OKLAHOMA MONTHLY CLIMATE SUMMARY
OCTOBER 2003

Oklahoma Climatological Survey

Overview

October was delightful for those that favor the warm days and mild nights of summer's twilight. Aided by a persistent upper-level ridge of high pressure over the western U.S., autumn was put on hold by the 31st warmest October on record. For others, however, the Halloween month was considerably more frightful. In the continuation of a now-tiresome storyline, monthly precipitation totals for the majority of the state were significantly below normal for the seventh time since the year's beginning. Those that needed rain were left wanting as October, normally the state's 4th wettest month, fell instead to the 26th driest since record-keeping began in 1892. Eight record high temperatures were set across the state, combining with high winds and lack of precipitation to turn Oklahoma into a tinderbox by the month's final week. Wildfires were common during that span until conditions calmed to a more seasonable nature as the month came to a close.

Precipitation

The 1.70-inch statewide-averaged precipitation deficit for the month further aggravated the dry conditions already present in the state; a problem which has been steadily increasing throughout the year. Already the 35th driest autumn since 1892, the statewide deficit increased to well over 7 inches for 2003 thus far, the 20th driest such period on record. That is not to say the state was completely devoid of precipitation during October, although that might be a difficult sell to the residents of Kenton in the far western Oklahoma panhandle. While the area around Kenton received no measurable rainfall for the entire month, a fairly large system of thunderstorms managed to dump over 4 inches of precipitation across localized areas of central and eastern Oklahoma. Radar estimates indicate the possibility of over 7 inches of rainfall deluged parts of northern Oklahoma County with that system of storms. That was the extent of the significant rainfall for the month, however. Many areas of the state received less than one inch of rainfall, and a portion of southern Oklahoma near the Red River received less than 0.10 inches of precipitation.

Temperature

Fall-like temperatures made a couple of appearances during the month, but the consequence of the upper-level ridge to the west was to provide the state with a pleasantly warm October. Indeed, during the late-to-mid portions of the month, the weather more closely resembled late summer than mid-fall. High temperatures in the mid-to-low 90s occurred across a large part of the state on several occasions, propelling the statewide-averaged temperature for the month to more than 1.5 degrees above normal. The southwest corner of the state was particularly warm at over 3 degrees above normal, eclipsing all but 13 previous October averages for that region. As is often the case, however, those areas that received bountiful rains were not quite as warm. Areas in northern and northeastern Oklahoma were at or below normal for the month. Combined with the cooler-than-normal September, the statewide-averaged warmth of October brought the seasonally-averaged temperature back slightly above normal, but still ranked as the 32nd coolest September-October period since 1892. The statewide-averaged January-October temperature was 1.5 degrees above normal – the 36th warmest on record.

October 2003 Statewide Extremes

Description	Extreme	Station	Date
High Temperature	96ºF	Camargo	October 20th
Low Temperature	20ºF	Kenton	October 26th
High Precipitation	4.44 in.	Guthrie	
Low Precipitation	0.00 in.	Kenton	

October Daily Highlights

October 1-3: A bit of irony to start the month as a reinforcing shot of cool air entered the state after a cold frontal passage on the last day of September. Oklahoma City and Tulsa set coldest high temperature records on the 1st with 55 and 62 degrees, respectively. Tulsa then set a coldest low temperature record the next day with a chilly 39 degrees. Showers and thunderstorms moved into northern sections of the state overnight on the 3rd, but accumulations were generally less than 0.5 inches.

October 4-7: A weak cold front passed through the state on the 4th with very little effect. An upper-level disturbance in Colorado generated a few showers that affected the northwestern one-half of Oklahoma, but once again accumulations were generally light. In all, this was a very pleasant period with partly cloudy skies and seasonable temperatures. The southern half of the state remained on the warm side throughout the period. Dense fog the morning of the 7th signaled the abundance of warm, moist air over the state, and dropped visibilities in central sections to less than 1/8th of a mile.

October 8-9: The warm, moist air in place combined with an upper-level disturbance which moved over the state from Colorado to produce the month's most tumultuous period. The rain began on the 8th in northwestern Oklahoma and moved eastward across the state. The storms strengthened as they moved east, dropping 2-3 inches of rainfall over a large area of north central and northeastern Oklahoma, prompting flash flood warnings on the morning of the 9th in Logan and Creek Counties. A few localized areas in southern Logan and northern Oklahoma counties reported up to 5 inches of precipitation. Tulsa set a record daily rainfall amount for the 9th with 2.86 inches, breaking the old record of 0.98 inches set back in 1937. Areas not receiving precipitation remained in the 70s and 80s throughout the period.

October 10-11: As the rain moved off to the east, a ridge of high pressure settled over the state. Skies remained mostly cloudy throughout the period, but temperatures warmed up into the 70s and 80s on the 10th. A cold front entered the state from the northwest on the 11th, whipping up winds behind the front from the north at 40 mph. Light rain quickly followed, and highs behind the front never rose above the 60s, although they did reach the low-80s in the south prior to the frontal passage.

October 12-15: A trough of low pressure developed in southeastern Colorado and northeastern New Mexico on the 12th, swinging winds around to the south in the panhandle with gusts greater than 30 mph. Highs in the 70s and 80s increased even further on the 13th into the upper-80s; Hollis reached a summer-like 90 degrees. A strong cold front entered the state on the same day, once again accompanied by northerly winds of up to 40 mph. A few thunderstorms developed ahead of the front. Rainfall totals were light over most portions of the state, although a few stronger cells in the northeast dropped more than an inch of rain over select areas. Low temperatures were in the lower 40s and 50s overnight on the 13th, but the day rebounded nicely with highs in the 70s and 80s. The pleasant weather stretched into the 14th and 15th with sunny skies, light winds and highs in the 70s and 80s.

October 16-17: Another cold front spoiled the party on the 16th, but not before temperatures in the southern portions of the state rose into the upper-80s and lower-90s. Showers and thunderstorms formed along the front and dropped light rain in eastern Oklahoma. Lows the night of the 16th fell into the 30s and 40s, and the temperatures were only able to recover to a point 10-15 degrees cooler than the previous day into the mid-60s to low-70s.

October 18-24: Summer-like conditions returned to the state for the next seven days with lots of sunshine and record-breaking warmth. High temperatures in the 80s and 90s were common during this period. Record high temperatures were set at McAlester on the 21st through the 24th, Oklahoma City on the 23rd and 24th, and Tulsa on the 24th. The high pressure at the surface and aloft that provided the hot weather began to be pushed out on the 24th, however, as another pesky cold front made its presence known. Winds behind the front gusted from the north up to 30 mph, and temperatures dropped into the more seasonable 70s.

October 25-26: The period started out cold in the post-frontal environment. Skies were overcast on the 25th with light rain falling in the north. Temperatures fell into the upper 50s and lower 60s for highs that day, ending in the 20s and 30s overnight on the 26th. Kenton felt a taste of winter with a low of 20 degrees that night.

October 27-29: The state was under the influence of a surface high pressure system on the 27th, signaling a pleasant afternoon. Southwesterly winds between 20 and 30 mph, combined with afternoon temperatures in the 70s and 80s and extremely dry vegetation, prompted the NWS to issue a fire weather watch for western and southern Oklahoma. Worsening conditions on the 29th brought the more serious red flag fire warning for the same areas.

October 30-31: A cold front moved through the state on the 30th. Temperatures behind the front cooled into the low-70s, and winds swung around to the north at 10-15 mph. Ahead of the front, however, the red flag fire warning conditions were still in place, with highs rising into the low-90s in southern Oklahoma. Halloween day saw the frontal system stall in the south. Lows ranged from 27 degrees at Boise City to 73 degrees at Sallisaw and Talihina, although high temperatures cooled somewhat in southern sections compared to the previous day, reaching only into the mid-80s.

