Oklahoma Monthly Climate Summary

NOVEMBER 2012

OKLAHOMA CLIMATOLOGICAL SURVEY

Drought surged during November with a return to the dry, warm and windy weather pattern that Oklahoma has become accustomed to over the last couple of years. According to the latest U.S. Drought Monitor report, the amount of extreme to exceptional drought rose from 72 percent last week to 91 percent this week. The state had not seen that amount of extreme to exceptional drought since late September. Other than a small but persistent area of moderate drought in far northeastern Oklahoma, the entire state remained in at least severe drought according to the report. The Drought Monitor's intensity scale slides from moderate-severe-extreme-exceptional, with exceptional being the worst category. The bulk of that increase came across areas in southern and eastern Oklahoma that had been categorized in severe drought since September.

The statewide average temperature finished at 52.4 degrees, 3.4 degrees above normal and the 12th warmest November since 1895. November also became the 26th month out of the last 32 to finish warmer than normal, dating back to April 2010. Oklahoma's 2012 January-November average temperature remained approximately two-tenths of a degree ahead of 1954 in a race to break the record for warmest calendar year.

The month was also exceedingly dry, a continuation of what the state had seen since May. The Mesonet's statewide average total for the month was 0.57 inches, more than 2 inches below normal and the 21st driest November on record. This November stands in stark contrast to last year's version, which ended as the 12th wettest on record at nearly 2 inches above normal. The current span of particularly dry weather extends=ed farther back than the beginning of November. According to preliminary data from the Oklahoma Mesonet and the National Climatic Data Center, the statewide average rainfall total for May through November was 13.48 inches, the second driest such period on record in Oklahoma. The only drier May through November was 1952's 13.34 inches.

The combination of wind, warmth and lack of rainfall accelerated the loss of moisture from the state's soils and reservoirs, and impeded the progress of the winter wheat crop. The November 26 weekly crop update from the USDA's Oklahoma office of the National Agricultural Statistics Service noted that the state's topsoil and subsoil moisture conditions were rated 95 percent and 97 percent poor to very poor, respectively. The report also indicated that only 13 percent of the winter wheat crop was rated as good, with one percent in the excellent category. Eleven of the state's major reservoirs are at less than 70 percent of normal capacity, with an additional eight being below 80 percent. Lake Altus-Lugert is in the worst shape at 17 percent of capacity.

November 2012 Statewide Extremes

Description	Extreme	Station	Day
High Temperature	89°F	Multiple	2
Low Temperature	12°F	Beaver	27
High Precipitation	1.33 in.	Copan	--
Low Precipitation	0.00 in.	Multiple	--

November 2012 Statewide Statistics

Temperature

	Average	Depart.	Rank (1895-2012)
Month (November)	52.4°F	4.1°F	12th Warmest
Season-to-Date (Sept - Nov)	62.0°F	1.3°F	39th Warmest
Year-to-Date (Jan-Nov)	65.0°F	3.5°F	1st Warmest

Precipitation

	Average	Depart.	Rank (1895-2012)
Month (November)	0.57 in.	-2.25 in.	21st Driest
Season-to-Date (Sept-Nov)	4.75 in.	-5.26 in.	17th Driest
Year-to-Date (Jan-Nov)	25.45 in.	-9.22 in.	15th Driest

Depart. = departure from 30-year normal

NOVEMBER 1-2: The beginning of November greeted us with sunny, warm, and dry weather. Maximum temperatures were relatively high, averaging between the mid-70s to upper 80s. The highest temperatures, coming in at 89, were observed in north central Oklahoma. Two daily record high temperatures were broken on the second: Oklahoma City at 84 degrees and McAlester at 86 degrees. Lows ranged from the 30s to 50s. Winds were light on the first, increasing to roughly 15mph on the second.

NOVEMBER 3-5: Two successive cold fronts passed through Oklahoma, pulling the average maximum temperature down into the upper 60s for most of the state. A few warm outliers occurred in portions of southeast Oklahoma, where it took longer for the front to reach. Low temperatures took a dip as well, measuring between 26 and 53 degrees. Cloudiness increased with the frontal passage, producing southerly winds ahead and northerly winds behind it. Maximum wind speeds were between 15 and 25mph, with some gusts reported as high as 40mph around central and north central OK. Rainfall was negligible.

NOVEMBER 6-9: Despite a weak cold front on the sixth, maximum temperatures managed to creep back up into the 70s and 80s. During this period, highs varied all the way from 59 in Jay and Westville to 88 degrees in Hollis. McAlester broke a daily record high mean temperature at 71 degrees on the ninth. The lowest minimum temperatures started in the 20s on the sixth, and gradually climbed into the upper 30s and 40s by the ninth. Likewise, the highest minimum temperatures transitioned from the 40s to the 60s. Winds remained pretty breezy, especially on the eighth and ninth at about 10-25mph. Strewn about the state were 40mph wind gust measurements.

NOVEMBER 10-11: Scattered showers and thunderstorms developed during the evening of the 10th and continued during the 11th. Statewide rainfall amounts averaged just over half an inch, but measured as low as one tenth of an inch in northwest Oklahoma and over an inch in central Oklahoma. Maximum temperatures were in the 70s and low 80s on the 10th, then dropped into the 40s in the panhandle region on the 11th. Low temperatures had a span of over 40 degrees, fluctuating between 20 degrees (Hooker on the 11th) and 67 degrees (Blackwell and Red Rock on the 10th). Both a record daily high mean temperature (McAlester at 70) and a record daily high minimum temperature (Tulsa at 64) were reached on the 10th. Average wind speeds were generally between 5 and 25mph, gusting into the 50s and 60s. Kenton received a 67mph wind gust on the 10th.

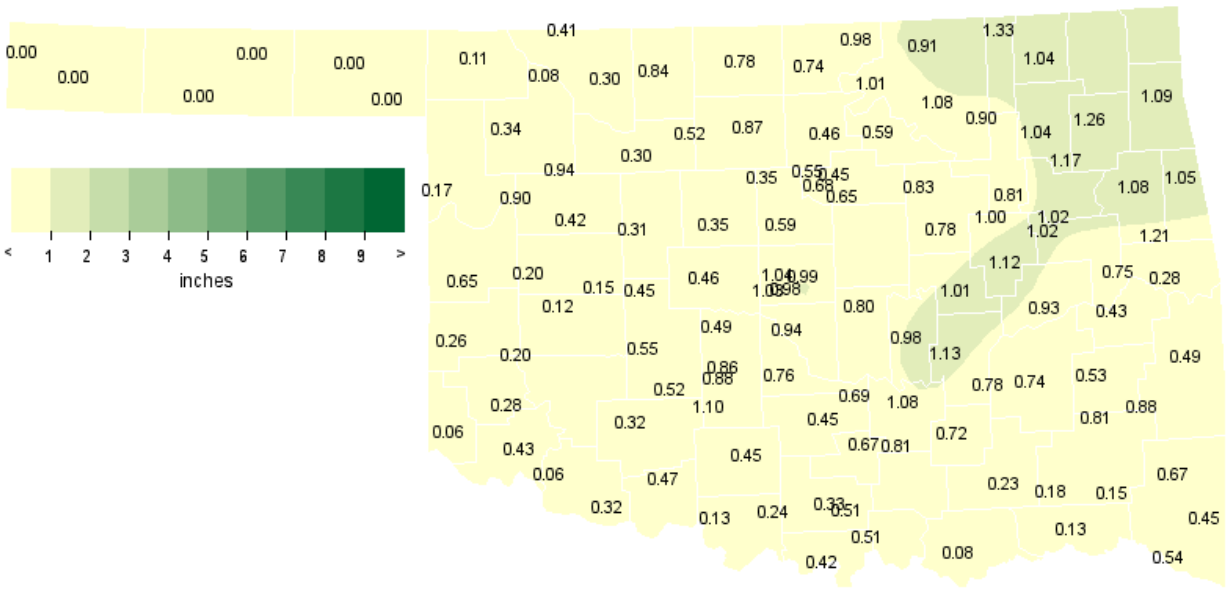
NOVEMBER 12-17: Although high temperatures fell closer to the climatic normals, the entire week remained sunny and beautiful. The highest maximum temperatures averaged in the 60s and the lowest maximum temperatures averaged in the 50s. Lows were fairly cool, with many portions of Oklahoma plummeting below freezing. The lowest temperature was 15 degrees in Beaver on the 12th. Neighboring stations had minimums just below 20 degrees for their lows on that same day. Average wind speeds were between 2 and 10mph from the 12th-16th, jumping up to roughly 5-18mph on the 17th.

