

MONTHLY REPORT OF RIVER AND FLOOD CONDITIONS

REPORT FOR:
 MONTH **November** YEAR **2012**

TO: Hydrometeorological Information Center, W/OH2
 NOAA / National Weather Service
 1325 East West Highway, Room 7230
 Silver Spring, MD 20910-3283

SIGNATURE
Steven F. Piltz
 (Meteorologist-in-Charge)

DATE
December 3, 2012

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

An "X" in the box indicates no flood stages were reached in this Hydrologic Service Area (HSA) during the month above.

November 2012 was extremely dry across all of eastern OK and northwest AR, leading to further deterioration in drought conditions. Fort Smith, AR recorded its second driest November on record with only 0.29" of rain. Normal precipitation for November ranges from 2.6 inches in Pawnee County to 4.4 inches in Haskell County. Normal precipitation for the Ozark region of northwest Arkansas averages 4.2 inches.

Monthly Summary

Using the radar-derived estimated observed precipitation from the RFCs (Fig. 1a), rainfall totals for November 2012 were 1.5" or less for all of eastern OK and northwest AR. This represents 50% or less of the normal November rainfall (Fig. 1b). Portions of west central AR and southeast OK received less than 0.5", which is less than 10% of the normal rainfall for the month. The worst off, however, included areas of Choctaw and southern Pushmataha Counties, where less than 0.1" of rain, less than 5% of normal, fell this month.

Tulsa, OK (TSA): November, 2012 Monthly Observed Precipitation
 Valid at 12/1/2012 1200 UTC- Created 12/3/12 13:38 UTC

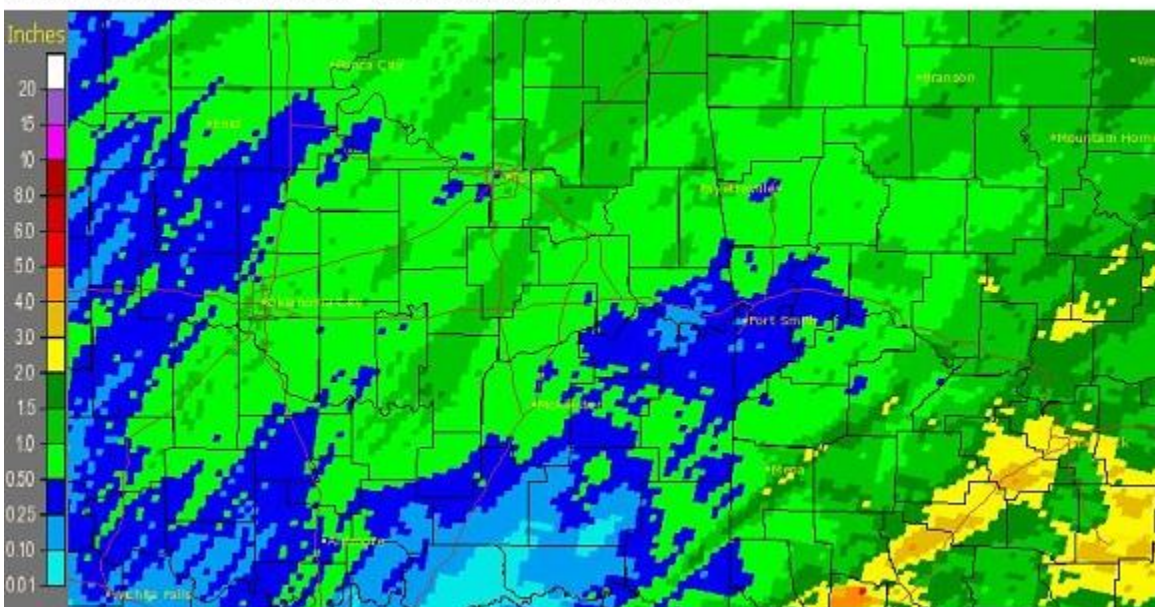


Fig. 1a. Estimated Observed Rainfall for November 2012

Tulsa, OK (TSA): November, 2012 Monthly Percent of Normal Precipitation
 Valid at 12/1/2012 1200 UTC- Created 12/3/12 13:41 UTC