October 2003 Statewide Statistics

Temperature

	Average	Depart.	Rank (1892-2003)
Month (October)	63.0ºF	1.7ºF	31st Warmest
Season-to-Date (Sep-Oct)	67.1ºF	0.4ºF	32nd Coolest
Year-to-Date (Jan-Oct)	64.3ºF	1.50ºF	36th Warmest

Precipitation

	Total	Depart.	Rank (1892-2003)
Month (October)	1.68 in.	-1.70 in.	26th Driest
Season-to-Date (Sep-Oct)	4.43 in.	-2.76 in.	35th driest
Year-to-Date (Jan-Oct)	24.59 in.	-7.26 in.	20th Driest

Depart. = Departure from 30-year normal

October 2003 Severe Weather

Significant Tornadoes (F2 or greater)

No significant tornadoes reported in the state

Hail (2 inches in diameter or greater)

No significant hail reported in the state

Wind Gusts (70 mph or greater)

No significant wind gusts reported in the state

Flooding

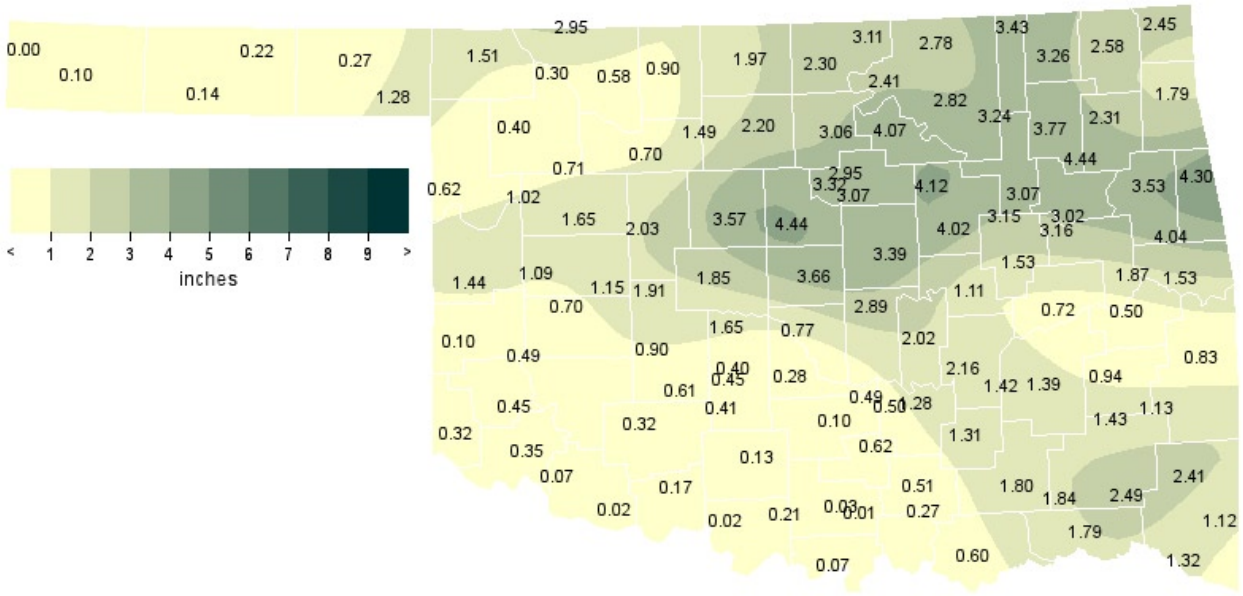
Location	County	Date
Guthrie	Logan	October 9
8 S Kellyville	Creek	October 9

Record Event Reports

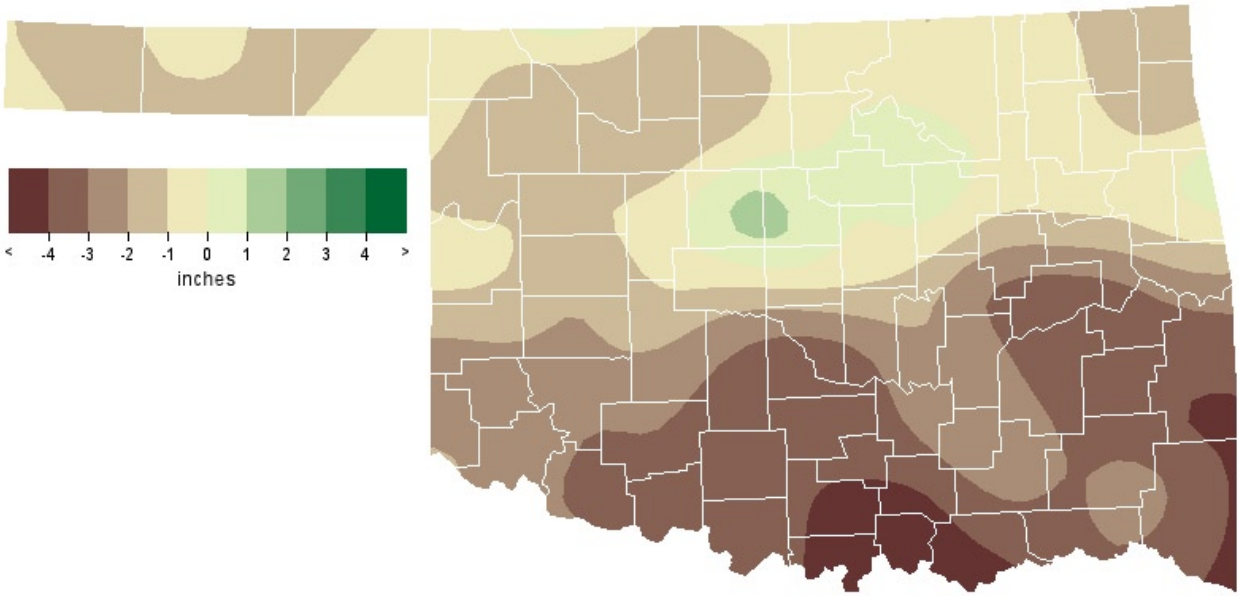
Description	Day	Location	Record	Previous Record	Year
Coldest High Temperature	1	Oklahoma City	55 degrees	61 degrees	1985
Coldest High Temperature	1	Tulsa	62 degrees (T)	62 degrees	1985
Low Temperature	2	Tulsa	39 degrees (T)	39 degrees	1975
Daily Rainfall	10	Tulsa	2.86 inches	0.98 inches	1937
High Temperature	21	McAlester	91 degrees	89 degrees	1978
High Temperature	22	McAlester	88 degrees (T)	88 degrees	1963
High Temperature	23	Oklahoma City	89 degrees (T)	89 degrees	1927
High Temperature	23	McAlester	88 degrees	86 degrees	1963
High Temperature	24	Oklahoma City	91 degrees	88 degrees	1927
High Temperature	24	Tulsa	89 degrees	88 degrees	1921
High Temperature	24	McAlester	90 degrees	84 degrees	1992