NOVEMBER 18-21: Apart from the short-lived, scattered sprinkles in southwest Oklahoma on the 18th, conditions remained pleasant in this four-day stretch. Skies were mostly clear and winds were on the calm side. A warming trend began, increasing the maximum temperatures from the low 70s on the 18th to 80 degrees on the 21st. McAlester tied a previous daily high record temperature at 78 degrees on the 21st. Although low temperatures generally averaged in the 40s, Wister did report a minimum of 26 degrees on the 18th with other panhandle stations falling into the 20s on the 20th. The highest average wind speeds were reported around 20mph; some wind gusts were in the 30s and 40s. Central Oklahoma experienced patchy fog, diminishing visibility below a quarter mile on the 21st.

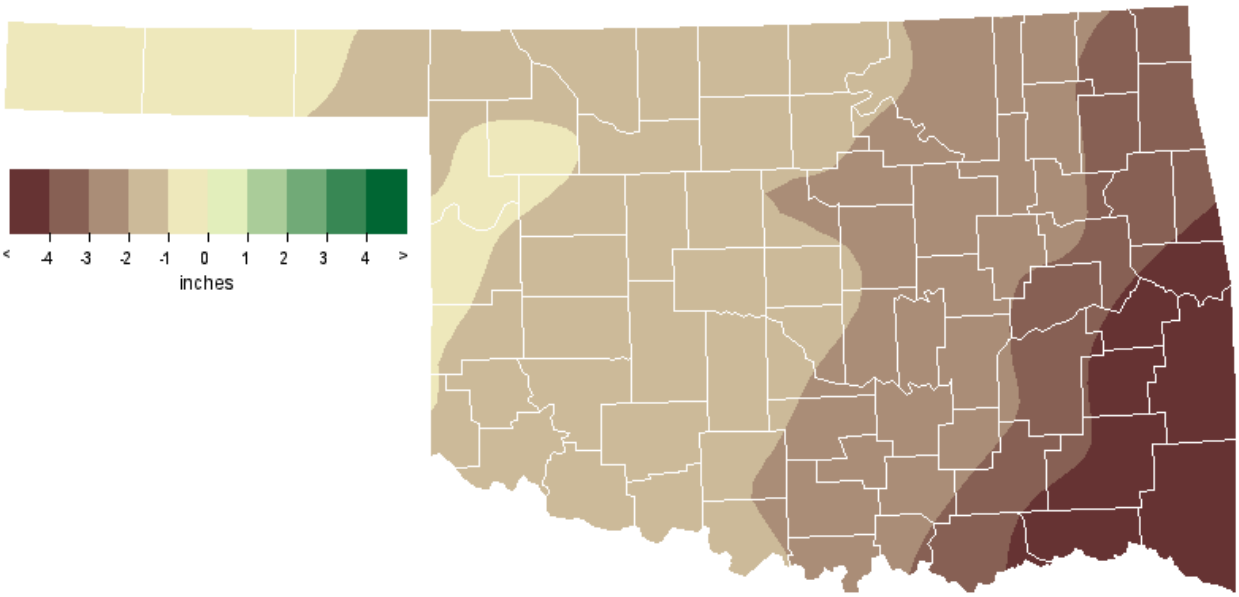
NOVEMBER 22-27: Multiple cold fronts moved through the state, creating a shift in wind direction (southerly to more northerly) and temperatures. The maximum temperatures that originally ranged between the 50s and 80s in the beginning of this period fell between the 30s and 60s towards the end. Minimum temperatures plummeted, averaging in the 20s to 30s. The 22nd experienced slightly warmer lows (50s) as passing cold fronts had yet to take effect. The lowest minimum for the entire month was reported on the 27th in Beaver at 12 degrees. The few scattered showers that accompanied the fronts produced trivial rainfall amounts. Wind gusts peaked into the 30s and 40s.

NOVEMBER 28-30: The end of November was much like the beginning – sunny and unseasonably warm. Highs ranged from 56 in Goodwell, Hooker, and Miami, to 77 in Grady. On the 28th, lows fluctuated from the teens to the 30s, but were between 23 and 53 degrees by the 30th. Winds were moderate, averaging between 5 and 15mph.

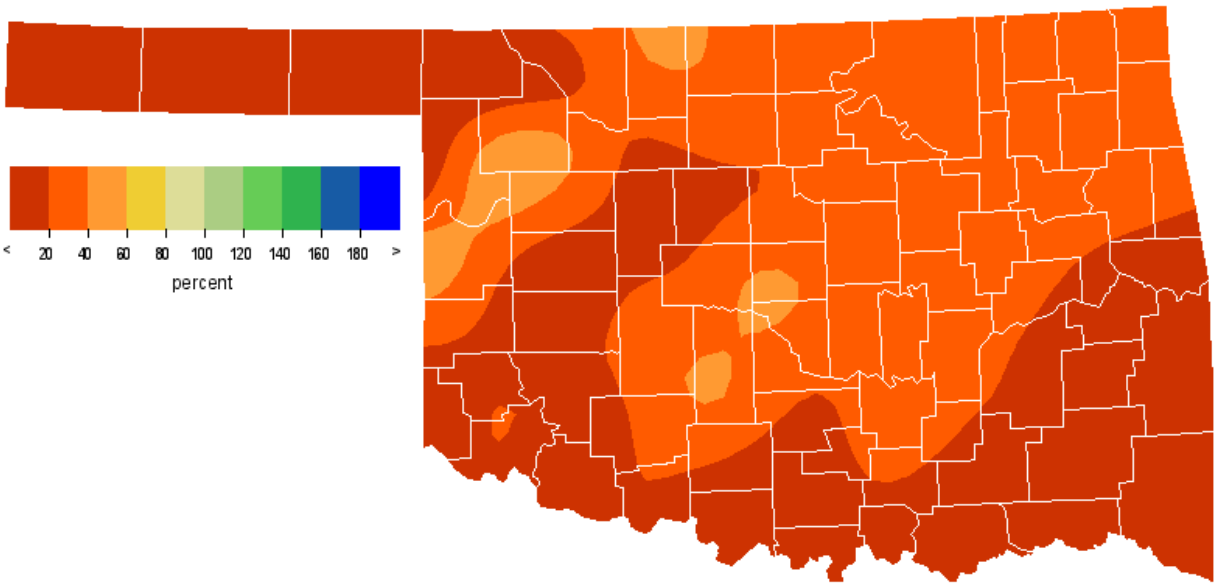
NOVEMBER 2012 OBSERVED PRECIPITATION



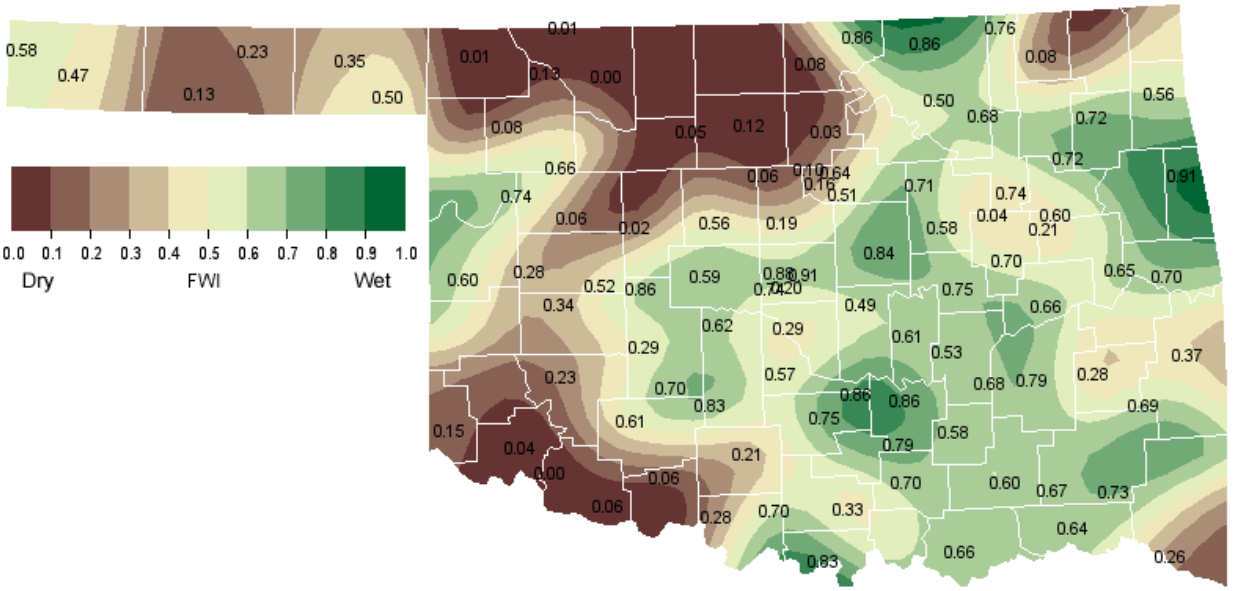
NOVEMBER 2012 DEPARTURE FROM NORMAL PRECIPITATION



