Oklahoma Water Resources Bulletin
& Summary of Current Conditions

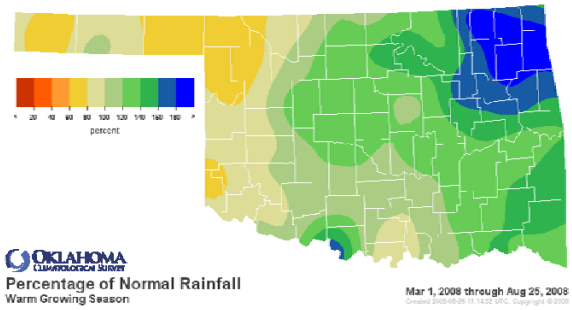
State of Oklahoma OWRB Water Resources Board the water agency

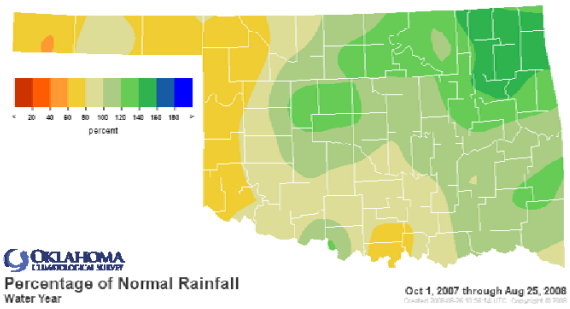
August 28, 2008

PRECIPITATION

Preliminary Statewide Precipitation

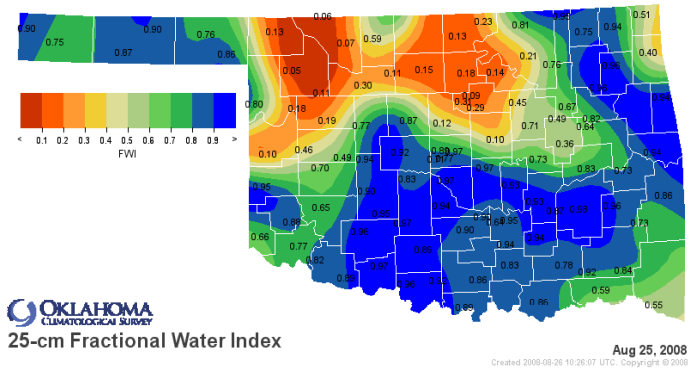
Climate Division (#)	Warm Growing Season March 1—August 25, 2008				Water Year October 1, 2007—August 25, 2008			
	Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	11.18"	-3.14"	78%	24th driest	13.67"	-5.07"	73%	15th driest
North Central	21.54"	+1.80"	109%	20th wettest	28.70"	+0.77"	103%	27th wettest
Northeast	39.85"	+16.35"	170%	1st wettest	51.74"	+15.17"	141%	3rd wettest
West Central	17.31"	-0.77"	96%	37th wettest	22.87"	-2.66"	90%	43rd wettest
Central	26.77"	+5.10"	124%	8th wettest	35.67"	+2.30"	107%	20th wettest
East Central	35.98"	+11.52"	147%	5th wettest	47.61"	+7.04"	117%	9th wettest
Southwest	18.70"	+0.29"	102%	29th wettest	24.21"	-2.68"	90%	41st driest
South Central	24.06"	+1.92"	109%	26th wettest	31.75"	-4.37"	88%	39th driest
Southeast	36.18"	+10.39"	140%	7th wettest	51.01"	+5.16"	111%	19th wettest
Statewide	25.82"	+4.91"	123%	6th wettest	34.20"	+1.85"	106%	23rd wettest