* (T) indicates a record that was tied

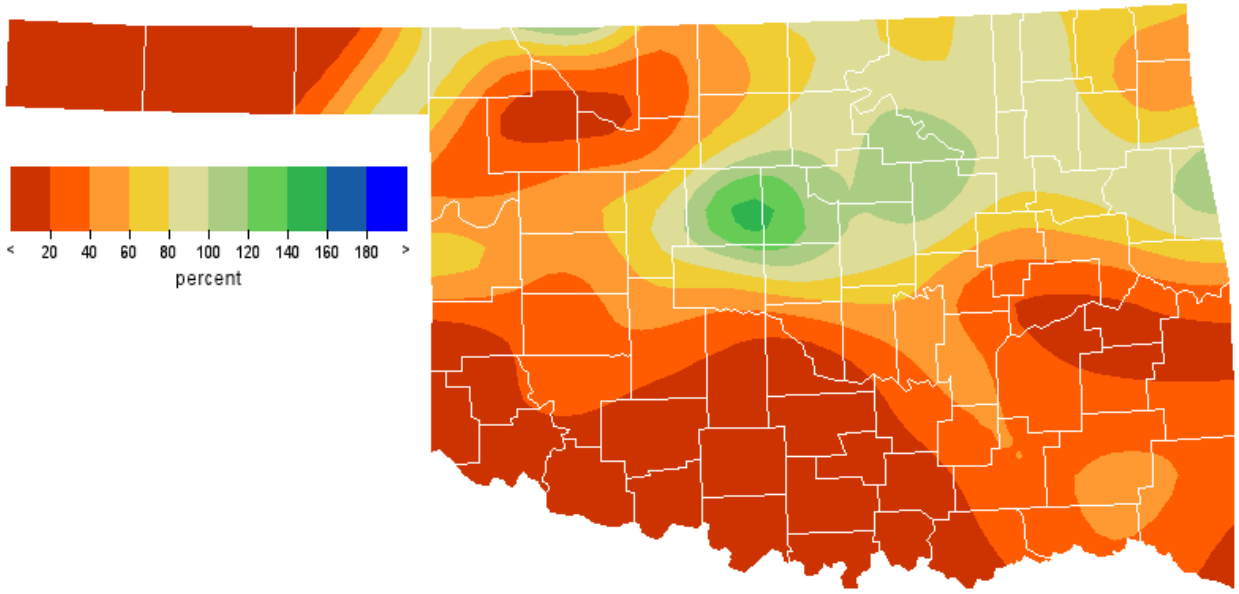
October 2003 Observed Precipitation



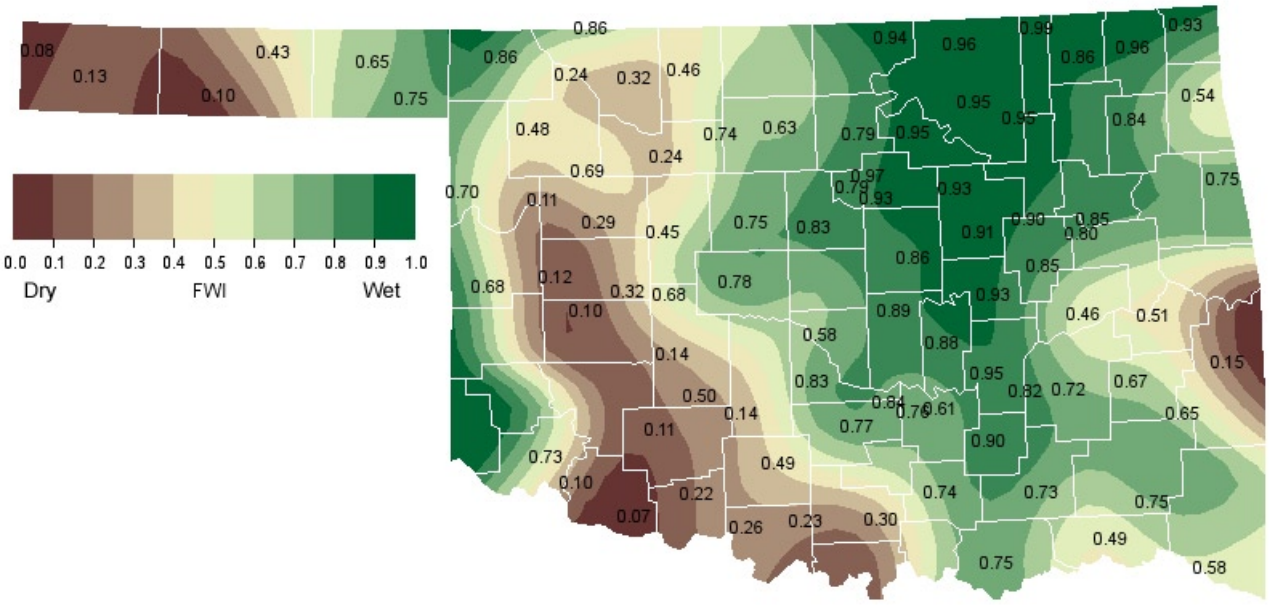
October 2003 Departure from Normal Precipitation



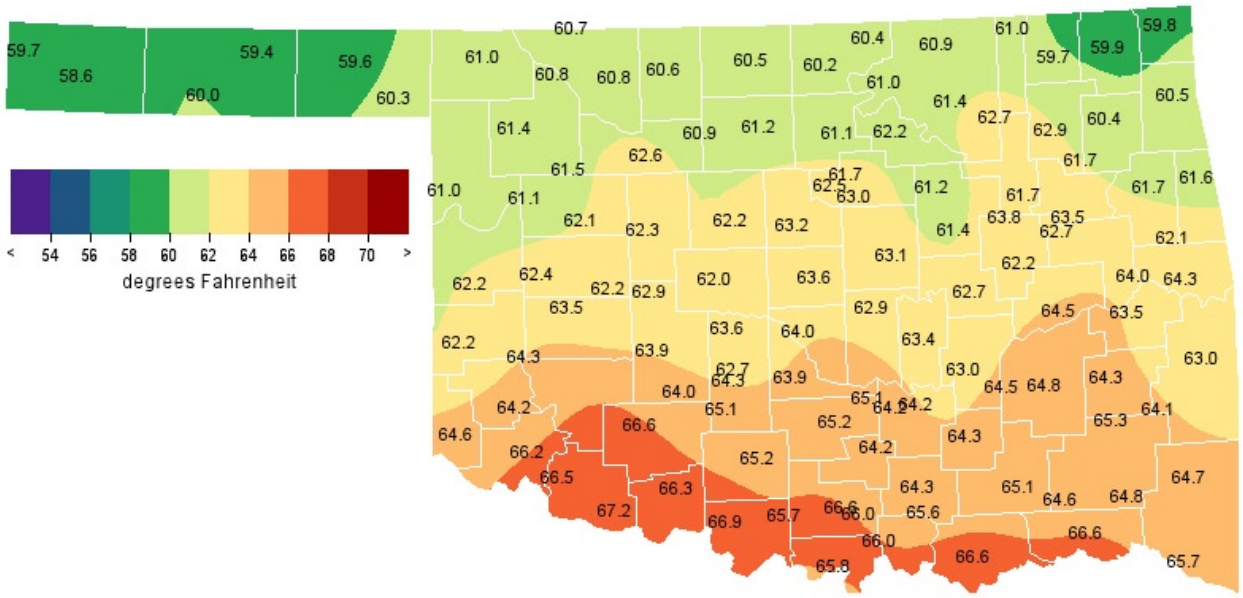
October 2003 Percent of Normal Precipitation



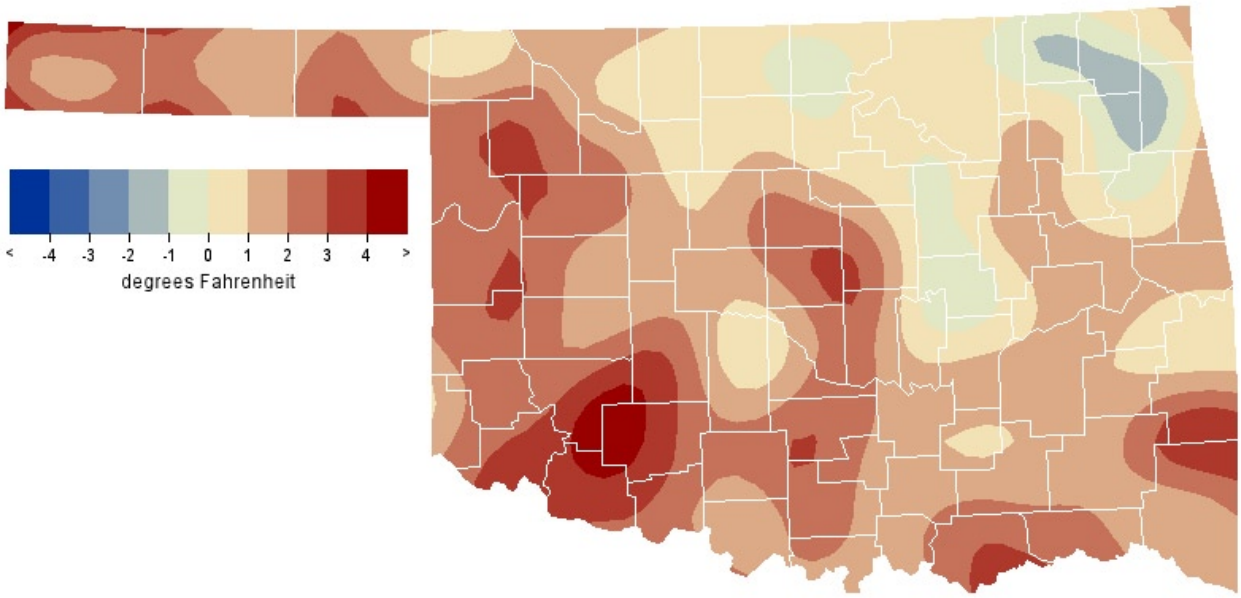
October 2003 Average Soil Moisture at 25cm