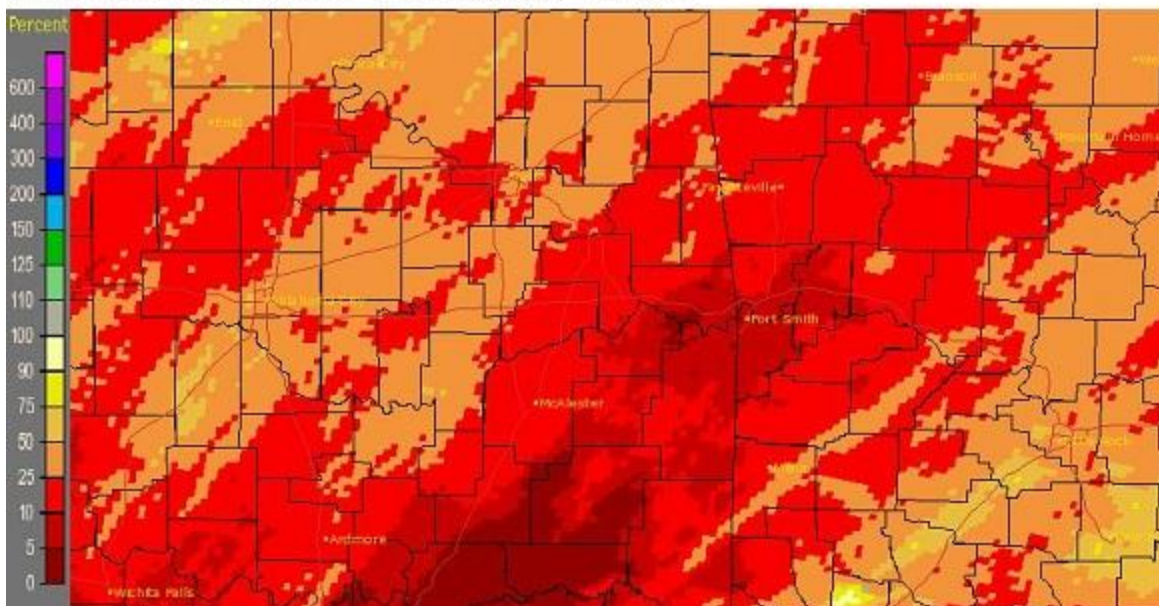


Fig. 1b. Estimated % of Normal Rainfall for November 2012

In Tulsa, OK, November 2012 ranked as the 23rd warmest November (52.6°F; since records began in 1905) and the 30th driest November (1.11"; since records began in 1888). Fort Smith, AR was the 40th warmest November (53.1°F) and the 2nd driest November (0.29") since records began in 1882. Fayetteville, AR was the 30th warmest November (48.0°F) and the 8th driest November (0.97", tied with 1950) since records began in 1949. In 2012, Tulsa, Fort Smith, and Fayetteville all have the record warmest year-to-date temperature (January 1 – November 30) for their respective periods of history. Rain was measured on only 3 days at Tulsa and only 4 days at Fort Smith this November.

Some of the larger precipitation reports (in inches) for November 2012 included:

Bartlesville, OK (ASOS)	1.48	Miami, OK (coop)	1.44	Copan, OK (meso)	1.33
Pryor, OK (meso)	1.26	Cookson, OK (meso)	1.21	Inola, OK (meso)	1.17
Okmulgee, OK (meso)	1.12	St Paul, AR (coop)	1.12	Tulsa, OK (ASOS)	1.11

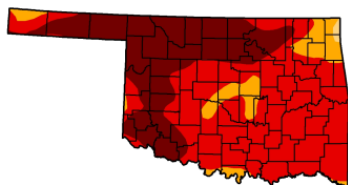
Some of the lowest precipitation reports (in inches) for November 2012 included:

Hugo, OK (meso)	0.13	Cloudy, OK (meso)	0.15	Antlers, OK (meso)	0.18
Sallisaw, OK (meso)	0.28	Fort Smith, AR (ASOS)	0.29	Antlers, OK (coop)	0.38
Clayton 14WNW, OK (coop)	0.42	Stigler, OK (meso)	0.43	Wister, OK (meso)	0.49

