

Oklahoma Water Resources Bulletin & Summary of Current Conditions

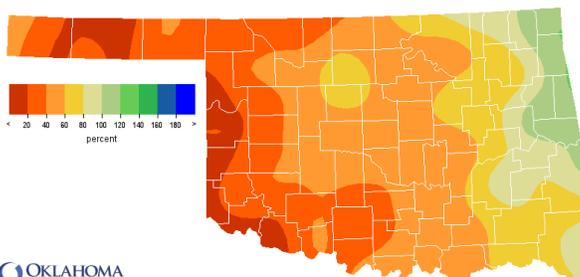


August 4, 2011

PRECIPITATION

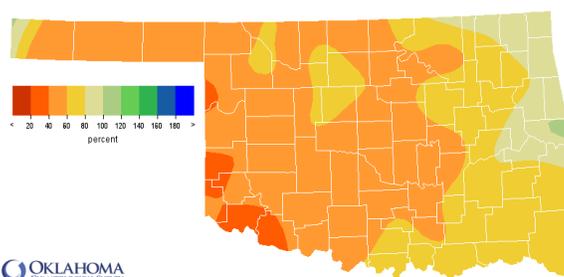
Statewide Precipitation

CLIMATE DIVISION	Warm Growing Season March 1 – July 31, 2011				Last 365 Days August 1, 2010 – July 31, 2011			
	TOTAL RAINFALL (INCHES)	DEPARTURE FROM NORMAL (INCHES)	PERCENT OF NORMAL	RANK SINCE 1921	TOTAL RAINFALL (INCHES)	DEPARTURE FROM NORMAL (INCHES)	PERCENT OF NORMAL	RANK SINCE 1921
Panhandle	3.34"	-8.96"	27%	1st driest	10.85"	-10.25"	51%	1st driest
North Central	8.06"	-9.22"	47%	1st driest	17.93"	-13.72"	57%	3rd driest
Northeast	16.34"	-4.59"	78%	17th driest	31.59"	-10.38"	75%	14th driest
West Central	4.83"	-11.06"	30%	1st driest	13.21"	-15.88"	45%	1st driest
Central	9.94"	-9.60"	51%	3rd driest	20.39"	-17.60"	54%	1st driest
East Central	18.78"	-3.37"	85%	36th driest	36.12"	-9.97"	78%	17th driest
Southwest	5.23"	-11.01"	32%	1st driest	14.38"	-16.42"	47%	1st driest
South Central	8.74"	-11.35"	43%	1st driest	23.44"	-17.52"	57%	2nd driest
Southeast	18.65"	-4.96"	79%	21st driest	34.97"	-15.97"	69%	6th driest
Statewide	10.39"	-8.29"	56%	3rd driest	22.47"	-14.22"	61%	1st driest



OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of Normal Rainfall
Warm Growing Season

Mar 1, 2011 through Jul 31, 2011
Created 7/4/2011 AM 10:42:12 CDT. Copyright © 2011

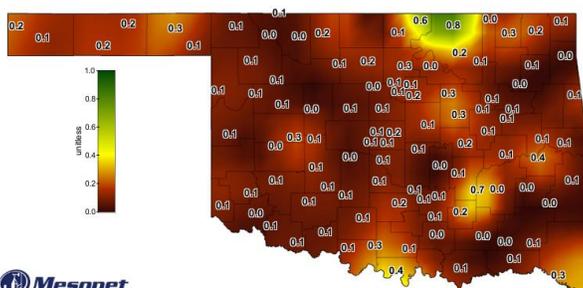


OKLAHOMA CLIMATOLOGICAL SURVEY
Percentage of Normal Rainfall
Last 365 Days

Aug 1, 2010 through Jul 31, 2011
Created 7/4/2011 AM 10:42:12 CDT. Copyright © 2011

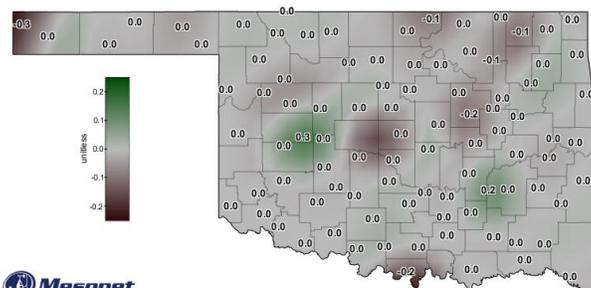
SOIL MOISTURE

Fractional Water Index¹ August 1, 2011



Mesonet
Daily Averaged Fractional Water Index at 10 inches

August 1, 2011
Created 7/4/2011 AM 10:42:12 CDT. Copyright © 2011



Mesonet
7-Day Change in Fractional Water Index at 10 inches

August 1, 2011
Created 7/4/2011 AM 10:42:12 CDT. Copyright © 2011

¹ The Fractional Water Index ranges from very dry soil having a value of 0 to soil at field capacity illustrated by a value of 1. [1.0-0.8 = Enhanced Growth; 0.8-0.5 = Limited Growth; 0.5-0.3 = Plants Wilting; 0.3-0.1 = Plants Dying; <0.1 = Barren Soil.]