October 2003 Average Temperature



October 2003 Departure from Normal Temperature



Mesonet Monthly Summary for October 2003

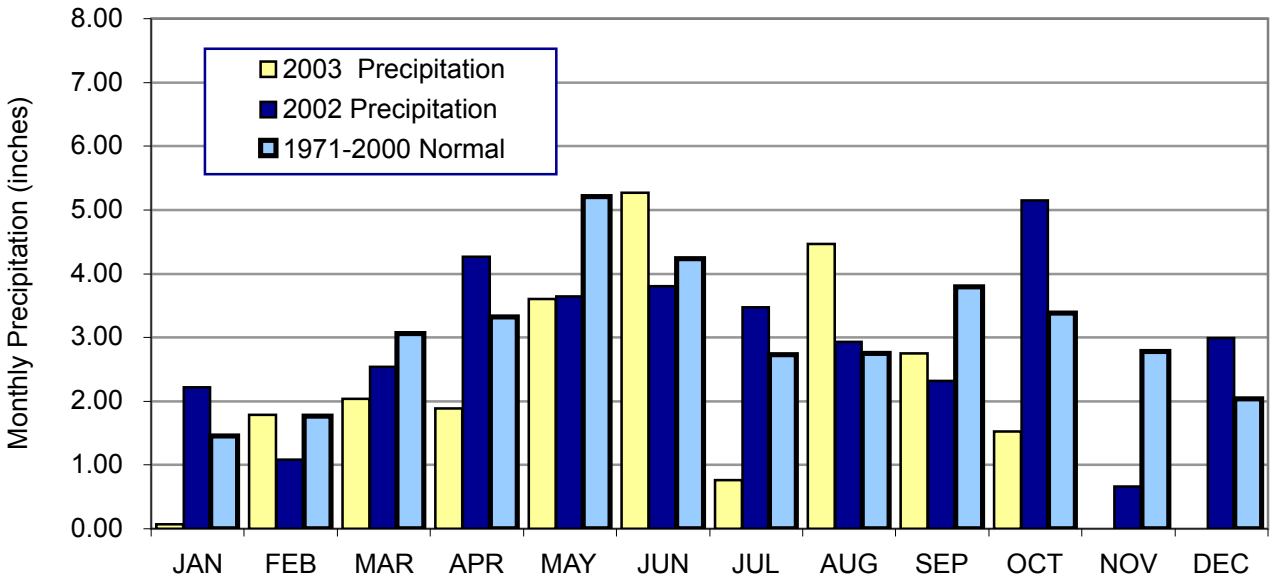
NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	60.7	95	20	29	26	183	48	.62	.44	8
Beaver	59.1	94	19	22	26	210	29	.57	.30	1
Boise City	58.0	92	29	21	26	238	22	.10	.07	8
Buffalo	60.6	94	19	28	26	182	45	1.90	1.50	8
NORTH CENTRAL										
Blackwell	59.9	90	20	32	26	182	23	2.32	.91	9
Breckenridge	60.9	89	20	34	26	163	36	2.68	1.25	8
Cherokee	60.3	94	20	29	26	181	35	1.10	.40	8
Fairview	62.3	93	20	33	26	151	66	1.26	.56	1
Freedom	60.4	94	18	27	26	185	42	.50	.23	8
Lahoma	60.5	90	20	33	26	171	33	2.08	.85	8
May Ranch	60.3	91	19	30	26	196	49	3.00	2.79	8
NORTHEAST										
Bixby	61.5	89	24	35	27	144	35	3.15	2.67	9
Burbank	60.7	90	20	34	26	166	34	2.43	1.10	9
Copan	60.6	90	20	35	26	172	36	3.63	2.47	9
Foraker	60.5	91	20	33	26	178	38	2.83	1.29	9
Jay	60.3	86	19	35	26	185	41	1.82	.84	9
Miami	59.5	85	24	35	27	193	23	2.77	.99	9
Nowata	59.3	86	20	35	26	****	****	3.41	1.76	9
Pawnee	61.9	91	20	35	26	142	47	4.37	1.48	9
WEST CENTRAL										
Bessie	63.3	91	20	34	26	130	78	1.34	.64	1
Butler	62.2	93	20	30	26	143	56	1.13	.70	8
Camargo	60.9	96	20	30	26	169	42	1.06	.77	8
Cheyenne	62.0	91	20	33	26	156	62	1.71	.97	8
Erick	62.2	91	20	30	26	****	****	*****	*****	***
CENTRAL										
Bowlegs	63.2	90	21	39	15	****	****	2.17	1.68	9
Bristow	61.3	89	24	34	29	146	31	4.16	3.71	9
Chandler	63.1	89	24	37	26	****	****	3.74	2.73	9
Chickasha	62.6	91	24	32	26	131	57	.61	.30	8
El Reno	61.8	91	24	30	26	155	57	2.15	1.49	8
Guthrie	62.8	90	24	36	26	134	67	5.06	2.87	9
Kingfisher	61.5	90	20	33	26	****	****	4.21	1.63	8
Marena	62.3	90	20	37	26	137	53	3.77	2.31	9
Minco	63.4	91	24	37	26	****	****	1.65	.94	8
Oilton	61.1	89	24	34	26	159	37	4.29	3.04	9
EAST CENTRAL										
Calvin	62.9	92	21	33	27	113	48	2.19	2.02	9
Cookson	62.0	87	21	33	26	139	44	4.04	2.91	9
Eufaula	64.4	92	21	37	27	94	75	.79	.48	9
Haskell	62.5	90	24	35	29	127	48	3.19	2.82	9
McAlester	64.6	92	21	35	26	****	****	1.39	1.12	9
Okmulgee	62.0	91	24	34	29	132	41	1.58	.99	9
Sallisaw	64.1	90	21	32	27	98	71	1.53	1.14	9
SOUTHWEST										
Altus	66.2	94	21	38	26	74	110	.38	.24	8
Fort Cobb	63.6	92	19	36	26	115	73	1.05	.71	8
Hinton	62.6	89	20	33	26	145	72	2.05	1.58	8
Hobart	*****	***	***	***	***	****	****	*****	*****	***
Hollis	64.5	93	21	36	26	90	76	.35	.17	8
Mangum	64.0	94	20	34	26	104	73	.52	.33	8
SOUTH CENTRAL										
Ada	64.1	91	21	38	29	102	74	1.31	1.01	9
Ardmore	66.0	93	21	36	27	72	102	.01	.01	13
Burneyville	65.7	94	21	31	27	80	102	.07	.06	5
Byars	65.0	90	21	39	26	90	91	.59	.42	9
Centrahoma	64.1	92	21	32	27	****	****	1.32	1.12	9
Durant	66.4	91	21	35	27	61	105	.60	.42	6
Ketchum Ranch	65.2	92	21	38	26	91	96	.13	.09	8
Lane	64.8	90	21	32	27	****	****	1.69	1.02	9
Madill	65.9	93	21	36	27	71	99	*****	*****	***
SOUTHEAST										
Antlers	64.5	92	24	28	27	93	78	1.84	.99	9
Clayton	65.3	90	24	33	27	85	93	1.43	.87	9
Cloudy	64.7	89	22	30	27	84	76	2.46	1.50	9
Hugo	66.5	90	24	36	27	56	104	1.79	1.04	9
Idabel	65.6	91	22	32	27	69	86	1.32	.65	9