U.S. Drought Monitor Oklahoma

November 27, 2012
Valid 7 a.m. EST

	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	84.90	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>

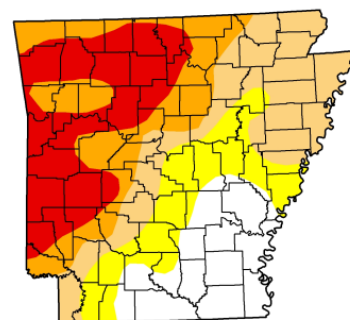


Fig. 2. Drought Monitor for Oklahoma

U.S. Drought Monitor Arkansas

November 27, 2012
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.15	81.85	65.98	42.30	23.78	0.00
Last Week (11/20/2012 map)	18.28	81.72	66.00	42.30	23.27	0.00
3 Months Ago (08/28/2012 map)	0.00	100.00	99.74	96.63	74.26	45.50
Start of Calendar Year (12/27/2011 map)	86.20	13.80	3.95	1.06	0.23	0.00
Start of Water Year (09/25/2012 map)	0.11	99.89	91.37	73.93	41.99	8.74
One Year Ago (11/22/2011 map)	42.44	57.56	27.01	11.25	5.00	2.52



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>



Fig. 3. Drought Monitor for Arkansas

According to the [U.S. Drought Monitor](http://droughtmonitor.unl.edu) (USDM) from November 27, 2012 (Figs 2, 3), all of eastern OK and

northwest AR was in Severe to Exceptional drought. Exceptional (D4) drought was occurring over portions of Osage, Pawnee, and Washington Counties in eastern OK. Severe (D2) drought was present across portions of Ottawa, Craig, Rogers, Mayes, and Delaware Counties in eastern OK, and Benton, northern Carroll, Crawford, and southern northern Franklin Counties in northwest AR. Extreme drought (D3) conditions existed across the remainder of the area.

According to statistics from the [Oklahoma Climatological Survey \(OCS\)](#):

Rank since 1921	Nov. 2012	Water Year-to-Date (Oct 1 – Nov 30)	Autumn-to-Date (Sep 1 – Nov 30)	Last 120 Days (Aug 3 – Nov 30)	Last 180 Days (Jun 4 – Nov 30)	Year-to-Date (Jan 1 – Nov 30)	Last 365 Days (Dec 2, 2011 – Nov 30, 2012)
Northeast OK	22 nd driest	15 th driest	15 th driest	17 th driest	2 nd driest	9 th driest	11 th driest
East Central OK	16 th driest	11 th driest	14 th driest	16 th driest	4 th driest	6 th driest	7 th driest
Southeast OK	2 nd driest	2 nd driest	2 nd driest	7 th driest	6 th driest	9 th driest	11 th driest
Statewide	17 th driest	5 th driest	11 th driest	11 th driest	4 th driest	7 th driest	9 th driest

Most of the major reservoirs in the Tulsa HSA were operating below 90% of their conservation pools as of November 30, 2012. Hugo Lake continues to fall to levels that are unusually bad for southeast OK. However, 1 reservoir was operating above its conservation pool: Hudson Lake 104%. Reservoirs reporting conservation pool deficits below 90% as of November 30, 2012: Hugo Lake 38%, Hulah Lake 51%, Birch Lake 53%, Skiatook Lake 67%, Beaver Lake 70%, Eufaula Lake 70%, Tenkiller Lake 71%, Keystone Lake 72%, Ft. Gibson Lake 72%, Copan Lake 77%, Oologah Lake 82%, and Kaw Lake 88%.

In Tulsa, OK, Fall 2012 ranked as the 35th warmest Fall (63.0°F, tied 2001, 1977; since records began in 1905) and the 25th driest Fall (5.64"; since records began in 1888). Fort Smith, AR was the 33rd warmest Fall (64.1°F, tied with 2011, 1904) and the 12th driest Fall (4.73") since records began in 1882. Fayetteville, AR was the 20th coldest Fall (57.5°F) and the 14th driest Fall (6.83") since records began in 1949.