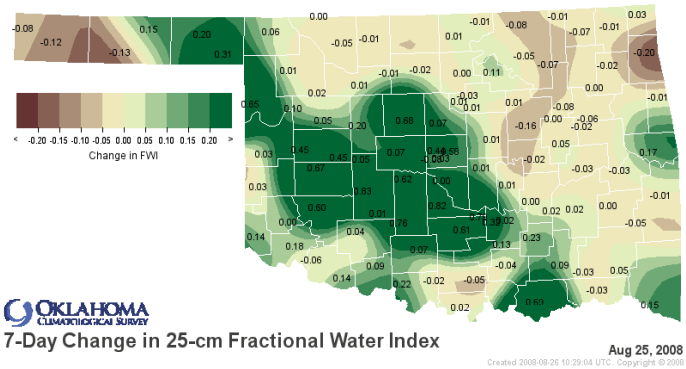




SOIL MOISTURE

Fractional Water Index[1]
August 25, 2008
25 CM (~10 INCHES)





[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. Specifically, 1.0 to 0.8 equals Enhanced Growth, 0.8 to 0.5 equals Limited Growth, 0.5 to 0.3 equals Plants Wilting, 0.3 to 0.1 equals Plants Dying, and less than 0.1 equals Barren Soil.

DROUGHT INDICES

Palmer Drought Severity Index[1]

Climate Division (#)	Current Status 8/23/2008	Value 8/23	Value 7/26	Change In Value
Northwest (1)	MOIST SPELL	1.19	-2.15	**3.34**
North Central (2)	UNUSUAL MOIST SPELL	2.99	3.83	**-0.84**
Northeast (3)	EXTREME MOIST SPELL	5.10	4.74	**0.36**
West Central (4)	MOIST SPELL	1.77	1.43	**0.34**
Central (5)	VERY MOIST SPELL	3.89	2.43	**1.46**
East Central (6)	VERY MOIST SPELL	3.29	1.93	**1.36**
Southwest (7)	NEAR NORMAL	0.43	-1.62	**2.05**
South Central (8)	INCIPIENT MOIST SPELL	0.92	-1.72	**2.64**
Southeast (9)	UNUSUAL MOIST SPELL	2.65	0.91	**1.74**

Standardized Precipitation Index[2] Through July 2008

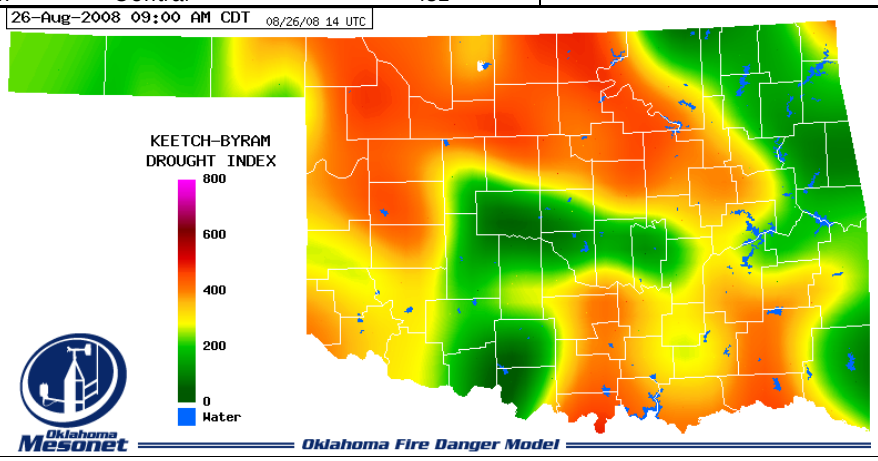
Climate Division (#)	3-Month	6-Month	9-Month	12-Month
Northwest (1)	NEAR NORMAL	MODERATELY DRY	MODERATELY DRY	VERY DRY
North Central (2)	VERY WET	VERY WET	VERY WET	MODERATELY WET
Northeast (3)	VERY WET	EXTREMELY WET	EXTREMELY WET	EXTREMELY WET
West Central (4)	NEAR NORMAL	MODERATELY WET	NEAR NORMAL	MODERATELY WET
Central (5)	NEAR NORMAL	MODERATELY WET	MODERATELY WET	MODERATELY WET
East Central (6)	NEAR NORMAL	VERY WET	MODERATELY WET	MODERATELY WET
Southwest (7)	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central (8)	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southeast (9)	NEAR NORMAL	VERY WET	NEAR NORMAL	NEAR NORMAL

- No climate divisions are currently experiencing drought conditions, according to the PDSI.
- One climate division has undergone a PDSI moisture decrease since July 26.
- Two climate divisions (the Northwest and Southwest) are experiencing long-term dry conditions, according to the SPI.