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	59.4	93	19	23	26	216	43	.14	.09	8
Hooker	58.9	93	19	24	26	221	31	.38	.16	1
Kenton	59.1	92	23	20	26	209	26	.00	.00	1
Slapout	59.9	93	19	29	26	205	47	1.92	1.26	8
Medford	60.2	90	20	32	26	179	30	2.00	1.19	8
Newkirk	59.9	88	20	32	26	190	33	3.13	1.60	9
Red Rock	60.8	89	20	33	26	166	36	3.47	1.05	9
Seiling	61.2	94	20	29	26	168	49	1.73	1.02	1
Woodward	61.0	94	20	30	26	186	61	1.29	.89	1
Alva	60.4	95	20	31	26	185	43	.88	.31	1
Pryor	60.2	86	23	34	27	173	25	2.33	.99	9
Skiatook	62.4	89	20	38	26	134	55	3.29	1.48	9
Vinita	59.6	86	20	34	26	189	21	2.84	1.21	9
Wynona	61.2	90	20	36	26	161	41	2.86	1.11	9
Porter	63.3	90	24	39	27	113	62	3.07	2.69	9
Inola	61.4	88	23	35	27	145	33	4.49	3.03	9
Claremore	62.6	89	23	38	26	129	54	3.85	1.69	9
Putnam	61.8	91	19	30	26	160	61	1.73	1.38	8
Retrop	64.0	92	20	34	26	115	86	.58	.27	5
Watonga	62.0	90	19	34	26	159	66	2.10	1.68	8
Weatherford	62.0	87	20	34	26	151	58	1.27	.78	8
Okemah	62.6	89	21	37	29	124	49	1.30	.71	9
Perkins	62.7	90	19	37	26	131	58	3.43	2.21	9
Shawnee	63.0	87	24	37	26	****	****	3.05	2.51	9
Spencer	63.2	89	24	35	26	****	****	1.12	.42	8
Stillwater	61.5	90	20	35	26	148	41	3.36	1.80	9
Washington	63.8	92	21	38	26	107	71	.49	.21	1
Ninnekah	64.2	92	24	37	26	111	87	.65	.33	8
Acme	65.1	94	21	34	26	107	109	.56	.24	8
Norman	63.8	91	24	36	26	116	79	.90	.25	8
Marshall	*****	***	***	***	***	****	****	*****	*****	***
Stigler	63.3	92	21	31	27	111	60	.53	.43	9
Stuart	64.2	90	21	39	29	****	****	1.42	1.23	9
Tahlequah	61.6	85	24	35	26	145	39	3.55	2.35	9
Webbers Falls	63.8	92	21	35	27	103	66	1.88	1.23	9
Westville	61.4	85	23	36	3	148	37	4.32	2.76	9
Hectorville	63.5	89	24	39	27	114	69	3.25	2.95	9
Medicine Park	66.5	95	21	43	26	80	127	.56	.25	8
Tipton	66.5	95	21	35	26	****	****	.07	.05	8
Walters	66.3	96	21	36	27	77	117	.18	.16	8
Apache	63.9	91	24	35	26	119	85	.81	.53	8
Grandfield	67.2	96	21	39	29	67	134	.02	.01	8
Pauls Valley	65.2	92	24	36	27	88	93	.16	.06	1
Ringling	65.6	92	21	33	27	79	97	.21	.20	8
Sulphur	64.0	90	21	34	27	104	74	.62	.34	9
Tishomingo	64.2	91	21	33	26	97	72	.51	.19	6
Waurika	66.7	96	21	36	27	67	121	.02	.02	13
Vanoss	64.1	91	21	37	29	105	78	.60	.38	9
Bee	65.6	94	21	33	27	75	94	.26	.10	8
Newport	66.3	92	21	36	27	67	109	.03	.02	13
Mt Herman	64.6	88	22	32	27	85	72	2.41	1.33	9
Talihina	64.0	91	21	28	27	99	69	1.11	.80	9
Wilburton	64.1	91	21	31	27	96	69	.94	.66	9
Wister	62.8	92	21	28	27	124	56	.83	.57	9
Broken Bow	*****	***	***	***	***	****	****	1.12	.60	9

October 2003 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Oct-02
Panhandle	0.52	-0.99	26th Driest	6.41 (2000)	0.03 (1952)	4.26
North Central	1.59	-1.07	40th Driest	9.65 (1998)	0.00 (1952)	7.66
Northeast	3.03	-0.60	54th Driest	17.33 (1941)	0.05 (1917)	3.26
West Central	1.07	-1.49	28th Driest	9.41 (1986)	0.00 (1910)	6.75
Central	2.34	-1.32	54th Driest	13.51 (1941)	0.00 (1917)	5.27
East Central	2.25	-2.02	36th Driest	14.75 (1941)	0.19 (1904)	3.54
Southwest	0.51	-2.47	9th Driest	11.44 (1983)	0.00 (1952)	6.03
South Central	0.50	-3.75	6th Driest	14.61 (1981)	0.00 (1917)	5.72
Southeast	1.53	-3.43	22nd Driest	12.62 (1984)	0.10 (1921)	5.51
Statewide	1.53	-1.85	24th Driest	11.32 (1941)	0.14 (1952)	5.29

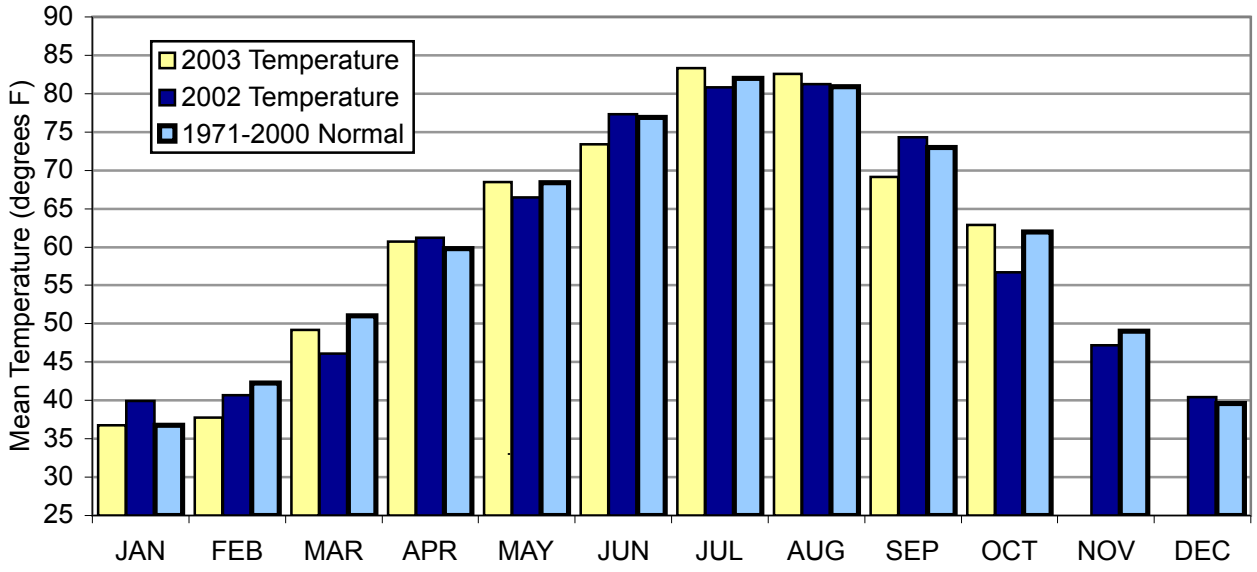
2002 and 2003 Statewide Precipitation Monthly Totals vs. Normal



October 2003 Mesonet Temperature Comparison

Climate Division	Average Temp (°F)	Departure from Normal (°F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Oct-02 (°F)
Panhandle	59.9	2.1	21st Warmest	66.4 (1963)	50.9 (1925)	52.1
North Central	61.0	0.6	53rd Warmest	69.6 (1963)	52.1 (1925)	54.0
Northeast	61.3	0.6	45th Warmest	70.0 (1963)	52.9 (1925)	56.7
West Central	62.5	2.0	27th Warmest	69.0 (1963)	53.8 (1925)	54.8
Central	63.0	1.1	39th Warmest	70.3 (1963)	54.5 (1925)	56.6
East Central	63.3	1.2	40th Warmest	71.2 (1963)	55.5 (1925)	58.9
Southwest	65.2	2.7	17th Warmest	70.5 (1963)	55.4 (1925)	57.8
South Central	65.4	1.9	30th Warmest	71.5 (1963)	56.4 (1976)	59.5
Southeast	64.8	2.4	29th Warmest	70.6 (1963)	55.7 (1976)	59.3
Statewide	62.9	1.6	31st Warmest	69.9 (1963)	54.4 (1925)	56.6

2002 and 2003 Statewide Temperature Monthly Averages vs. Normal



Mesonet Extremes for October 2003

Climate Division	High Temp (ºF)	Day	Station	Low Temp (ºF)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	95	20th	Arnett	20	26th	Kenton	1.51	Buffalo	1.50	8th	Buffalo
North Central	95	20th	Alva	27	26th	Freedom	3.11	Newkirk	2.79	8th	May Ranch
Northeast	91	20th	Pawnee	33	26th	Foraker	4.44	Inola	3.03	9th	Inola
West Central	96	20th	Camargo	30	26th	Camargo	2.03	Watonga	1.68	8th	Watonga
Central	94	21st	Acme	30	26th	El Reno	4.44	Guthrie	3.71	9th	Bristow
East Central	92	21st	Calvin	31	27th	Stigler	4.30	Westville	2.95	9th	Hectorville
Southwest	96	21st	Walters	33	26th	Hinton	1.91	Hinton	1.58	8th	Hinton
South Central	96	21st	Waurika	31	27th	Burneyville	1.80	Lane	1.12	9th	Centrahoma
Southeast	92	21st	Wister	28	27th	Antlers	2.49	Cloudy	1.50	9th	Cloudy
Statewide	96	20th	Camargo	20	26th	Kenton	4.44	Guthrie	3.71	9th	Bristow

November Climatological Outlook

Oklahoma's weather descends rather rapidly during November from the pleasantry of autumn into the chill of early winter. The state's normal temperature (averaged statewide) during the month, 49.0 degrees Fahrenheit, is the 4th lowest of any of the year's 12 months. Based on monthly averages across the state, November is 13 degrees cooler than October, easily Oklahoma's largest temperature difference between consecutive months. The increasingly frequent intrusions of cooler (and sometimes frigid) air, frequently accompanied by some dreary, dismal weather, are usually separated by interludes of gorgeous autumn days. The pleasant interludes provide farmers with an opportunity to complete the harvest of peanuts, cotton, and sorghum, or to finish drilling the new wheat crop. The statewide-averaged November normal precipitation is 2.78 inches, making November the 6th wettest of the months in Oklahoma. Snow, sleet, and ice are frequent late-November visitors to the state, too often creating travel hazards during the long Thanksgiving weekend.