Outlooks

The [Climate Prediction Center \(CPC\)](#) outlook for December 2012 (issued November 30, 2012) indicates an enhanced chance for above normal temperatures and equal chances for above, near, and below median precipitation across all of eastern OK and northwest AR. This outlook is based primarily on short-range computer models, as a warm start to the month is expected for much of the southern and central U.S.

For the 3-month period Dec-Jan-Feb 2012-13, CPC is forecasting an equal chance for above, near, and below average temperatures across far northeast OK and far northwest AR, with a slightly enhanced chance for above normal temperatures elsewhere. This outlook also calls for a slightly enhanced chance for above median precipitation for the Tennessee Valley and possibly as far west as eastern OK and northwest AR (outlook issued November 15, 2012). According to CPC, ENSO neutral conditions are expected during the upcoming winter and an El Niño is no longer anticipated. Therefore, this outlook is based on dynamic computer model output, statistical tools, and long-term trends. ENSO neutral conditions continued through November.

Summary of Precipitation Events

November 2012

Widespread showers and thunderstorms affected eastern OK and northwest AR on the 11th, as a strong cold front moved west to east across the region. A large portion of the HSA received around 0.5" to around 1" of rain from this system (Figs 4, 5). Unfortunately, Choctaw and southern Pushmataha Counties received the least amount of rain, less than 0.25". This ended up being the only significant rain in the area for all of November 2012.

Tulsa, OK (TSA): 11/12/2012 1-Day Observed Precipitation
 Valid at 11/12/2012 1200 UTC- Created 11/14/12 23:31 UTC

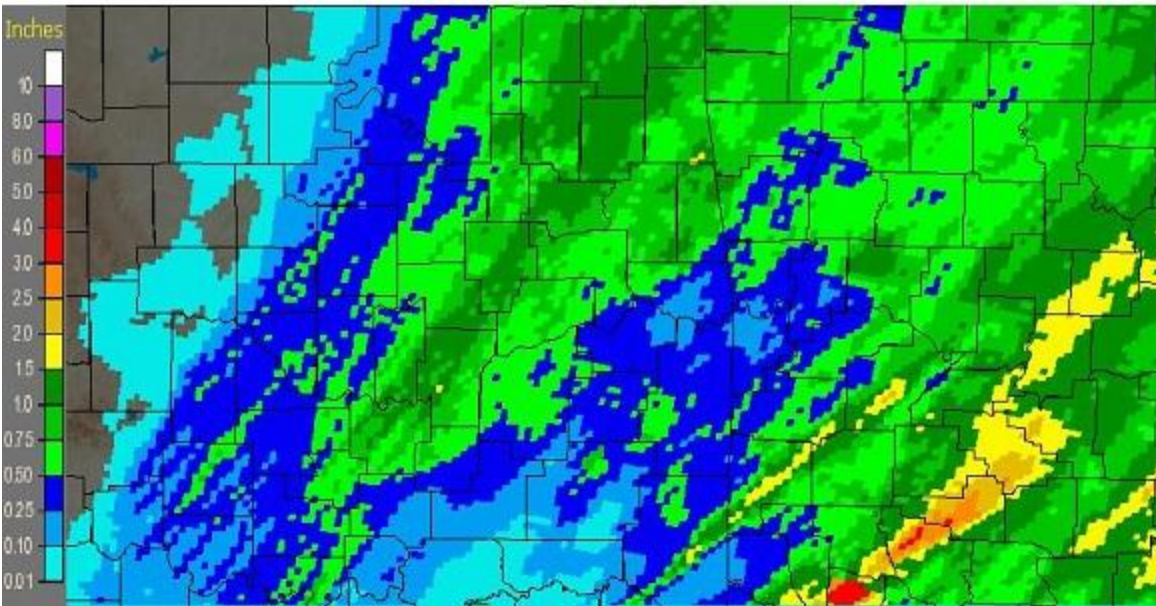
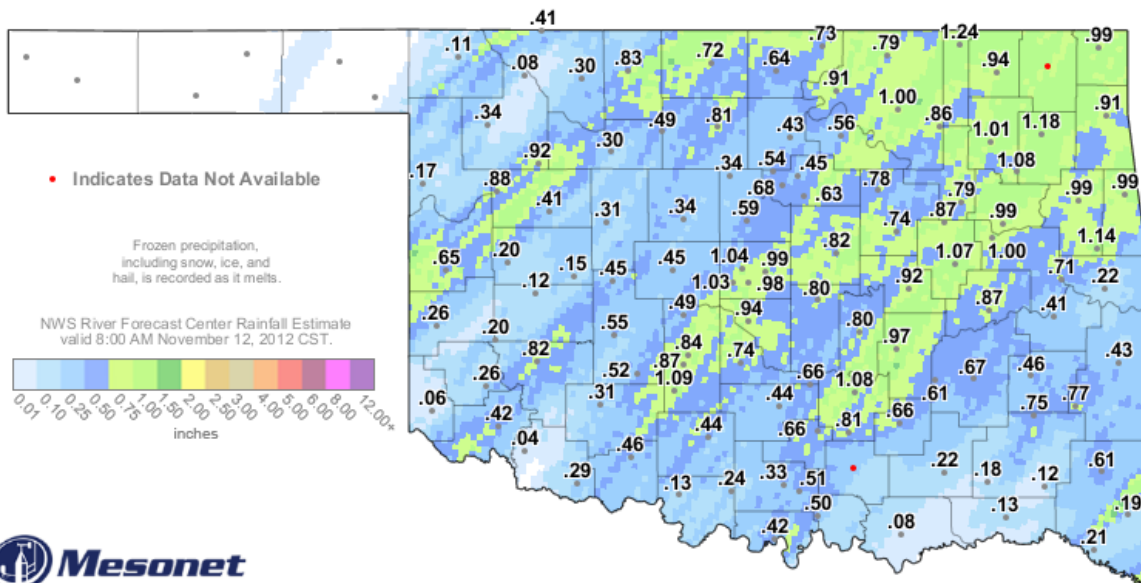