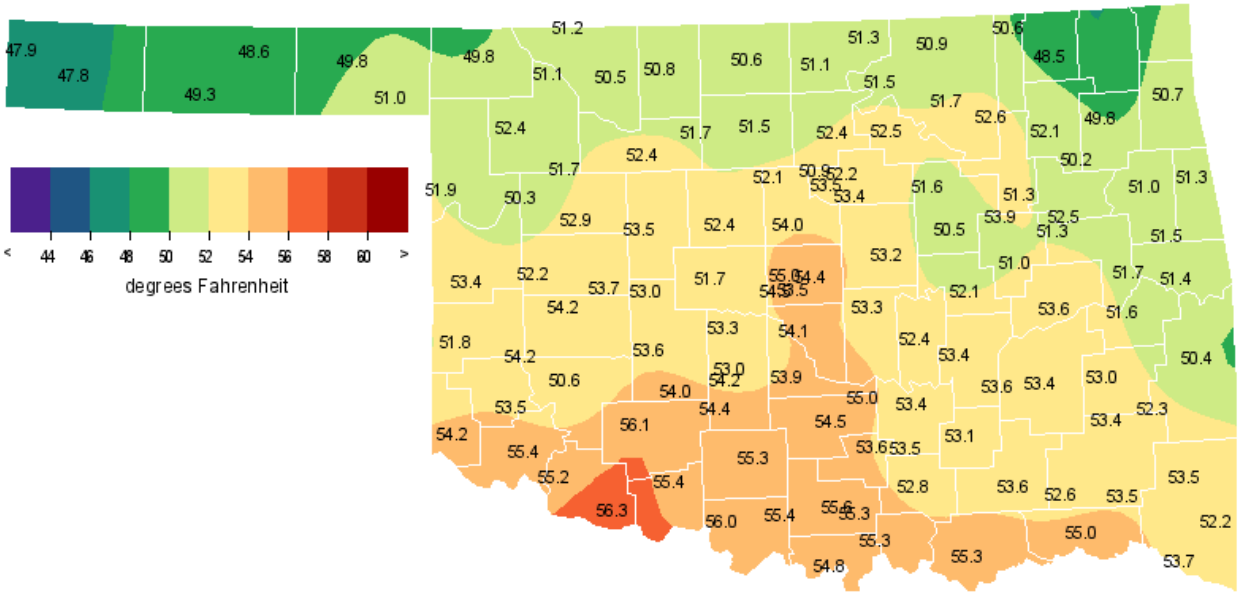
NOVEMBER 2012 PERCENT OF NORMAL PRECIPITATION



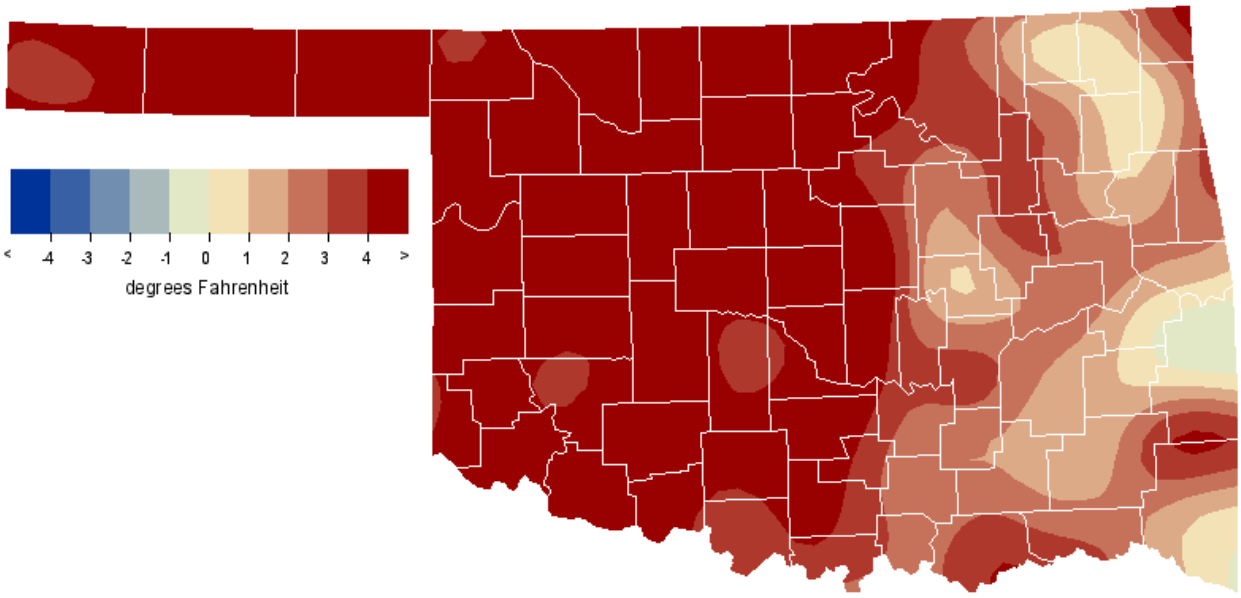
NOVEMBER 2012 AVERAGE SOIL MOISTURE AT 25CM