Temperature
Mean: 49.0 degrees
Warmest November: 1989, 56.2 degrees
Coolest November: 1929, 42.6 degrees
Warmest location: Waurika, 53.4 degrees
Coolest location: Turpin, 42.8 degrees
Hottest recorded: 95 degrees, Waukomis, November 1, 1914
Coalgate, November 1, 1937
Coldest recorded: -15 degrees, Kenton, November 28, 1976

Statewide-averaged monthly temperature extremes for the Novembers since 1892 have varied between 56.2 degrees in 1989 and 42.6 degrees in 1929. The range of normal daily average temperatures across the state, as published by the National Climatic Data Center, is from 53.4 degrees at Waurika to 42.8 degrees at Turpin. Normal daily maximum temperatures fall between Waurika's 65.3 degrees and Newkirk's 56.6 degrees. Normal daily minimum temperatures range from 42.9 degrees at Okemah to 28.4 degrees at three panhandle reporting stations (Turpin, Boise City, and Beaver). Hot weather is rare, but not absent, during the month. Mutual set a state record for November's highest temperature when the thermometer registered 95 degrees on November 1, 1914. That record was tied at Coalgate 23 years later on November 1, 1937. November's coldest day, according to the Oklahoma record book, occurred on November 28, 1976 when a temperature of 15 degrees below zero (-15) was reported at Kenton.

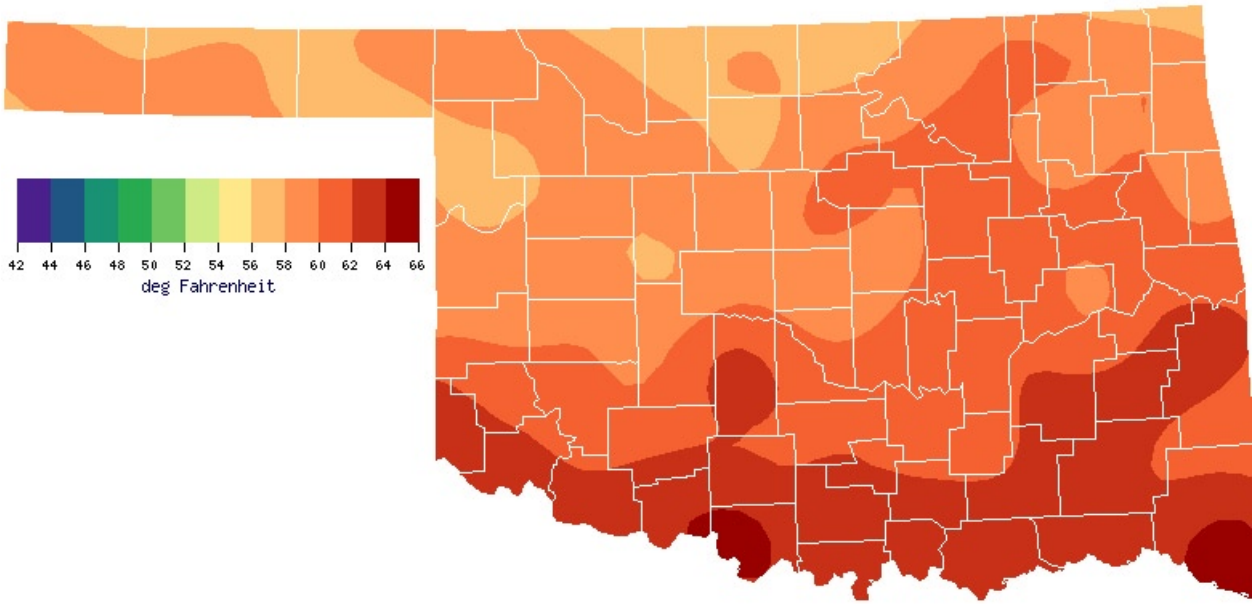
November precipitation is highly variable from year-to-year. The state's driest recorded November, a statewide averaged precipitation of 0.12 inches in 1910, followed the record wet one (5.72 inches in 1909) by exactly one year. During much of the state's history, November was thought of as a much drier month than it is today. During the period from 1931 through 1960, the statewide-averaged precipitation during November across Oklahoma was only 1.87 inches, nearly a full inch less than the currently established monthly normal (compiled from 1971 through 2000). Annual precipitation across Oklahoma compiled from the earlier was a full 3.25 inches less than the value currently in use. Increased precipitation during November has contributed more to the recent increases in annual precipitation than any other month. At individual locations within Oklahoma, November normal precipitation ranges 5.64 inches at the Carnasaw Fire Tower in McCurtain County to 0.61 inch at the panhandle's Goodwell and Regnier. Stilwell averages 9.6 days with measurable precipitation (at least 0.01 inch), whereas Leedey averages a mere 2.4 such days. Ponca City holds the record for most precipitation in one day at a recognized reporting site during November: 11.11 inches on November 20, 1979. Idabel recorded 17.01 inches of precipitation during November 2000 to establish the record for total precipitation during the month at a regular reporting station.

Precipitation
Mean: 2.78 inches
Wettest year: 1909, 5.72 inches
Driest year: 1910, 0.12 inches
Wettest location: Carnasaw Fire Tower, 5.64 inches
Driest location: Goodwell and Regnier, 0.61 inches
Most recorded: 17.01 inches, Idabel, 2000

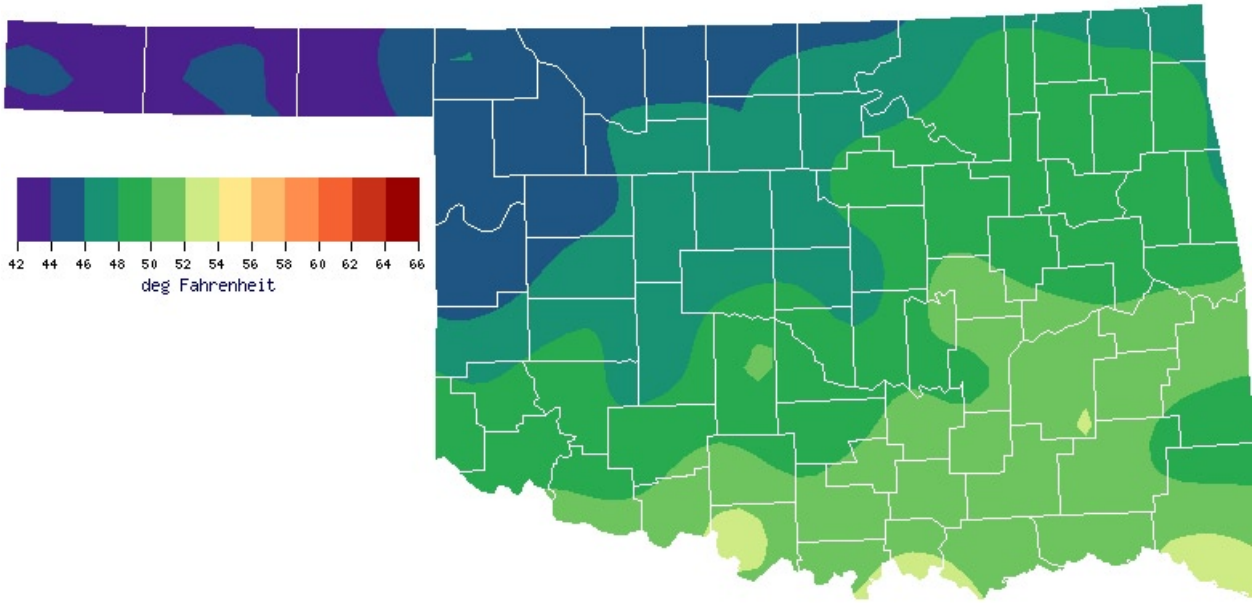
Severe and dangerous weather takes on a myriad of forms during November. There were 75 November tornadoes reported in the state from 1950 through 2002. Twelve of those were recorded on November 17, 1958 to establish the state record for most November tornadoes, both during a month and on a day. A tornado that struck Camel Creek School and the town of Bethany on November 19, 1930 killed 23 people. On November 4, 1922, a tornado between Shamrock and Drumright resulted in 11 deaths. The most recent November tornado fatalities occurred on November 19, 1973 when five people were killed in Blanchard. There were no tornadoes reported within the state during 32 of those 53 Novembers.