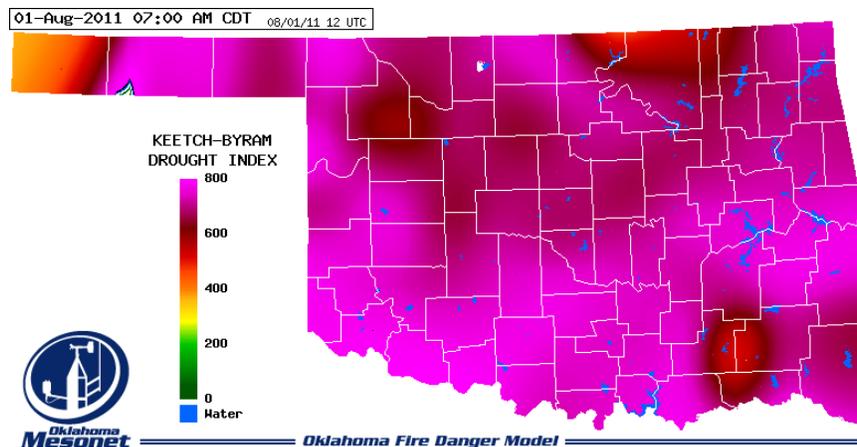
DROUGHT INDICES

Palmer Drought Severity Index ¹					Standardized Precipitation Index ² Through June 2011			
CLIMATE DIVISION	CURRENT STATUS 7/30/2011	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	9-MONTH	12-MONTH
		7/30	7/2					
Northwest	EXTREME DROUGHT	-5.43	-4.49	-0.94	EXTREMELY DRY	EXCEPTIONALLY DRY	VERY DRY	VERY DRY
North Central	EXTREME DROUGHT	-4.09	-2.84	-1.25	VERY DRY	VERY DRY	VERY DRY	MODERATELY DRY
Northeast	MODERATE DROUGHT	-2.95	-1.73	-1.22	NEAR NORMAL	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL
West Central	EXTREME DROUGHT	-5.46	-4.18	-1.28	EXTREMELY DRY	EXTREMELY DRY	EXTREMELY DRY	VERY DRY
Central	EXTREME DROUGHT	-5.09	-3.81	-1.28	MODERATELY DRY	VERY DRY	VERY DRY	VERY DRY
East Central	SEVERE DROUGHT	-3.30	-1.93	-1.37	NEAR NORMAL	NEAR NORMAL	VERY DRY	MODERATELY DRY
Southwest	EXTREME DROUGHT	-6.13	-4.90	-1.23	VERY DRY	EXTREMELY DRY	EXTREMELY DRY	MODERATELY DRY
South Central	EXTREME DROUGHT	-5.39	-4.05	-1.34	VERY DRY	EXTREMELY DRY	EXTREMELY DRY	VERY DRY
Southeast	SEVERE DROUGHT	-3.63	-2.53	-1.10	NEAR NORMAL	MODERATELY DRY	VERY DRY	VERY DRY

- All nine climate divisions are currently experiencing drought conditions, according to the PDSI. The Southwest, Northwest, West Central and South Central, Central, and North Central climate divisions are in extreme drought.
- All nine climate divisions have undergone PDSI moisture decreases since July 2.
- All climate divisions are experiencing near long-term dry conditions, according to the SPI.