NOVEMBER 2012 AVERAGE TEMPERATURE



NOVEMBER 2012 DEPARTURE FROM NORMAL TEMPERATURE

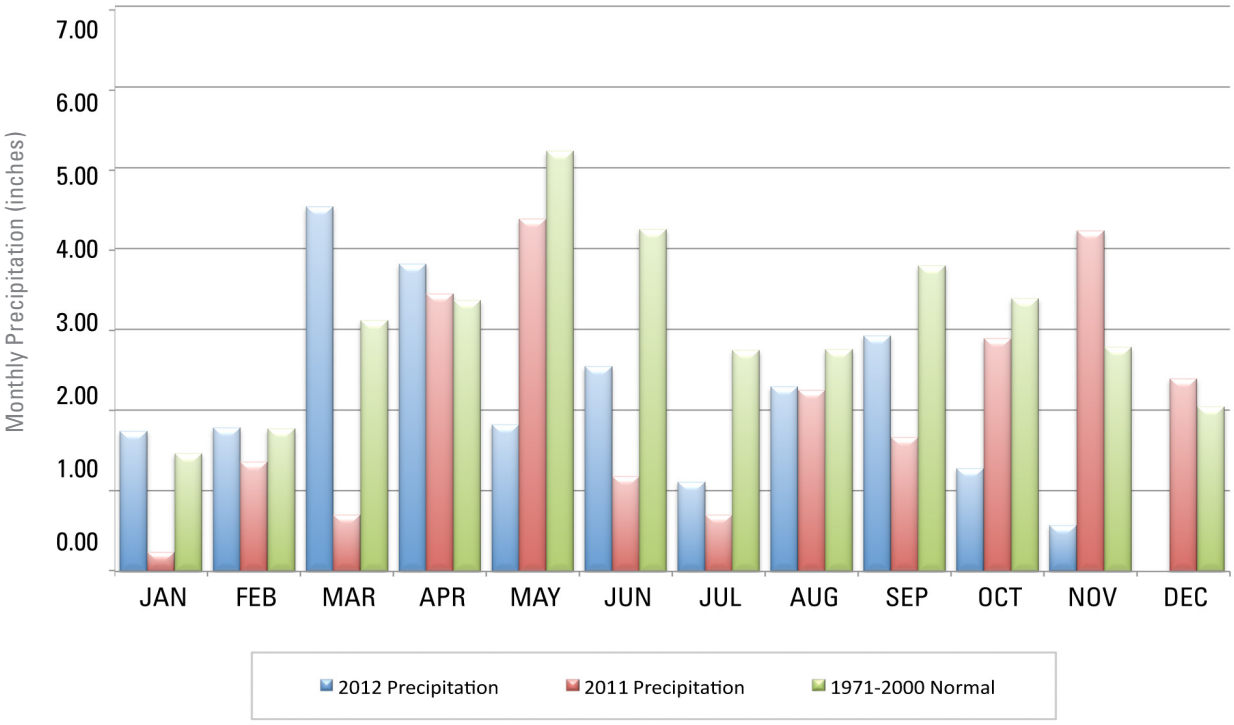


MESONET MONTHLY SUMMARY FOR NOVEMBER 2012

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
PANHANDLE										
Arnett	51.9	85	9	18	27	403	10	.17	.17	10
Beaver	49.8	86	9	12	27	460	4	.00	.00	1
Boise City	47.8	79	1	17	12	517	0	.00	.00	1
Buffalo	49.8	87	9	15	27	459	3	.11	.11	10
NORTH CENTRAL										
Alva	50.5	87	2	17	27	447	12	.30	.18	11
Blackwell	51.1	89	2	18	27	435	18	.74	.64	11
Breckinridge	51.5	88	2	20	27	421	16	.87	.81	11
Cherokee	50.8	89	2	20	27	440	14	.84	.50	10
Fairview	52.4	89	2	22	27	396	17	.30	.22	11
Freedom	51.2	84	9	18	27	420	6	.08	.08	10
Lahoma	51.7	89	2	21	27	413	14	.52	.48	11
NORTHEAST										
Bixby	51.3	88	2	22	24	420	10	.81	.79	11
Burbank	51.5	89	2	20	24	419	14	1.01	.91	11
Claremore	52.1	87	2	24	24	396	7	1.04	1.01	11
Copan	50.6	87	2	19	27	440	7	1.33	1.24	11
Foraker	50.8	89	2	19	27	434	9	.91	.79	11
Inola	50.2	85	2	21	24	448	5	1.17	1.08	11
Jay	50.7	82	2	20	24	433	4	1.09	.91	11
Miami	50.1	80	2	22	24	****	****	1.23	.99	11
WEST CENTRAL										
Bessie	54.1	86	2	24	27	346	19	.12	.12	11
Butler	52.2	88	2	20	28	399	16	.20	.14	10
Camargo	50.3	89	2	18	27	451	9	.90	.85	10
Cheyenne	53.4	85	2	22	27	359	13	.65	.64	10
Erick	51.7	87	2	20	27	411	13	.26	.24	10
CENTRAL										
Acme	54.4	85	1	23	12	337	19	1.10	1.09	11
Bowlegs	52.4	85	2	21	24	384	7	.98	.80	11
Bristow	50.6	87	2	18	24	442	10	.78	.73	11
Lake Carl Blac	50.9	88	2	18	24	440	15	.55	.54	11
Chandler	53.1	86	2	24	24	369	13	*****	*****	***
Chickasha	53.0	85	2	23	24	374	14	.86	.84	11
El Reno	51.6	84	2	21	12	412	11	.46	.45	11
Guthrie	54.0	85	2	23	27	348	18	.59	.58	11
Kingfisher	52.4	88	2	22	24	394	17	.35	.34	11
Marena	53.4	88	2	22	12	363	16	.68	.68	11
Minco	53.3	83	2	25	27	359	9	.49	.49	11
Marshall	52.1	88	2	21	27	404	18	.35	.34	11
EAST CENTRAL										
Cookson	51.5	83	2	22	24	411	5	1.21	1.14	11
Eufaula	53.6	86	2	25	24	357	14	.93	.87	11
Haskell	51.3	87	2	21	24	419	7	1.02	1.00	11
Hectorville	53.8	87	2	26	12	351	14	1.00	.87	11
Holdenville	53.4	86	2	26	24	360	12	1.13	.97	11
McAlester	53.3	85	2	22	24	360	11	.74	.67	11
Okmulgee	51.0	87	2	20	28	428	9	1.12	1.07	11
SOUTHWEST										
Altus	55.4	88	1	26	27	308	19	.43	.42	11
Apache	53.9	84	2	24	27	346	13	.52	.52	11
Fort Cobb	53.6	85	2	25	24	352	10	.55	.55	11
Grandfield	56.3	88	1	28	24	287	27	.32	.29	11
Hinton	53.1	84	2	22	27	370	12	.45	.45	11
Hobart	54.2	86	2	23	27	****	****	.83	.82	11
SOUTH CENTRAL										
Ada	53.3	86	2	23	24	359	7	1.08	1.08	11
Ardmore	55.4	86	2	28	24	306	17	.51	.51	11
Burneyville	54.8	88	2	22	24	325	18	.42	.42	11
Byars	55.0	84	2	26	24	318	18	.69	.66	11
Centrahoma	53.1	87	2	21	24	366	10	.72	.66	11
Durant	55.4	86	2	26	13	303	15	.08	.08	11
Fittstown	53.5	85	2	24	24	353	9	.81	.81	11
Ketchum Ranch	55.3	85	1	24	24	308	17	.45	.44	11
Lane	53.6	86	2	24	13	351	10	.23	.22	11
SOUTHEAST										
Antlers	52.6	87	2	21	13	380	8	.18	.18	11
Antlers	*****	***	***	***	***	****	****	*****	*****	***
Broken Bow	52.2	87	2	24	24	386	1	.45	.19	11
Clayton	53.4	86	2	23	13	359	10	.81	.75	11
Cloudy	53.4	85	2	24	13	352	4	.15	.12	11
Hugo	54.9	87	2	28	24	314	12	.13	.13	11

NAME	MEAN TEMP	HIGH TEMP	HIGH DAY	LOW TEMP	LOW DAY	HDD	CDD	TOT PPT	HIGH 24-HR	HIGH DAY
Goodwell	49.2	81	1	18	27	473	0	.00	.00	1
Hooker	48.6	81	1	15	27	491	0	.00	.00	1
Kenton	47.8	79	1	17	28	515	0	.00	.00	1
Slapout	51.0	85	9	18	27	424	4	.00	.00	1
May Ranch	51.2	84	9	20	27	417	4	.41	.41	10
Medford	50.7	89	2	18	27	443	13	.78	.59	11
Newkirk	51.4	88	2	20	27	421	13	.98	.73	11
Red Rock	52.4	88	2	21	27	397	18	.46	.43	11
Seiling	51.7	88	2	19	27	411	12	.94	.80	10
Woodward	52.3	85	9	19	27	395	14	.34	.34	10
Nowata	48.5	84	2	18	24	502	6	1.04	.94	11
Pawnee	52.5	89	2	22	24	391	16	.59	.56	11
Porter	52.5	86	2	23	24	384	8	1.02	.99	11
Pryor	49.8	84	2	19	24	463	7	1.26	1.18	11
Skiatook	52.6	86	2	24	12	381	11	.90	.86	11
Vinita	49.1	82	2	19	24	****	****	1.18	1.01	11
Wynona	51.6	88	2	22	12	414	12	1.08	1.00	11
Putnam	52.9	87	2	20	27	378	14	.42	.27	11
Retrop	54.2	87	2	22	27	345	22	.20	.20	11
Watonga	53.5	85	2	23	27	359	14	.31	.31	11
Weatherford	53.7	85	2	23	27	353	12	.15	.15	11
Ninnekah	54.1	85	2	22	24	343	17	.88	.87	11
Norman	54.1	85	2	25	12	342	15	.94	.94	11
Oilton	51.6	86	2	21	24	414	13	.83	.78	11
OKC East	53.6	84	2	25	24	357	14	.98	.98	11
OKC North	54.9	84	2	25	27	321	19	1.04	1.04	11
OKC West	54.5	84	2	27	27	328	14	1.03	1.03	11
Okemah	52.1	84	2	21	24	393	7	1.01	.92	11
Perkins	53.4	86	2	24	24	364	16	.65	.63	11
Shawnee	53.3	83	2	24	27	362	11	.80	.80	11
Spencer	54.4	84	2	25	27	335	17	.99	.99	11
Stillwater	52.2	87	2	21	24	398	13	.45	.45	11
Washington	53.9	85	2	25	12	346	13	.76	.74	11
Sallisaw	51.3	86	2	22	24	413	3	.28	.22	11
Stigler	51.6	85	2	22	24	410	8	.43	.41	11
Stuart	53.7	85	2	26	13	352	12	.78	.61	11
Tahlequah	51.0	83	2	21	24	423	3	1.08	.99	11
Webbers Falls	51.6	87	2	23	24	407	5	.75	.71	11
Westville	51.3	81	2	23	24	412	2	1.05	.99	11
Hollis	54.2	88	2	22	12	343	19	.06	.05	11
Mangum	53.6	89	2	20	13	362	19	.28	.26	11
Medicine Park	56.1	85	1	27	27	286	19	.32	.31	11
Tipton	55.2	88	1	24	12	316	23	.06	.04	11
Walters	*****	***	***	***	***	****	****	*****	*****	***
Madill	55.3	87	2	24	24	307	17	.51	.50	11
Newport	55.6	87	2	27	24	301	18	.33	.33	11
Pauls Valley	54.5	85	2	24	24	330	16	.45	.44	11
Ringling	55.4	86	2	26	12	301	13	.24	.24	11
Sulphur	53.6	84	2	22	24	349	8	.67	.66	11
Tishomingo	52.9	86	2	22	24	371	7	*****	*****	***
Vanoss	*****	***	***	***	***	****	****	*****	*****	***
Waurika	56.0	86	2	24	13	293	24	.13	.13	11
Idabel	53.6	87	2	24	13	349	8	.54	.21	11
Mt Herman	53.5	84	2	25	24	353	9	.67	.61	11
Talihina	52.4	84	2	21	13	388	10	.88	.77	11
Wilburton	53.0	86	2	21	24	371	11	.53	.46	11
Wister	50.4	85	2	19	24	446	8	.49	.43	11