Keetch-Byram Drought Fire Index[3]

Mesonet Station	County	Climate Division	Current Value 8/26/2008
Marshall	Logan	Central	493
Fairview	Major	North Central	485
Guthrie	Logan	Central	481

- Stations currently above 600 (August 26) = 0
- Stations above 600 on July 29 = 3



[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.

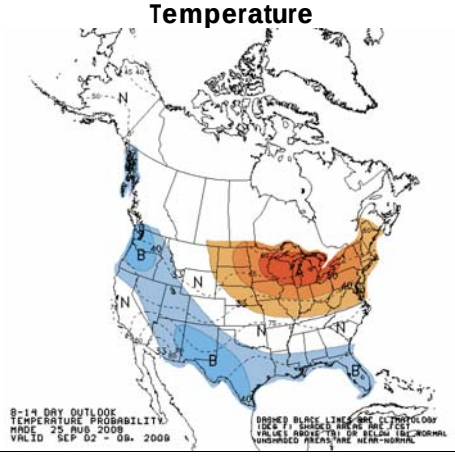
[2] The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while 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.

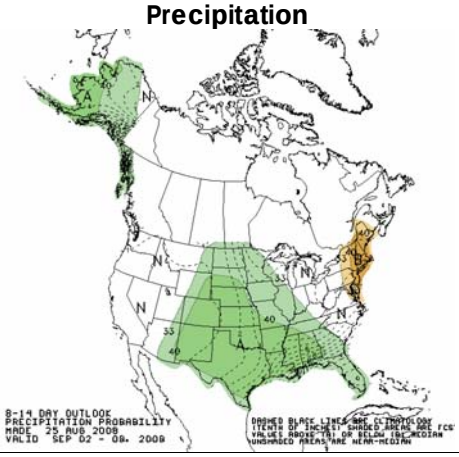
WEATHER/DROUGHT FORECAST

8- to 14-Day Outlook
September 2-8, 2008

Temperature



Precipitation

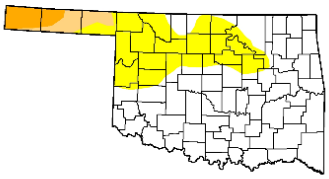


U.S. Drought Monitor
Oklahoma

August 26, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	67.5	32.5	6.8	3.5	0.0	0.0
Last Week (08/19/2008 map)	67.5	32.5	6.8	3.5	0.0	0.0
3 Months Ago (05/03/2008 map)	81.9	18.1	8.2	6.9	5.1	0.0
Start of Calendar Year (01/01/2008 map)	83.4	16.6	7.1	0.0	0.0	0.0
Start of Water Year (10/02/2007 map)	95.6	4.4	0.0	0.0	0.0	0.0
One Year Ago (08/28/2007 map)	87.0	13.0	0.0	0.0	0.0	0.0



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

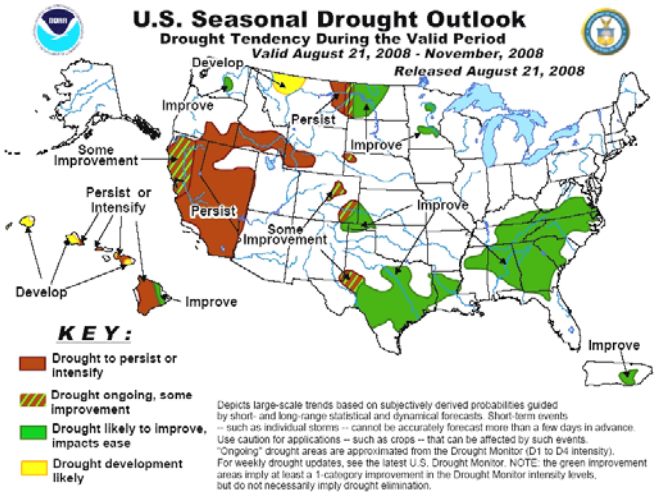
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements

http://drought.unl.edu/dm

Released Thursday, August 28, 2008
Author: J. Lawrimore/L. Love-Brotak, NOAA/NESDIS/NCDC