Keetch-Byram Drought Fire Index³

MESONET STATION	CLIMATE DIVISION	CURRENT VALUE 8/1/2011	
Altus	Southwest	798	<ul style="list-style-type: none"> • Stations currently at or above 600 (August 1) = 113 • Stations above 600 on July 4 = 27
Grandfield	Southwest	790	
Tipton	Southwest	771	



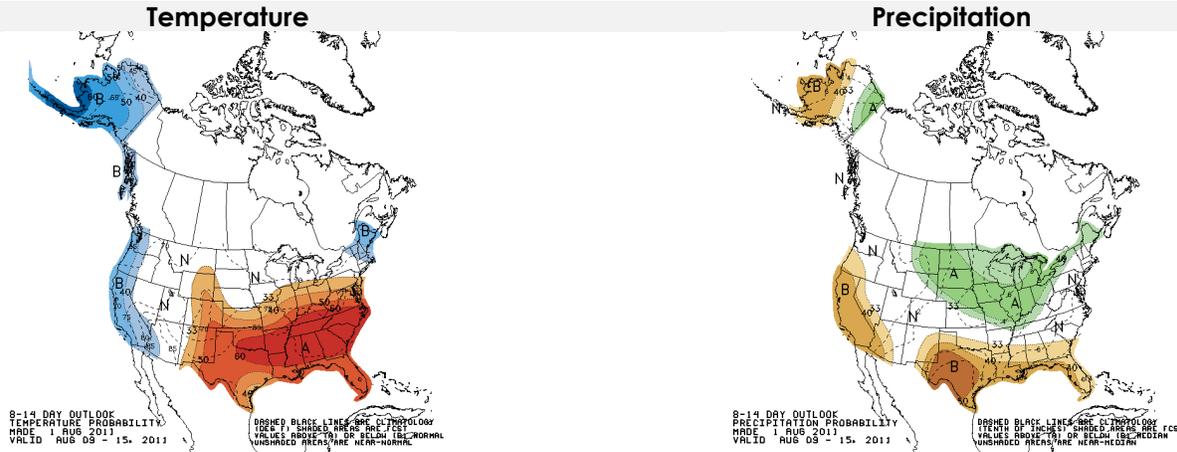
¹ The Palmer Drought Severity Index, the first comprehensive drought index developed in the United States, is calculated based on precipitation, temperature, and soil moisture. Though widely used by government agencies and states to trigger drought relief programs, the PDSI may underestimate or overestimate the severity of ongoing dry periods.

² The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while the 6-month SPI can be very effective in showing precipitation over distinct seasons.

³ The Keetch-Byram Drought Index measures the state of near-surface soil moisture (within the uppermost eight inches of soil) as well as the amount of fuel available for fires. KBDI values of 600 and above are often associated with more severe drought and increased wildfire occurrence.

WEATHER/DROUGHT FORECAST

8- to 14-Day Outlook August 9-15, 2011



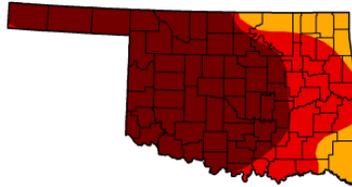
Regional Drought Summary & Outlook

U.S. Drought Monitor

August 2, 2011
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	100.00	88.10	64.30	
Last Week (07/28/2011 map)	0.00	100.00	100.00	95.45	67.69	52.20	
3 Months Ago (05/03/2011 map)	24.44	75.56	69.37	55.77	37.52	5.39	
Start of Calendar Year (12/28/2010 map)	13.82	86.18	47.90	1.50	0.00	0.00	
Start of Water Year (09/28/2010 map)	66.28	33.72	4.21	0.00	0.00	0.00	
One Year Ago (07/27/2010 map)	85.61	14.39	3.60	0.00	0.00	0.00	



Intensity:

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

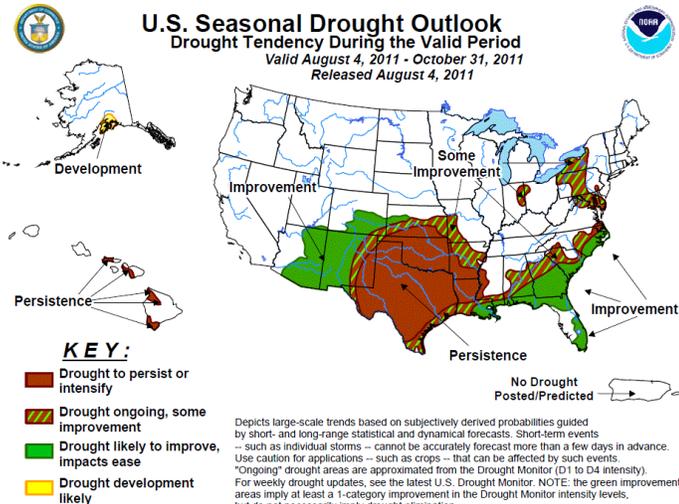
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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