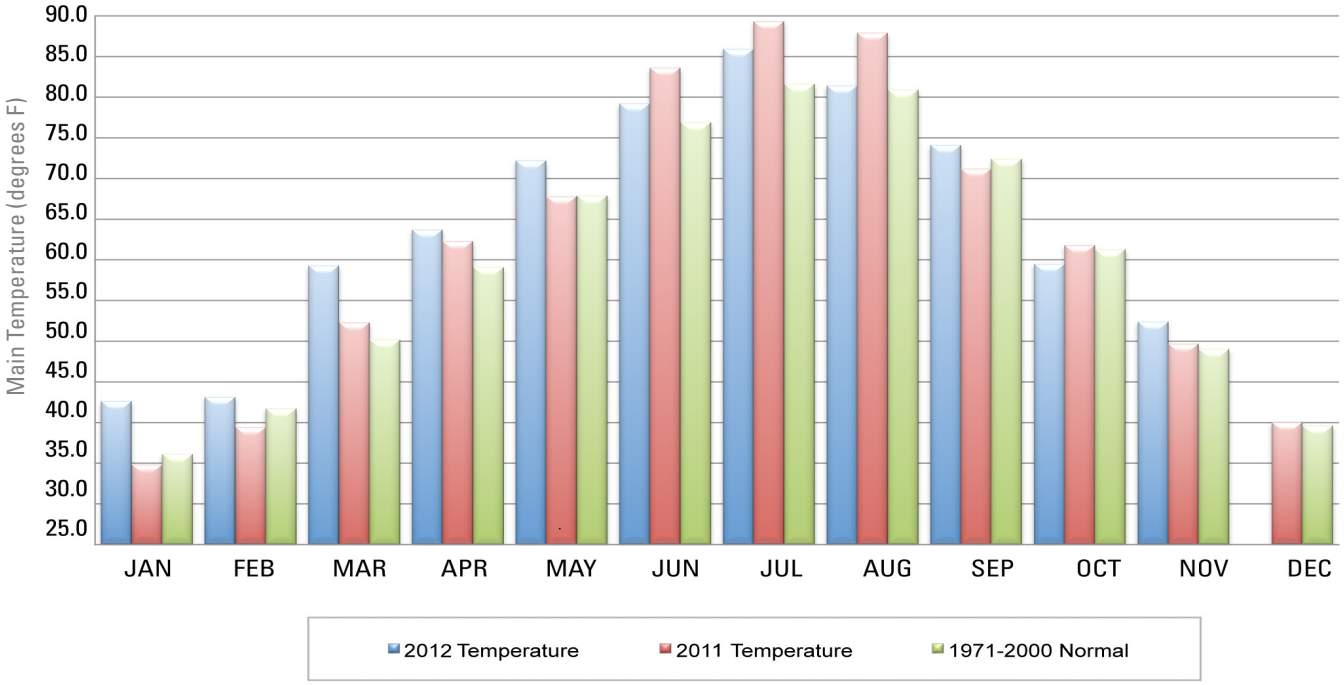
2011 AND 2012 STATEWIDE PRECIPITATION MONTHLY TOTALS VS. NORMAL



November 2012 Mesonet Precipitation Comparison

Climate Division	Precipitation (inches)	Departure from Normal (inches)	Rank since 1895	Wettest on Record (Year)	Driest on Record (Year)	Nov-11
Panhandle	0.04	-1.01	12th Driest	4.07 (1909)	0.00 (1897)	1.56
North Central	0.58	-1.50	36th Driest	6.48 (1964)	0.00 (1910)	3.24
Northeast	1.02	-2.60	22nd Driest	7.37 (1994)	0.00 (1904)	5.75
West Central	0.36	-1.37	29th Driest	6.62 (1964)	0.00 (1897)	2.95
Central	0.76	-2.05	34th Driest	6.88 (1931)	0.00 (1910)	3.66
East Central	0.89	-3.41	19th Driest	10.16 (1996)	0.20 (1914)	6.78
Southwest	0.35	-1.38	30th Driest	6.61 (2004)	0.00 (1897)	2.87
South Central	0.49	-2.61	14th Driest	7.62 (1902)	0.00 (1903)	4.64
Southeast	0.48	-4.59	6th Driest	13.16 (1946)	0.00 (1903)	8.40
Statewide	0.57	-2.25	21st Driest	6.12 (2004)	0.14 (1910)	4.36

2011 AND 2012 STATEWIDE TEMPERATURE MONTHLY TOTALS VS. NORMAL



November 2012 Mesonet Temperature Comparison

Climate Division	Average Temp (F)	Departure from Normal (F)	Rank since 1895	Hottest on Record (Year)	Coldest on Record (Year)	Nov-11 (F)
Panhandle	49.5	5.5	6th Warmest	51.4 (1999)	36.0 (1929)	46.6
North Central	51.4	5.1	8th Warmest	54.5 (1999)	39.0 (1929)	46.8
Northeast	51.1	3.1	21st Warmest	56.4 (1999)	40.9 (1929)	49.8
West Central	52.9	6.1	4th Warmest	54.7 (1999)	39.7 (1929)	47.9
Central	53.1	4.3	12th Warmest	56.8 (1999)	41.3 (1929)	50.1
East Central	52.2	2.3	32nd Warmest	57.8 (1999)	43.4 (1929)	50.7
Southwest	54.3	5.1	7th Warmest	56.3 (1999)	42.1 (1929)	50.3
South Central	54.5	3.5	19th Warmest	58.3 (1927)	44.1 (1929)	52.6
Southeast	53.0	2.3	35th Warmest	58.9 (1909)	44.1 (1976)	52.7
Statewide	52.4	4.1	12th Warmest	56.0 (1999)	41.3 (1929)	49.7

RECORD EVENT REPORTS

Description	Day	Location	Record	Previous Record	Year
Daily Warmest High Temperature	2	Oklahoma City	84	83	1924 & 2008
Daily High Temperature	2	McAlester	86	82	1978
Daily High Mean Temperature	9	McAlester	71	70	1984
Daily High Mean Temperature	10	McAlester	70	70	1964
Daily High Minimum Temperature	10	Tulsa	64	62	1949
Daily High Temperature	21	McAlester	78	78	1966