Regional Drought Summary & Outlook:
August 26—Over the past couple weeks, widespread rainfall throughout much of Oklahoma, including the Panhandle region, has greatly improved drought conditions. Conditions have improved to D2 (severe drought) in the western half of the Panhandle and to D1 (moderate drought) and D0 in the eastern half. In north-central Texas, rainfall amounts of 1 to 2 inches and similar amounts during the previous week led to an end to abnormally dry conditions and a reduction from D1H to D0 conditions from near Waco to the Dallas/Fort Worth area and northwestward.

According to the latest Drought Outlook, Colorado, Oklahoma, and Texas have experienced drought relief since late July. Further improvement is forecast.



CROP REPORT

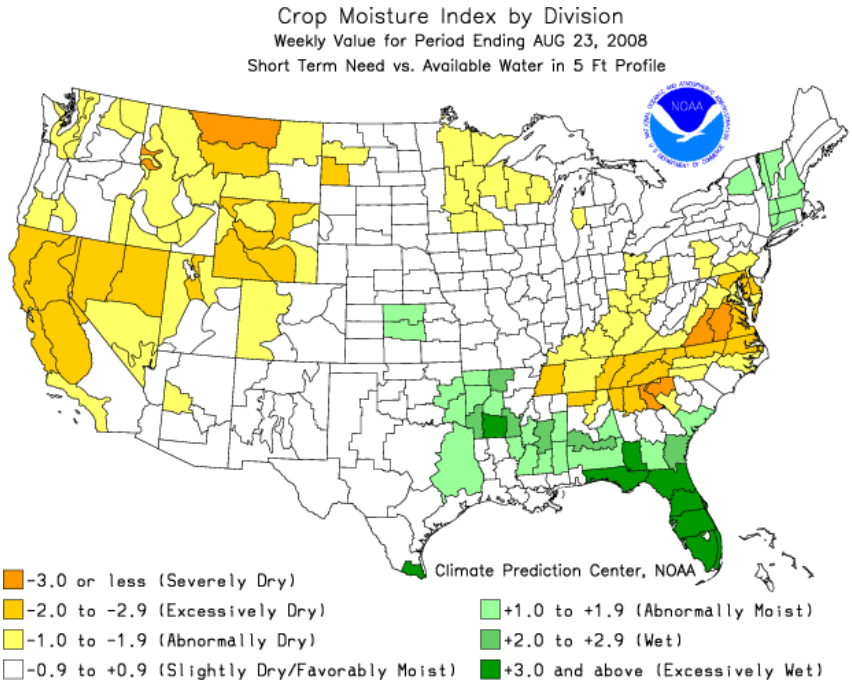
August 25, 2008—Cool and wet weather for the last two weeks has helped improve Oklahoma's pastures and late maturing row crops. This rainfall should also enhance prospective yields for many hay and late maturing row crops that have suffered from a hot and dry July. The Panhandle, West Central, Southwest, South Central and Central Oklahoma regions have reported light flood and hail damage. The areas most affected by flooding were low-lying land near rivers and creeks. Soil moisture continued to improve and both topsoil and subsoil are now in mostly adequate condition. There were 4.9 days suitable for field work.

Two weeks of wet weather have slowed small grain seedbed preparation. Winter wheat plowed increased one percentage point from last week to reach 92 percent complete with 30 percent of wheat seedbed preparation completed. Rye seedbed preparation increased 24 percentage points to reach 35 percent complete. Oats plowed was nearing an end at 95 percent, with 15 percent of oats seedbed preparation complete.

