Oklahoma Water Resources Bulletin
& Summary of Current Conditions

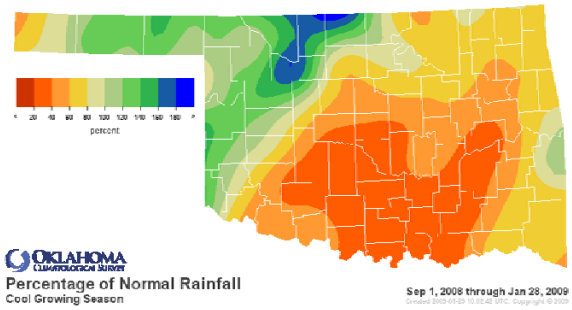
State of Oklahoma OWRB Water Resources Board the water agency

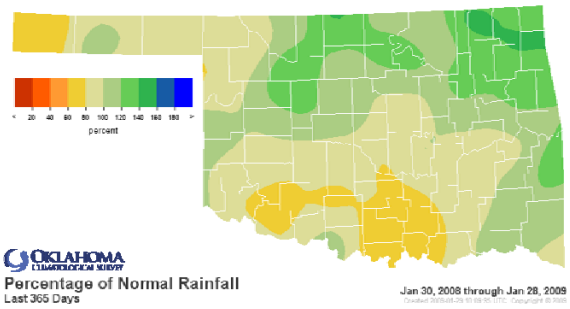
January 29, 2009

PRECIPITATION

Statewide Precipitation

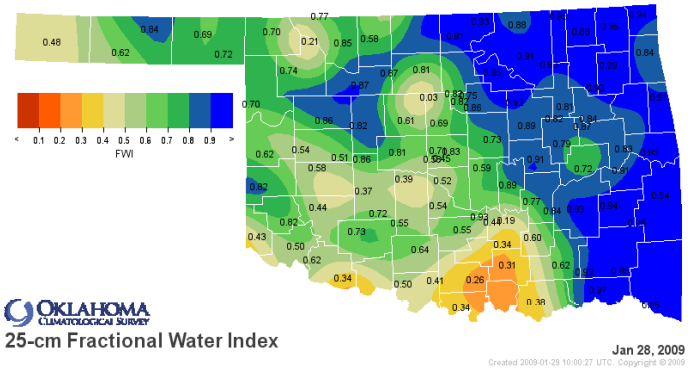
Climate Division (#)	Cool Growing Season September 1, 2008—January 28, 2009 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Last 365 Days January 30, 2008—January 28, 2009 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	5.80"	+0.20"	104%	33rd wettest	17.65"	-3.44"	84%	26th driest
North Central	11.97"	+1.96"	120%	19th wettest	35.71"	+4.09"	113%	15th wettest
Northeast	11.17"	-4.56"	71%	28th driest	54.11"	+12.19"	129%	3rd wettest
West Central	10.56"	+1.31"	114%	22nd wettest	30.56"	+1.50"	105%	17th wettest
Central	6.29"	-7.53"	46%	9th driest	35.85"	-2.10"	94%	38th wettest
East Central	9.53"	-8.90"	52%	12th driest	48.84"	+2.82"	106%	20th wettest
Southwest	5.75"	-4.69"	55%	15th driest	26.35"	-4.42"	86%	29th driest
South Central	5.22"	-10.72"	33%	2nd driest	31.33"	-9.57"	77%	18th driest
Southeast	13.86"	-7.35"	65%	15th driest	54.60"	+3.75"	107%	20th wettest
Statewide	8.70"	-4.64"	65%	18th driest	37.07"	+0.42"	101%	27th wettest

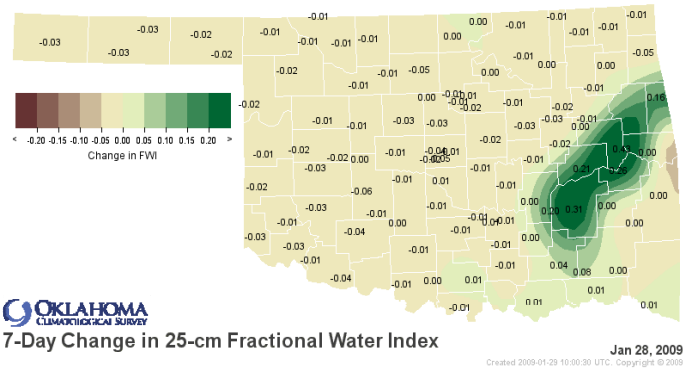




SOIL MOISTURE

Fractional Water Index[1]
January 28, 2009
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]