MESONET EXTREMES FOR NOVEMBER 2012

Climate Division	High Temp (F)	Day	Station	Low Temp (F)	Day	Station	High Monthly Rainfall (inches)	Station	High Daily Rainfall (inches)	Day	Station
Panhandle	87	9th	Buffalo	12	27th	Beaver	0.17	Arnett	0.17	10th	Arnett
North Central	89	2nd	Blackwell	17	27th	Alva	0.98	Newkirk	0.81	11th	Breckinridge
Northeast	89	2nd	Foraker	18	24th	Nowata	1.33	Copan	1.24	11th	Copan
West Central	89	2nd	Camargo	18	27th	Camargo	0.90	Camargo	0.85	10th	Camargo
Central	88	2nd	Lake Carl Blackwell	18	24th	Lake Carl Blackwell	1.10	Acme	1.09	11th	Acme
East Central	87	2nd	Hectorville	20	28th	Okmulgee	1.21	Cookson	1.14	11th	Cookson
Southwest	89	2nd	Mangum	20	13th	Mangum	0.55	Fort Cobb	0.55	11th	Fort Cobb
South Central	88	2nd	Burneyville	21	24th	Centrahoma	1.08	Ada	1.08	11th	Ada
Southeast	87	2nd	Antlers	19	24th	Wister	0.88	Talihina	0.77	11th	Talihina
Statewide	89	2nd	Camargo	12	27th	Beaver	1.33	Copan	1.24	11th	Copan

DECEMBER OUTLOOK

The winter month of December is Oklahoma's second coldest and third driest month. Overnight freezes are the rule, particularly in northern portions of the state, and winter storms often provide the state with snow and ice that create more havoc than the precipitation totals they provide are worth.

The statewide-averaged monthly mean temperature in December is 39.6 degrees. The range of mean temperature from south-to-north is greater than 10 degrees Fahrenheit, ranging from 44.2 degrees at Waurika to 33.5 degrees at Turpin. Since 1892, the historical range of December statewide-averaged mean temperature is from a low of 25.8 degrees in 1983 to a high of 45.4 degrees, achieved in 1965. Normal daily maximum temperatures for the month range from 45.2 degrees at Newkirk to 56.0 degrees at Waurika. Normals of daily minimum temperatures vary from 19.7 degrees at Beaver to 33.9 degrees at Okemah. The state's recorded December temperature extremes are 92 degrees at Ardmore on December 30, 1951 and 18 degrees below zero (-18) at Perry on December 22, 1989.

December precipitation, including rain and melted snow or sleet, when averaged statewide, accumulates only to a depth of 2.04 inches. The historical range of statewide-averaged monthly precipitation is from 0.10 inch in 1950 to 4.98 inches in 1984.The range of normal precipitation, increasing from the northwest to the southeast, is from 0.34 inch at Goodwell to 5.19 inches at Smithville. The extreme southeastern corner of the state received a record-breaking soaking in December 1971, exemplified by the 18.13 inches recorded at Bear Mountain Tower in Western McCurtain County, which established the state record for December precipitation at a given station. The state record for daily precipitation during December (11.34 inches) was established at the same location on December 10, 1971.

Snow is common in the northwestern portions of the state by late December. Boise City averages 6.1 inches of snow per December. Stations in the far southern portions of the state generally average less than one-half inch of snow during December. Records for snowfall extremes were set at Beaver. That panhandle city, while en route to a state-record seasonal snowfall of 87 inches, received 35 inches of snow in December 1911, including 22 inches reported on the 19th. From 1911 forward, sufficient snow has been on the ground on Christmas morning for large portions of the state to declare a "White Christmas" in seventeen different years. Most snowy Christmases have occurred in the state's northwestern half, but other areas of the state have also been affected from time-to-time.

An unfortunate by-product of developing winter storms is the presence of sleet or freezing rain. Major ice storms spread across much of the state, beginning on Christmas Day in 1987 and, again, in 2000. Those two storms left 114,000 and 175,000 customers, respectively, without power for several days. A similar storm in mid-December 1937 left extensive damage to power and telephone lines in central and northern Oklahoma. For many late December travelers, the winter storms that seem inevitable during the week between Christmas and New Year's Day sometimes appear to have become something of an Oklahoma tradition. Other major ice storms struck Oklahoma during the Decembers of 1897, 1916, 1924, 1969, 1972, and 1998.

Tornadoes are not a regular December feature. Only 22, occurring in seven different years, are included in the comprehensive database that begins in 1950. Four tornadoes were reported in Oklahoma during each of 1971, 1975, and 1982.

Temperature

Mean	39.6 degrees
Warmest December	1933 & 1965, 46.5 degrees
Coolest December	1983, 26.5 degrees
Hottest recorded	92 degrees, Ardmore, December 30, 1951
Coldest recorded	-19 degrees, Goodwell, December 12, 1932
Hottest Location	Waurika, 44.2 degrees
Coolest Location	Turpin, 33.5 degrees

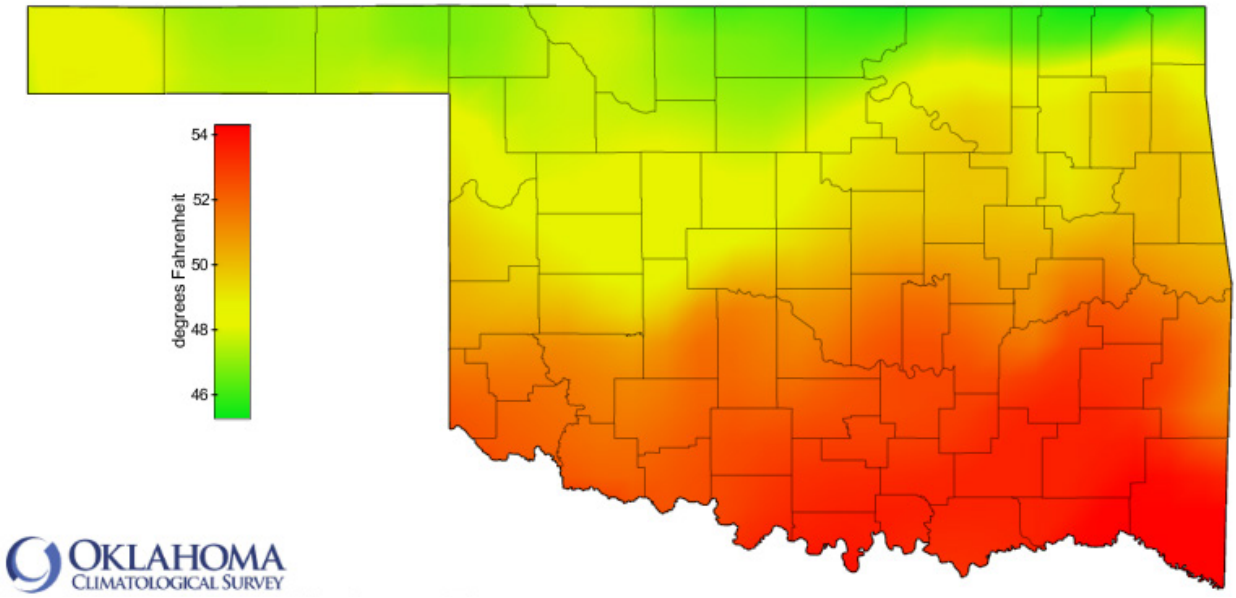
Precipitation

Mean	2.04 inches
Wettest Year	1984, 4.98 inches
Driest Year	1980, 0.07 inches
Wettest location	Smithville, 5.19 inches
Driest location	Goodwell, 0.34 inches
Most recorded	18.13 inches, Bear Mountain Tower, 1971