Released Thursday, August 4, 2011
Brad Rippey, U.S. Department of Agriculture

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period
Valid August 4, 2011 - October 31, 2011
Released August 4, 2011



August 2 – The latest U.S. Drought Monitor reports that an already dire situation continued to worsen across the south central U.S. where the combination of an historic 10-month drought and a relentless summer heat wave left little hope for rain-fed commodities and placed significant stress on livestock and irrigated crops. Farther west, an active monsoon circulation contributed to beneficial showers in the Four Corners States. A record-shattering string of 100-degree readings continued into August across parts of Oklahoma and Texas. With an average temperature of 89.2°F, July 2011 was the hottest month on record in Oklahoma City, smashing its Dust Bowl-era record of 88.7°F set in August 1936.

The coverage of Texas rangeland and pastures in very poor to poor conditions stood at 93% on July 31, according to USDA. The rangeland and pasture situation was nearly as bad in Oklahoma (86% very poor to poor), Arkansas (79%), and Kansas (57%). Oklahoma's row crops were in particularly bad shape with USDA rating 88% of the cotton and 74% of the sorghum in very poor to poor condition. By month's end, topsoil moisture was reported to be 100% very short to short in Oklahoma, 97% in Texas, 89% in Arkansas, and 73% in Kansas.

According to the latest Drought Outlook (August 4), climate anomalies attributed to the Summer 2010-Spring 2011 La Niña event promoted widespread drought development and intensification across the southern tier of the U.S. In many locations, significant deterioration occurred with the southern Great Plains experiencing some of the worst impacts. Apart from the relief afforded by isolated thunderstorms, or perhaps a tropical system, drought conditions are anticipated to persist over the south-central states through the August-October period. During the past few weeks, a persistent ridge of high pressure maintained hot, dry conditions across the core drought areas of the southern Great Plains.

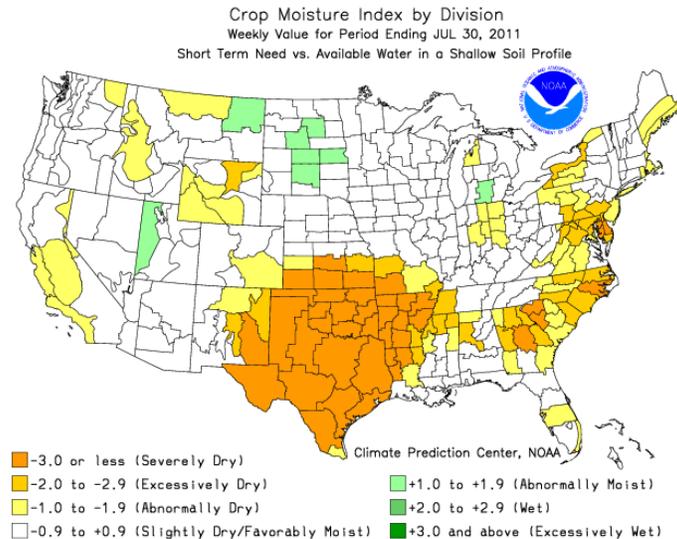
CROP REPORT

August 1, 2011 – Oklahoma producers received no relief last week as maximum temperatures at all Mesonet sites were over 100 degrees and precipitation was scarce to nonexistent. A large wild fire was reported just west of Tahlequah where a dozen structures were threatened, but no damages were reported. Additionally, wildfires near Quartz Mountain campgrounds caused 400 people from two church camps to be evacuated. On Wednesday, the USDA issued a disaster declaration for 74 of the state's 77 counties due to the devastating drought conditions. Nowata, Craig, and Ottawa Counties, located in northeastern Oklahoma, were the only counties not included in the declaration. Crop conditions continued to decline. Topsoil and subsoil moisture conditions continued to deteriorate as soil temperatures ranged from 82 to 100 degrees; both were rated mostly very short. There were 6.5 days suitable for field work.

Many areas are too dry to plow. As a result, plowing of small grain fields has decreased. Wheat ground plowed reached 80 percent complete by Sunday. Plowing of rye ground reached 81 percent complete and plowing of oat ground reached 80 percent complete by the end of the week.

Crop conditions continued to worsen. Eighty percent of the corn reached the dough stage and 37 percent reached the dent stage by week's end. Sorghum heading reached 48 percent complete, 14 points ahead of the five-year average; sorghum coloring reached 27 percent complete by Sunday. Soybean blooming was 55 percent complete by Sunday and ten percent were setting pods by week's end. Peanut pegging was 92 percent complete and 31 percent of plants were setting pods, a 13 point increase from the previous week but significantly behind normal. Cotton emerged reached 81 percent complete by Sunday and cotton squaring was 47 percent complete, both significantly behind the five-year average. Six percent of the cotton crop was setting bolls by week's end. The watermelon harvest was 71 percent complete, 13 points ahead of normal.