The recent weeks of cool and wet weather have improved row crop conditions and should have a positive impact on future yields in some areas. Row crop conditions are mostly in the good to fair range. Corn silking is virtually complete at 97 percent. Eighty-nine percent of the state's corn had reached the dough stage, up three points from the previous week but five points behind the five-year average. Forty-five percent of corn had reached maturity by week's end, an increase of fifteen points from the previous week and three points ahead of normal. Thirty percent of corn was harvested by week's end. Sorghum emerged was nearly complete at 97 percent. Sorghum headed increased 11 points from the previous week to reach 58 percent complete but was 20 points behind the five-year average. Twenty-eight percent of the sorghum was coloring by the end of the week, an increase of three points from the previous week but nine points behind normal. Ten percent of the state's sorghum had reached maturity, in-line with the five-year average. Sorghum harvested has begun in a few isolated areas. Soybeans blooming were at 80 percent, an increase of 12 points from the previous week but five points behind the five-year average. Just under two thirds of the state's soybeans were setting pods, an increase of 16 points from the previous week but six points behind normal. A small percentage of soybeans had reached maturity by the end of the week. Peanuts setting pods increased seven points from the previous week to reach 90 percent complete, six points behind normal. Peanuts had reached maturity in a few areas. Cotton setting bolls reached 88 percent complete, two points behind normal. A small percentage of cotton bolls were opening.

Hay growth has increased greatly from the recent rainfall. Hay conditions remain mostly in the good to fair range. Seventy-two percent of the state's alfalfa had been cut for the fourth time, a 20 point increase from the previous week. Alfalfa fifth cutting reached 10 percent complete. Other hay second cutting reached 42 percent, an increase of 12 points from the previous week, but 18 points behind normal. Watermelons harvested had reached 91 percent complete, an increase of five points from the previous week but slightly behind normal.

Pasture and grasses continued to improve last week in areas that received rainfall. Pasture and range conditions remained mostly in the good to fair range. Livestock conditions were rated mostly in the good to fair range with mostly light to moderate insect activity was reported.



RESERVOIR STORAGE

- 11 reservoirs are currently operating at less than full capacity (compared to 15 three weeks ago).
- 20 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs
August 26, 2008

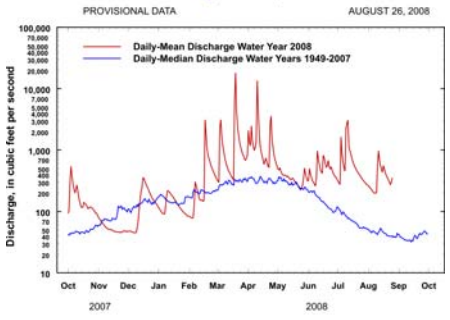
Lake or Reservoir	*Normal Pool Elevation* (feet)	*Previous Elevation 07/29/2008* (feet)	*Current Elevation 08/26/2008* (feet)	*Change in Elevation* (feet)	*Current Flood Control Storage* (acre-feet)
North Central					
Fort Supply	2004.00	2004.28	2004.21	(0.07)	394
Great Salt Plains	1125.00	1124.80	1125.01	0.21	84
Kaw*	1008.00	1010.52	1008.16	(2.36)	2,588
Northeast					
Birch	750.50	750.65	750.44	(0.21)	(69)
Copan	710.00	710.73	710.61	(0.12)	3,462
Fort Gibson	554.00	556.40	556.39	(0.01)	47,451
Grand	745.00	744.09	742.12	(1.97)	(129,720)
Hudson	619.00	620.89	621.17	0.28	24,437
Hulah	733.00	733.30	734.30	1.00	8,015
Keystone	723.00	726.26	723.43	(2.83)	9,912
Oologah	638.00	641.16	641.47	0.31	114,617
Skiatook	714.00	714.40	713.53	(0.87)	(4,741)
West Central					
Canton	1615.40	1615.30	1614.85	(0.45)	(4,322)
Foss	1642.00	1641.81	1641.67	(0.14)	(2,204)
Central					
Arcadia	1006.00	1005.89	1006.46	0.57	856
Heyburn	761.50	761.52	760.53	(0.99)	(785)
Thunderbird	1039.00	1038.89	1040.75	1.86	10,975
East Central					
Eufaula*	585.00	586.49	585.33	(1.16)	31,870
Tenkiller	632.00	636.12	632.73	(3.39)	9,563
Southwest					
Fort Cobb	1342.00	1341.84	1342.84	1.00	3,270
Lugert-Altus	1559.00	1548.45	1543.28	(5.17)	(76,495)
Tom Steed	1411.00	1409.46	1409.11	(0.35)	(11,527)
South Central					
Arbuckle	872.00	871.23	870.60	(0.63)	(3,232)
McGee Creek**	175.90	176.17	176.29	0.12	4,998
Texoma*	616.90	616.36	617.39	1.03	39,961
Waurika*	951.40	950.89	951.96	1.07	5,677
Southeast					
Broken Bow*	602.50	601.38	601.03	(0.35)	(21,355)
Hugo*	404.50	405.08	404.69	(0.39)	4,747
Pine Creek*	440.00	443.17	440.32	(2.85)	8,432
Sardis	599.00	599.01	598.96	(0.05)	(535)
Wister	478.00	477.86	479.74	1.88	13,769