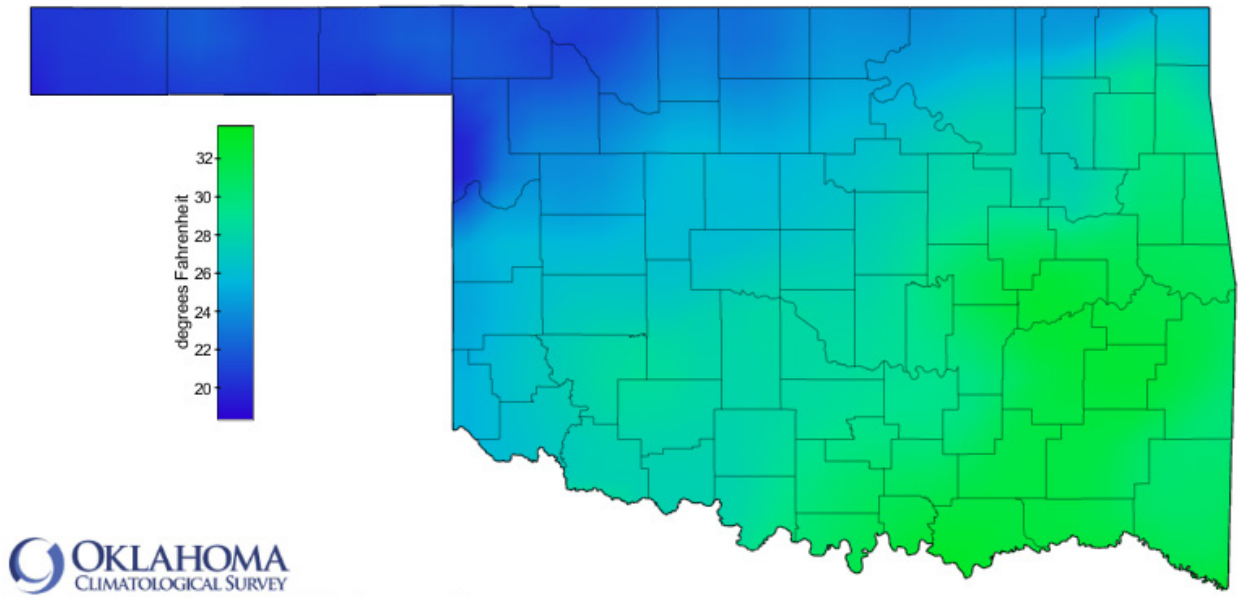
Tornadoes

Average December Tornadoes	0.4
Most	4 (1982)

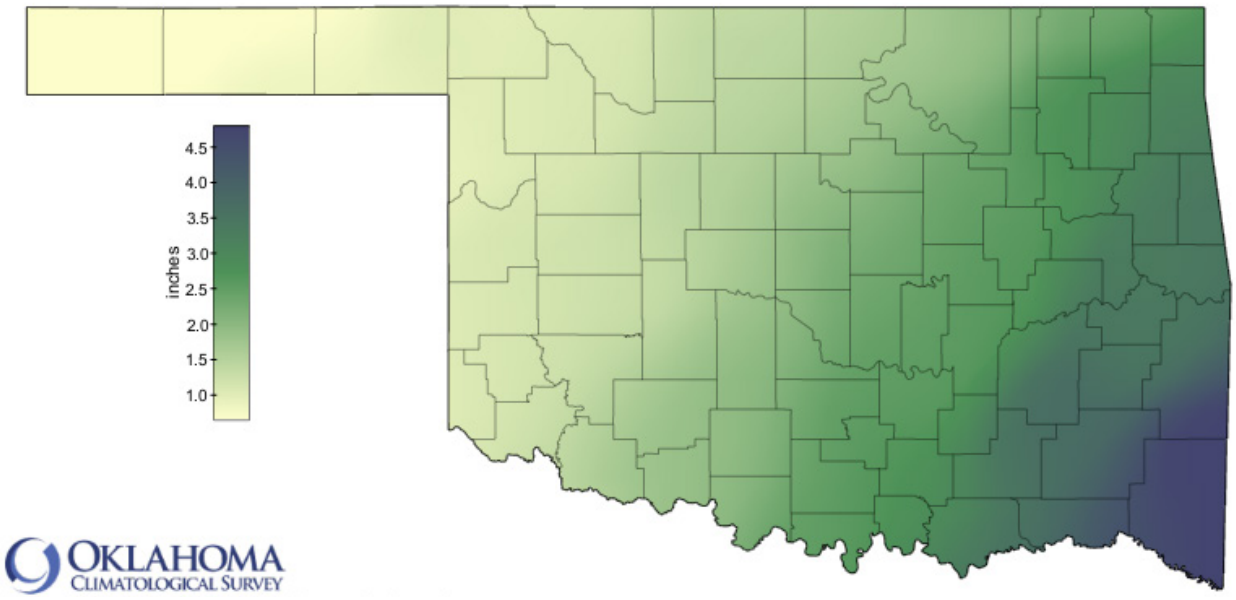
DECEMBER NORMAL DAILY MAXIMUM TEMPERATURE (1981-2010)



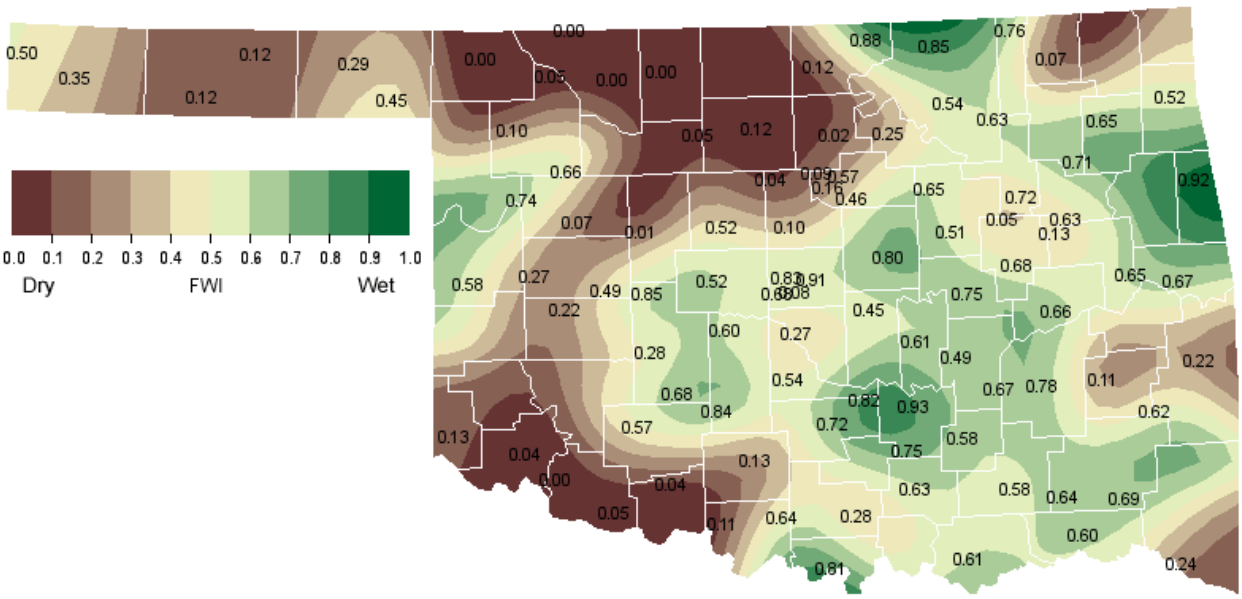
DECEMBER NORMAL DAILY MINIMUM TEMPERATURE (1981-2010)



DECEMBER NORMAL PRECIPITATION (1981-2010)



DECEMBER 1, 2012 SOIL MOISTURE CONDITIONS AT 25CM



DECEMBER 2012 DROUGHT INDICES

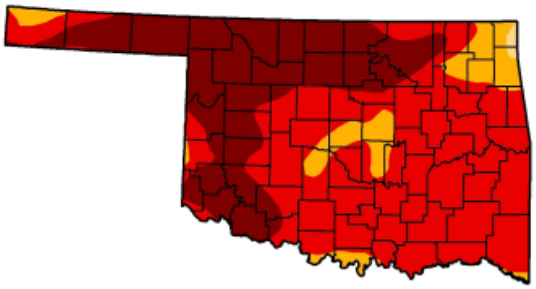
U.S. Drought Monitor

November 27, 2012
Valid 7 a.m. EST

Oklahoma

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	99.64	90.50	34.46
Last Week (11/20/2012 map)	0.00	100.00	100.00	99.56	71.86	32.28
3 Months Ago (08/28/2012 map)	0.00	100.00	100.00	99.62	90.00	37.03
Start of Calendar Year (12/27/2011 map)	14.83	85.17	78.76	50.55	27.48	3.33
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	99.98	95.33	42.09
One Year Ago (11/22/2011 map)	5.10	94.90	88.74	63.43	42.33	14.43