Tornadoes
Average October Tornadoes: 1
Most: 2 (1958)

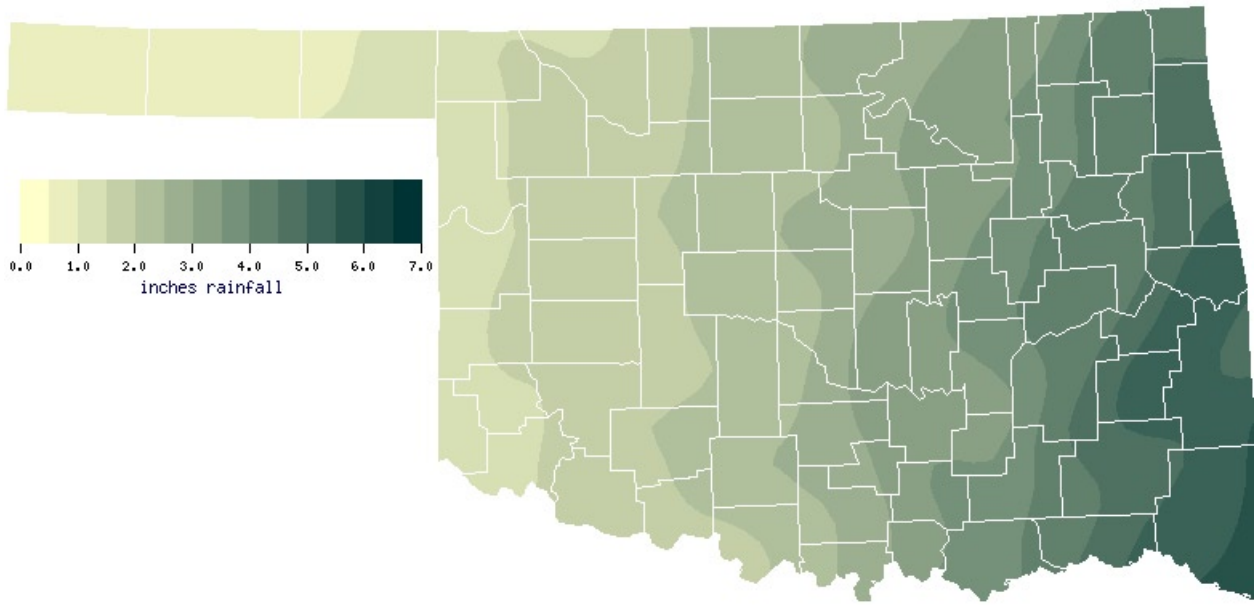
November Normal Monthly Maximum Temperature (1971-2000)



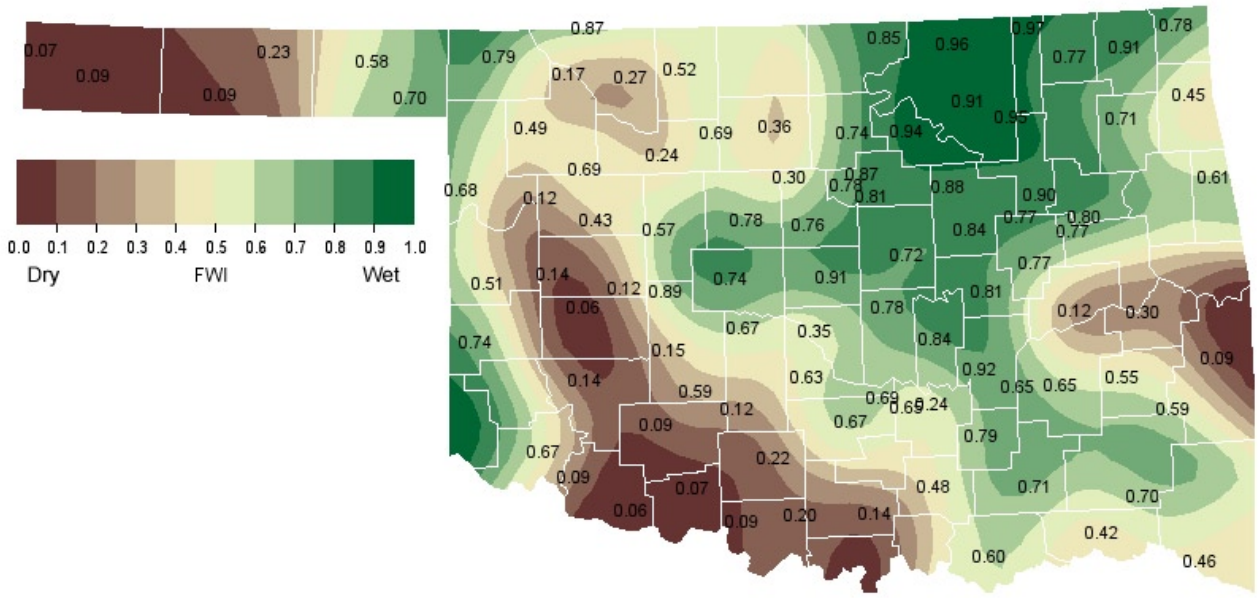
November Normal Monthly Minimum Temperature (1971-2000)



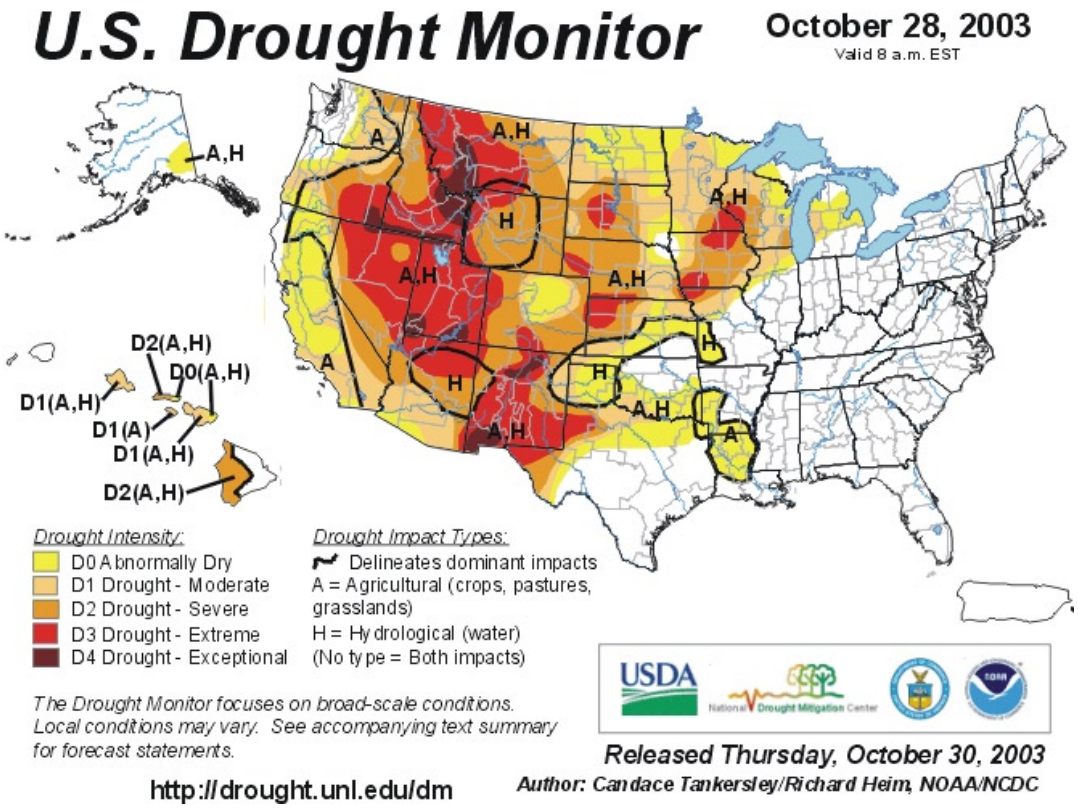
November Normal Precipitation (1971-2000)