** indicates seasonal pool operation* *** elevation in meters* *negative numbers in red, parentheses*

STREAMFLOW CONDITIONS

Baron Fork at Eldon

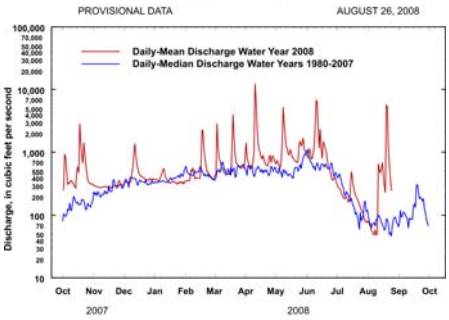
Baron Fork at Eldon, Oklahoma
Station No. 07197000 Northeast Oklahoma
Drainage Area 307 square miles



Comparison of daily discharges for water year 2008 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



Comparison of daily discharges for water year 2008 and period of record
Data from U.S. Geological Survey

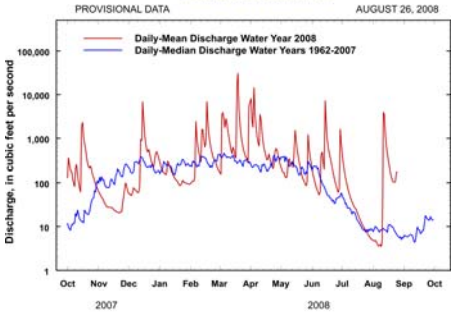
Cimarron River near Waynoka

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

Comparison of daily discharges for water year 2008 and period of record
Data from U.S. Geological Survey

Glover River near Glover

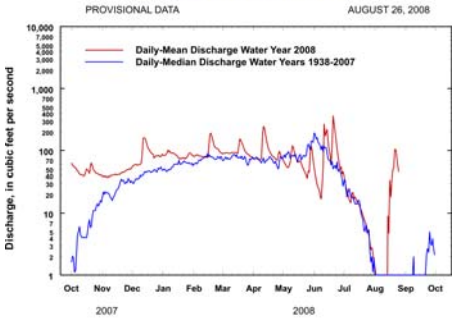
Glover River near Glover, Oklahoma
Station No. 07337900 Southeast Oklahoma
Drainage Area 315 square miles



Comparison of daily discharges for water year 2008 and period of record
Data from U.S. Geological Survey

North Fork of the Red River near Carter

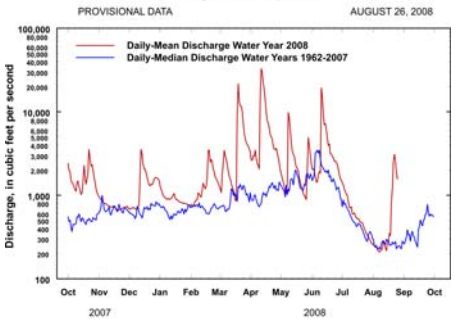
North Fork of the Red River near Carter, Oklahoma
Station No. 07301500 Southwest Oklahoma
Drainage Area 2,337 square miles



Comparison of daily discharges for water year 2008 and period of record
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



Comparison of daily discharges for water year 2008 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**.