Hay supplies were still very minimal around the state and hay production is dismal. Second cuttings of alfalfa reached 88 percent complete and third cuttings reached 22 percent complete, 60 points behind normal. First cuttings of other hay also reached 88 percent complete and the second cutting was 12 percent complete by Sunday. Pasture and range conditions were rated mostly very poor. Despite the drought conditions, livestock conditions continued to be rated mostly fair to good. However, producers continued to sell cattle herds resulting from the limited hay supplies and lack of pasture.



RESERVOIR STORAGE

- 29 reservoirs are currently operating at less than full capacity (compared to 24 four weeks ago).
- 30 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs					
August 3, 2011					
Lake or Reservoir	Normal Pool Elevation (feet)	Previous Elevation 7/5/2011 (feet)	Current Elevation 8/3/2011 (feet)	Change in Elevation (feet)	Current Flood Control Storage (acre-feet)
North Central					
Fort Supply	2004.00	2003.51	2002.46	(1.05)	(2,558)
Great Salt Plains	1125.00	1124.39	1123.64	(0.75)	(9,806)
Kaw*	1008.40	1011.83	1008.57	(3.26)	3,339
Northeast					
Birch	750.50	748.79	747.46	(1.33)	(3,310)
Copan	710.00	710.34	709.72	(0.62)	(1,092)
Fort Gibson	554.00	553.05	551.69	(1.36)	(42,032)
Grand*	743.90	744.06	743.82	(0.24)	(2,098)
Hudson	619.00	619.70	619.80	0.10	8,840
Hulah	733.00	733.44	732.52	(0.92)	(1,453)
Keystone*	723.00	721.45	720.36	(1.09)	(43,548)
Oologah*	638.00	638.17	637.27	(0.90)	(22,049)
Skiatook	714.00	707.08	705.44	(1.64)	(81,623)
West Central					
Canton	1615.40	1611.01	1610.29	(0.72)	(36,612)
Foss	1642.00	1639.00	1638.04	(0.96)	(25,364)
Central					
Arcadia	1006.00	1005.57	1004.47	(1.10)	(2,692)
Heyburn	761.50	760.93	760.00	(0.93)	(905)
Thunderbird	1039.00	1036.57	1035.59	(0.98)	(19,555)
East Central					
Eufaula*	585.00	584.63	583.16	(1.47)	(168,222)
Tenkiller	632.00	632.46	629.00	(3.46)	(37,700)
Southwest					
Fort Cobb	1342.00	1340.83	1339.79	(1.04)	(7,891)
Lugert-Altus	1559.00	1537.09	1532.71	(4.38)	(108,048)
Tom Steed	1411.00	1406.60	1405.55	(1.05)	(30,865)
South Central					
Arbuckle	872.00	869.66	868.34	(1.32)	(8,259)
McGee Creek**	175.90	175.87	175.57	(0.30)	(4,001)
Texoma*	617.90	614.48	612.92	(1.56)	(356,443)
Waurika*	951.40	949.42	948.32	(1.10)	(29,075)
Southeast					
Broken Bow*	602.50	601.13	596.14	(4.99)	(90,111)
Hugo*	405.30	406.52	404.86	(1.66)	(6,617)
Pine Creek*	433.00	431.57	429.48	(2.09)	(8,875)
Sardis	599.00	598.43	597.86	(0.57)	(15,203)
Wister	478.00	478.50	477.51	(0.99)	(2,872)

* indicates seasonal pool operation

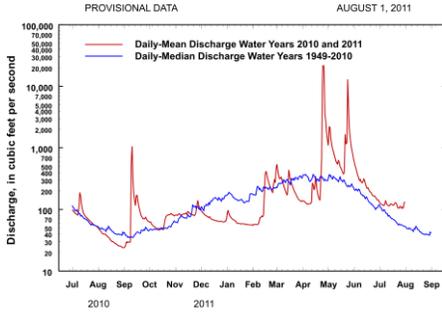
** elevation in meters

negative numbers in red, parentheses

STREAMFLOW CONDITIONS

Baron Fork at Eldon

Baron Fork at Eldon, Oklahoma
 Station No. 07197000 Northeast Oklahoma
 Drainage Area 307 square miles