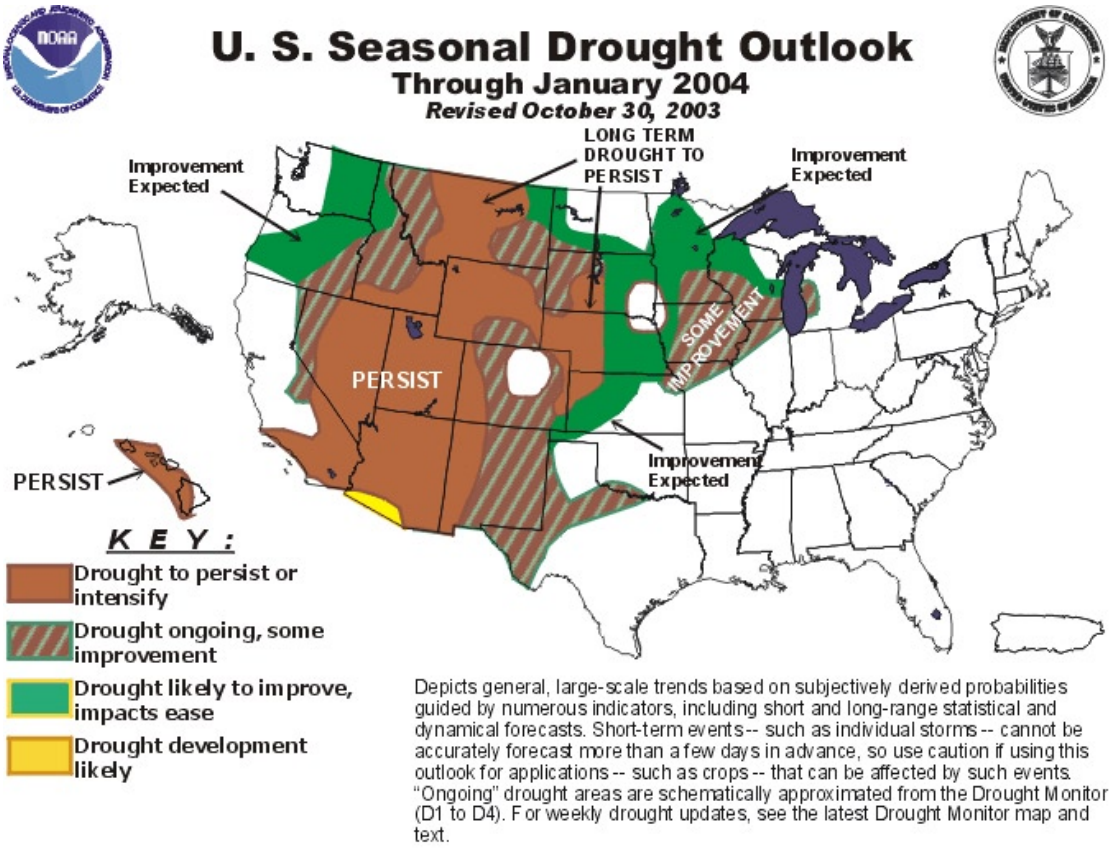


November 1, 2003 Soil Moisture Conditions at 25cm

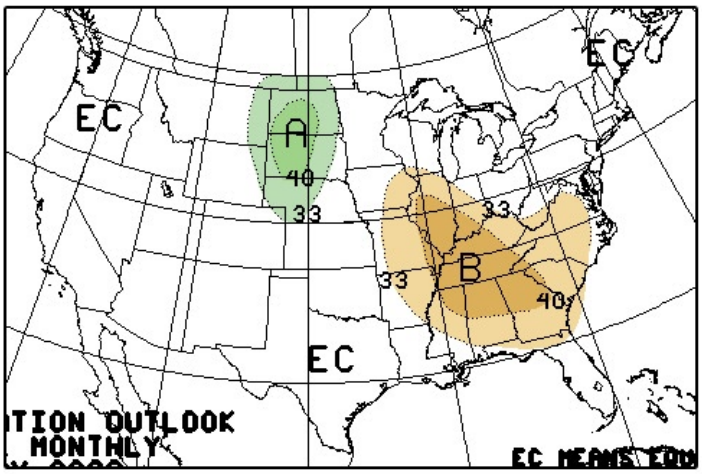


November 2003 Drought Indices





November 2003 U.S. Precipitation Forecast



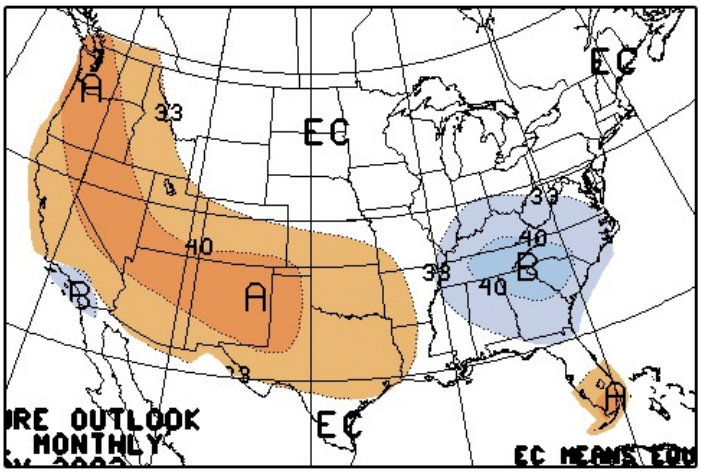
Percent Likelihood
of Above or Below
Average Precipitation*

5% - 10%
0% - 5%
A = Above

0% - 5%
5% - 10%
B = Below

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

November 2003 U.S. Temperature Forecast



Percent Likelihood
of Above and Below
Average Temperatures*

10% - 20%
5% - 10%
0% - 5%
A = Above

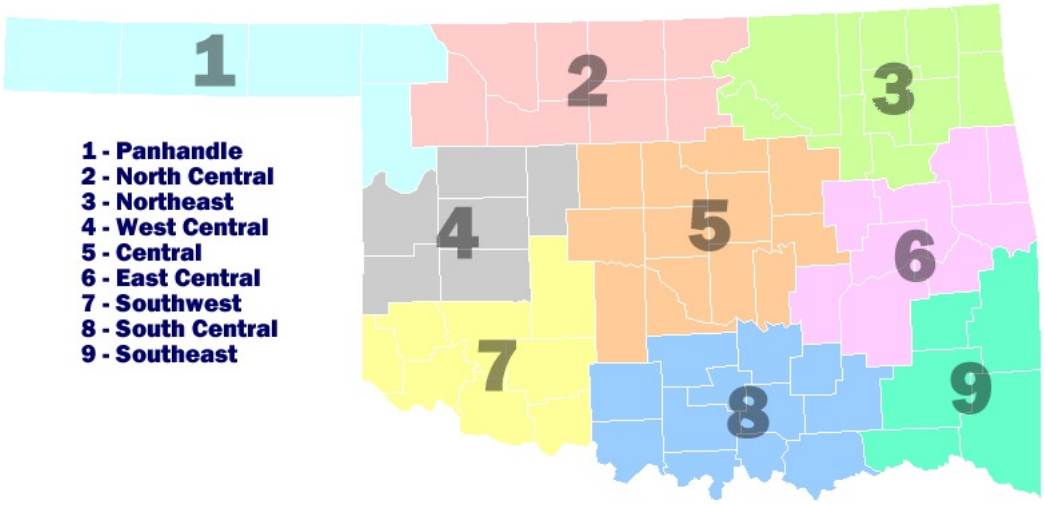
0% - 5%
5% - 10%
B = Below

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

November Climate Normals

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1.0	58.8	30.2	44.6	1.0
2.0	58.1	33.4	45.8	2.1
3.0	60.0	37.5	48.8	3.6
4.0	59.0	34.3	46.7	1.7
5.0	60.3	37.2	48.8	2.7
6.0	60.9	39.0	50.0	4.2
7.0	61.7	36.3	49.0	1.7
8.0	62.7	39.2	51.0	3.1
9.0	63.0	39.0	51.0	5.0
Statewide	60.5	36.4	48.5	2.9

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 Climate Office for Oklahoma

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