Intensity:

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

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

http://droughtmonitor.unl.edu

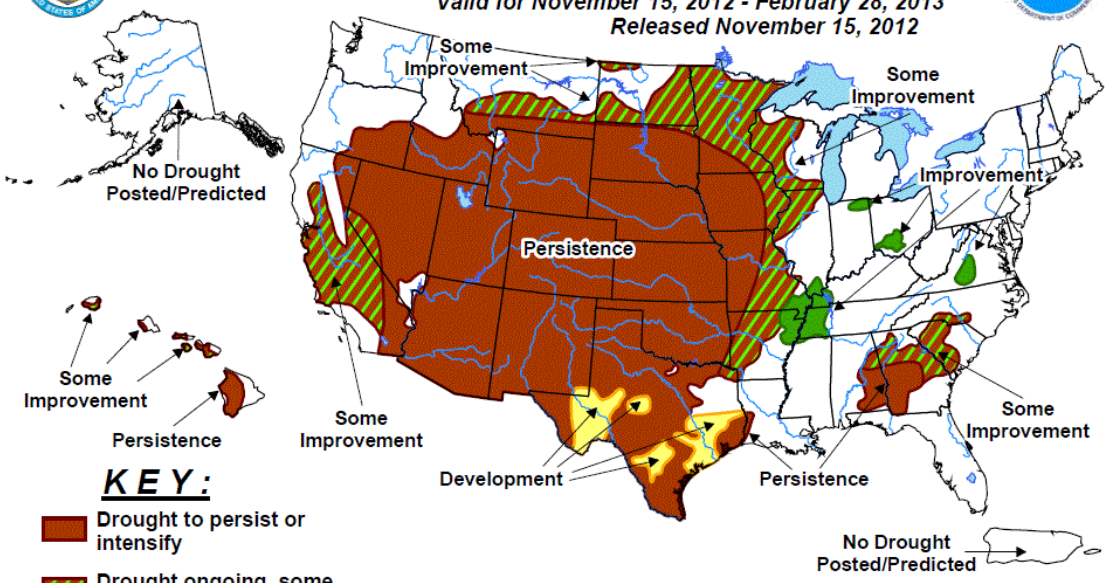
USDA National Drought Mitigation Center

Released Thursday, November 29, 2012
National Drought Mitigation Center,

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for November 15, 2012 - February 28, 2013
Released November 15, 2012

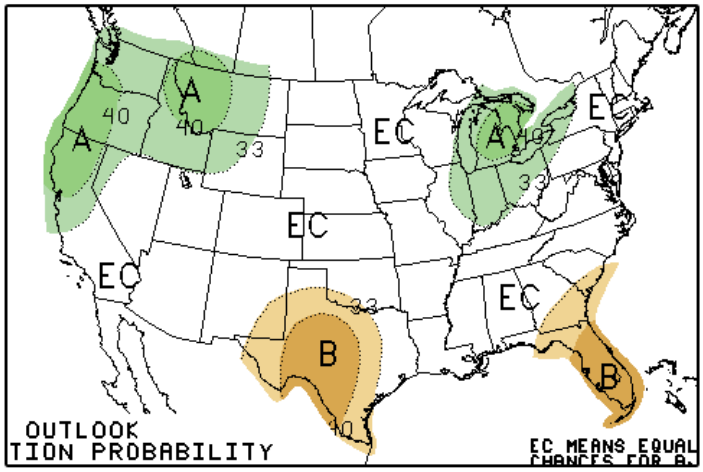


KEY:

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

Depicts large-scale trends based on subjectively derived probabilities guided by 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. Use caution for applications -- such as crops -- that can be affected by such events. "Ongoing" drought areas are approximated from the Drought Monitor (D1 to D4 intensity). For weekly drought updates, see the latest U.S. Drought Monitor. 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.

DECEMBER 2012 U.S. PRECIPITATION FORECAST



Percent Likelihood of Above or Below Average Precipitation*

- 5% - 10%
- 0% - 5%

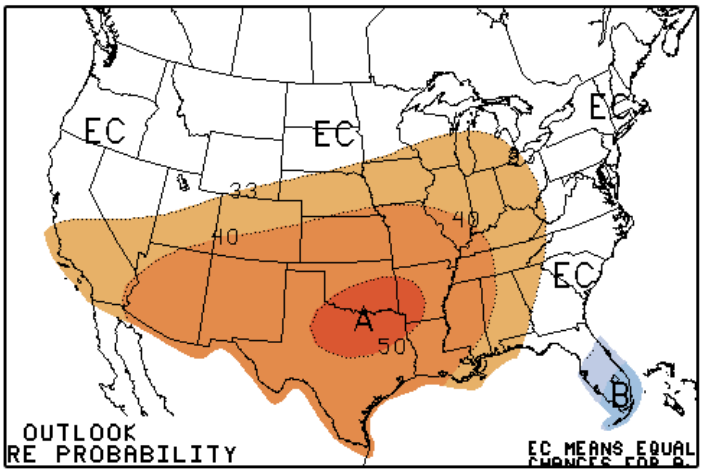
A = Above

- 0% - 5%
- 5% - 10%

B = Below

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

DECEMBER 2012 U.S. TEMPERATURE FORECAST



Percent Likelihood of Above or Below Average Temperatures*

- 10% - 20%
- 5% - 10%
- 0% - 5%

A = Above

- 0% - 5%
- 5% - 10%

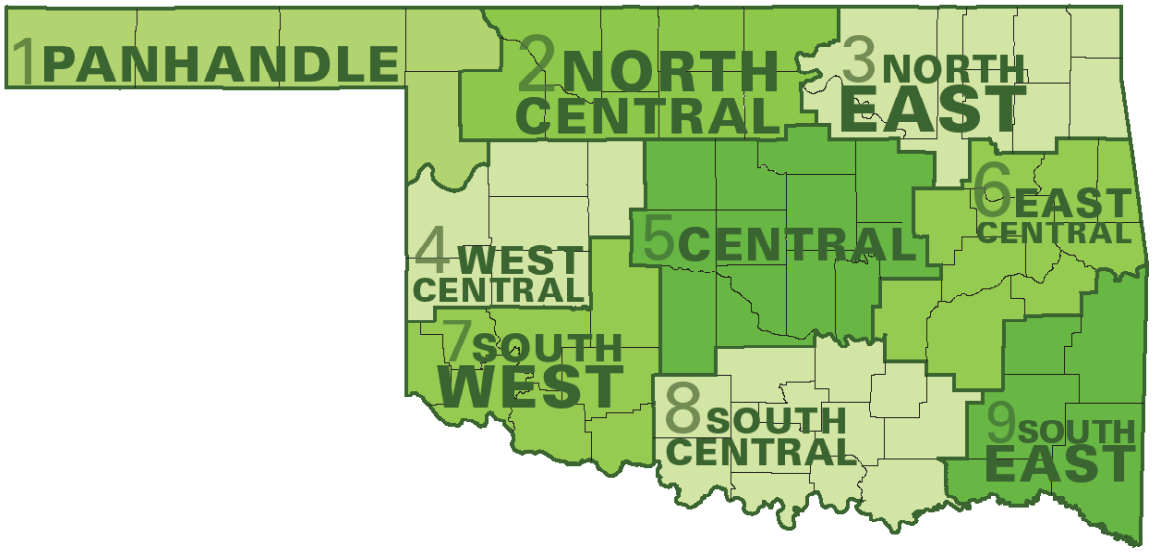
B = Below

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

DECEMBER CLIMATE NORMALS

Climate Division	Max. Temperature (°F)	Min. Temperature (°F)	Avg. Temperature (°F)	Precipitation (inches)
1	49.2	21.7	35.5	0.68
2	47.2	23.9	35.6	1.30
3	49.4	27.8	38.6	2.29
4	48.8	25.3	37.1	1.11
5	50.2	28.0	39.1	1.98
6	51.2	30.0	40.6	3.01
7	51.6	27.1	39.4	1.39
8	53.3	30.4	41.9	2.54
9	53.9	30.7	42.3	4.21
Statewide	50.5	27.3	38.9	2.14

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.mesonet.org or http://climate.ok.gov/

OKLAHOMA CLIMATOLOGICAL SURVEY

Oklahoma Climatological Survey is the State Climate Office for Oklahoma

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