Fig. 4. Estimated 24-hr Observed Rainfall ending at 6am CST 11/12/2012.



2-Day Rainfall (inches)

Fig. 5. Estimated and Observed 2-day Rainfall ending at 9:30 am CST 11/12/2012.

Elevated showers developed during the evening and overnight hours of the 18th as the low level jet strengthened and a weak upper-level disturbance moved through the area. Due to drier low-levels, much of the rain evaporated before reaching the ground, with most locations only receiving a few hundredths of an inch of precipitation. However, some areas of far northeast OK and northwest AR did get 0.10" to 0.25" of rain.

Near record high temperatures in the mid to upper 70s made for a pleasant start to Thanksgiving Day on November 22. A cold front then moved into the HSA during the afternoon and evening, bringing isolated to widely scattered showers. While most of the affected areas received less than 0.10" of rain, portions of Owasso (Tulsa/Rogers Counties), western Pittsburg County, southern Le Flore, Madison, and Carroll Counties received between 0.10" and 0.33" of rain.

Written by:

Nicole McGavock
Service Hydrologist
WFO Tulsa

Products issued in November 2012:

- 0 Flash Flood Warnings (FFW)
- 0 Flash Flood Statements (FFS)
- 0 Flash/Areal Flood Watches (FFA) (2 Watch FFA CON/EXT/CAN)
- 0 Urban and Small Stream Advisories (FLS)
- 0 Areal Flood Warnings (FLW)
- 0 Areal Flood Statements (FLS)
- 0 River Flood Warnings (FLW)
- 0 River Flood Statements (FLS)
- 0 River Flood Advisories (FLS) (0 Advisory FLS CON/EXT/CAN)
- 0 River Flood Watches (FFA) (0 Watch FFA CON/EXT/CAN)
- 0 River Statements (RVS)
- 0 Hydrologic Outlooks (ESF)
- 1 Drought Information Statements (DGT)

Preliminary Hydrographs:

No river flooding occurred this month.