guided by numerous indicators, including short- and long-range statistical and dynamical forecasts. Short-term events -- such as individual storms -- cannot be accurately forecast more than a few days in advance, so use caution if using this outlook for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are schematically approximated from the Drought Monitor (D1 to D4). For weekly drought updates, see the latest Drought Monitor map and text. NOTE: the green improvement areas imply at least a 1-category improvement in the Drought Monitor intensity levels, but do not necessarily imply drought elimination.

January 2005 U.S. Precipitation Forecast



*EC indicates no forecasted anomalies due to lack of model skill.

January 2005 U.S. Temperature Forecast

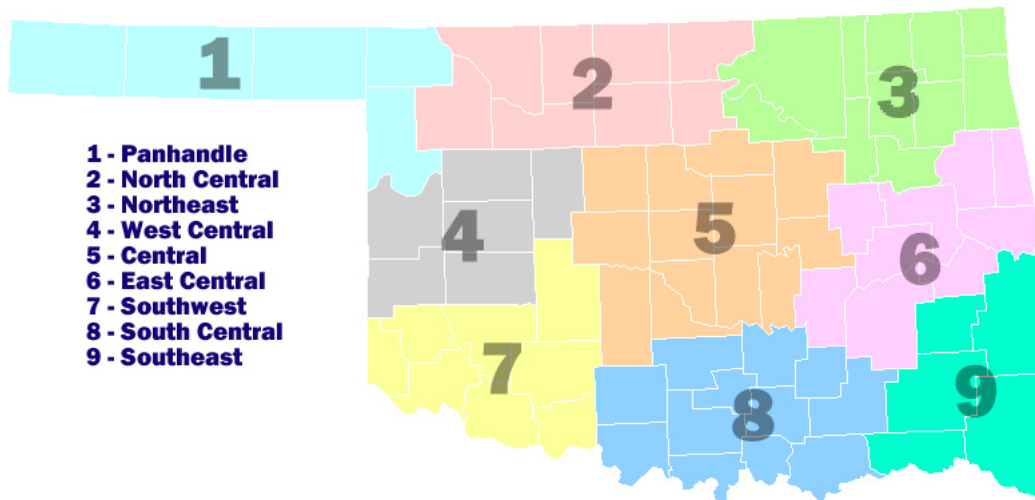


*EC indicates no forecasted anomalies due to lack of model skill.

January Climate Normals

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	47.3	19.2	33.3	0.51
2	44.7	20.5	32.6	0.95
3	46.3	24.0	35.2	1.58
4	46.9	22.4	34.6	0.83
5	47.5	24.5	36.0	1.33
6	48.0	26.4	37.2	2.10
7	49.7	24.2	37.0	1.08
8	50.4	27.2	38.8	1.91
9	51.3	27.7	39.5	2.81
Statewide	47.9	24.1	36.0	1.51

Oklahoma Climate Divisions



Interpretation Information

Mean Daily Temperature: Calculated from an average of the daily maximum and minimum temperatures. Daily averages are summed for each day, and then divided by the number of valid data points – typically the number of days in the month. Although this may differ from the “true” daily average, it is consistent with historical methods of observation and comparable to the normals and extremes for stations and regions of the state.

Degree Days: Degree Days are calculated each day of the month for which there is a temperature report and the mean temperature for the day is less than (Heating Degree Days) or greater than (Cooling Degree Days) 65 degrees. Daily values are summed to arrive at a monthly total. HDD/CDD are qualitative measures of how much heating/cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value.

Severe Weather Reports: Only the most significant events are listed. Tornadoes of F2 or greater strength (on the 0-5 Fujita scale), hail of two inches diameter or greater, and wind speeds of 70 miles per hour or above are listed. National Weather Service defines storms as severe when they produce a tornado, hail of three-quarters inch or greater, or wind speeds above 57 miles per hour (50 knots). For additional reports, contact the Oklahoma Climatological Survey, Storm Prediction Center, or your local National Weather Service forecast office.

Soil Moisture: The soil moisture variable displayed is the Fractional Water Index (FWI), measured at a depth of 25 cm. This unitless value ranges from very dry soil having a value of 0, to saturated soils having a value of 1.

Additional Resources

Sunrise / Sunset tables

U.S. Naval Observatory: <http://aa.usno.navy.mil/data>

Severe Storm Reports

Storm Prediction Center: <http://spc.noaa.gov/climo/>

National Climatic Data Center (more than about 4-5 months old):
<http://www4.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storms>

Seasonal Outlooks

Climate Prediction Center:
http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

Climate Calendars and other local weather and climate information

Oklahoma Climatological Survey: <http://climate.ocs.ou.edu> or
<http://www.ocs.ou.edu/>
E-mail (ocs@ou.edu) or telephone (405/325-2541)



Oklahoma Climatological Survey

Oklahoma Climatological Survey is the State
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