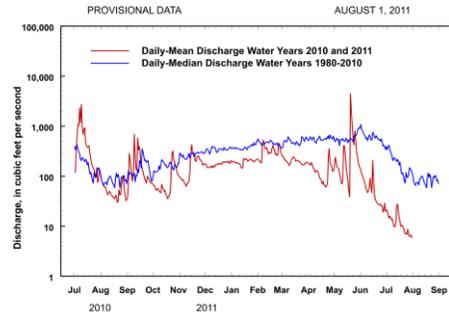


PROVISIONAL DATA AUGUST 1, 2011
 Comparison of daily discharges for water years 2010 and 2011 and period of record

Data from U.S. Geological Survey

Canadian River at Purcell

Canadian River at Purcell, Oklahoma
 Station No. 07229200 Central Oklahoma
 Drainage Area 25,939 square miles

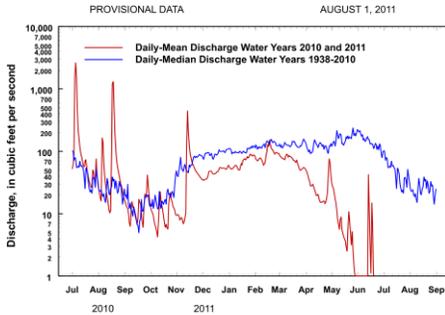


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 Comparison of daily discharges for water years 2010 and 2011 and period of record

Data from U.S. Geological Survey

Cimarron River near Waynoka

Cimarron River near Waynoka, Oklahoma
 Station No. 07158000 Northwest Oklahoma
 Drainage Area 13,334 square miles

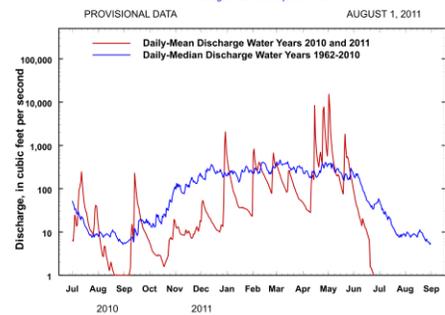


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Data from U.S. Geological Survey

Glover River near Glover

Glover River near Glover, Oklahoma
 Station No. 07337900 Southeast Oklahoma
 Drainage Area 315 square miles

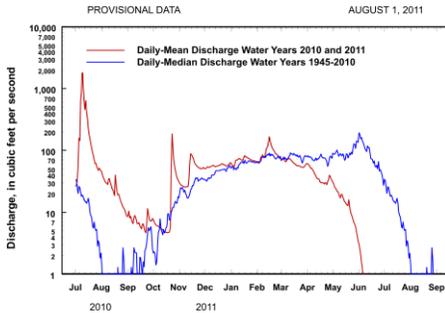


PROVISIONAL DATA AUGUST 1, 2011
 Comparison of daily discharges for water years 2010 and 2011 and period of record

Data from U.S. Geological Survey

North Fork of the Red River near Carter

North Fork of the Red River near Carter, Oklahoma
 Station No. 07301500 Southwest Oklahoma
 Drainage Area 2,337 square miles

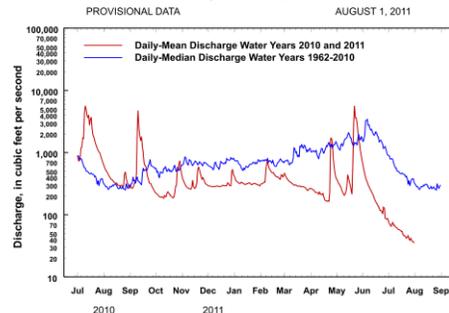


PROVISIONAL DATA AUGUST 1, 2011
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Data from U.S. Geological Survey

Washita River near Dickson

Washita River near Dickson, Oklahoma
 Station No. 07331000 South-Central Oklahoma
 Drainage Area 7,202 square miles



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 Comparison of daily discharges for water years 2010 and 2011 and period of record

Data from U.S. Geological Survey



Water Bulletin information/data courtesy of National Weather Service, Climate Prediction Center, Oklahoma Climatological Survey, State Department of Agriculture, Food, and Forestry, Agricultural Statistics Service, U.S. Army Corps of Engineers, U.S. Department of Agriculture/Forest Service, U.S. Geological Survey, Western Drought Coordination Council, and National Drought Mitigation Center. For more information, visit www.owrb.ok.gov and www.mesonet.org.