Standardized Precipitation Index[2] Through December 2008

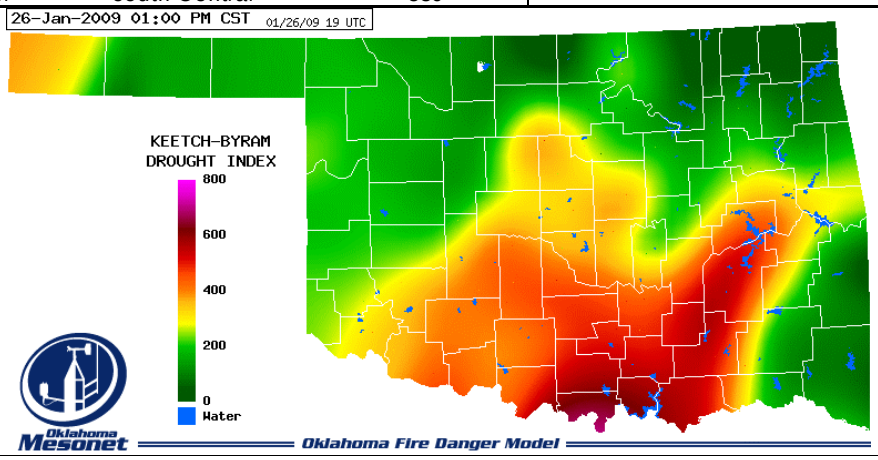
Climate Division (#)	Current Status 1/24/2009	Value 1/24	Value 1/3	Change In Value	3-Month	6-Month	9-Month	12-Month
Northwest (1)	MOIST SPELL	1.01	1.54	**-0.53**	VERY WET	VERY WET	MODERATELY WET	NEAR NORMAL
North Central (2)	VERY MOIST SPELL	3.88	4.57	**-0.69**	NEAR NORMAL	NEAR NORMAL	VERY WET	VERY WET
Northeast (3)	VERY MOIST SPELL	2.57	3.60	**-1.03**	NEAR NORMAL	NEAR NORMAL	VERY WET	EXTREMELY WET
West Central (4)	UNUSUAL MOIST SPELL	2.29	2.72	**-0.43**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY WET
Central (5)	NEAR NORMAL	-0.24	0.92	**-1.16**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
East Central (6)	MILD DROUGHT	-1.45	0.00	**-1.45**	EXTREMELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southwest (7)	MILD DROUGHT	-1.06	-0.53	**-0.53**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central (8)	MILD DROUGHT	-1.62	-1.29	**-0.33**	VERY DRY	VERY DRY	MODERATELY DRY	NEAR NORMAL
Southeast (9)	MOIST SPELL	1.21	2.06	**-0.85**	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL

- Three climate divisions are currently experiencing drought conditions, according to the PDSI.
- All nine climate divisions have undergone a PDSI moisture decrease since January 3.
- Three climate divisions are experiencing near long-term dry conditions, according to the SPI.

Keetch-Byram Drought Fire Index[3]

Mesonet Station	County	Climate Division	Current Value 1/26/2009
Burneyville	Love	South Central	664
Madill	Marshall	South Central	602
Ardmore	Carter	South Central	589

- Stations currently above 600 (January 26) = 2
- Stations above 600 on January 5 = 1



[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.

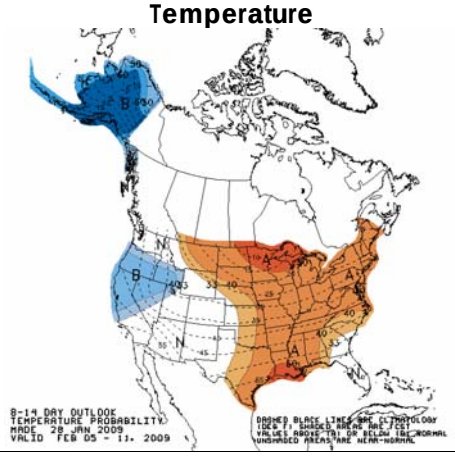
[2] The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while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

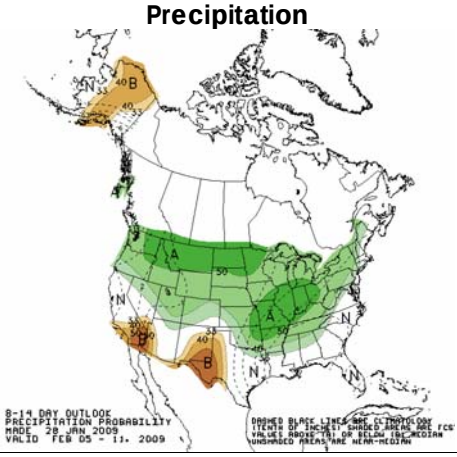
WEATHER/DROUGHT FORECAST

8- to 14-Day Outlook
February 5-11, 2009

Temperature



Precipitation

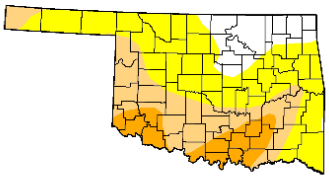


U.S. Drought Monitor
Oklahoma

January 27, 2009
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.8	86.2	38.8	12.4	0.0	0.0
Last Week (01/20/2009 map)	29.3	70.7	27.7	4.5	0.0	0.0
3 Months Ago (11/04/2008 map)	45.1	54.9	9.7	0.0	0.0	0.0
Start of Calendar Year (01/06/2009 map)	41.6	58.4	12.0	3.4	0.0	0.0
Start of Water Year (10/07/2008 map)	84.4	15.6	5.0	3.5	0.0	0.0
One Year Ago (01/29/2008 map)	48.5	51.5	8.5	0.0	0.0	0.0



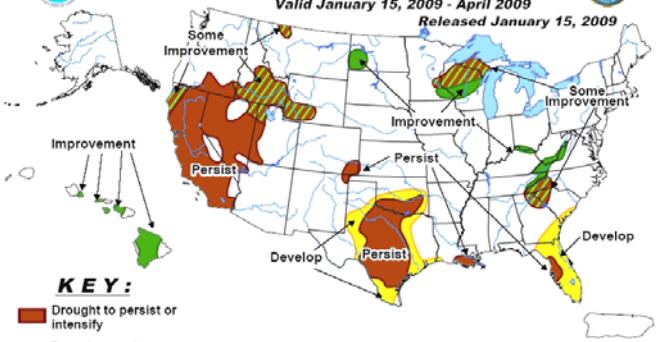
Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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, January 29, 2009
Author: Eric Luebehusen, U.S. Department of Agriculture

U.S. Seasonal Drought Outlook
Drought Tendency During the Valid Period
Valid January 15, 2009 - April 2009
Released January 15, 2009



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.

Regional Drought Summary & Outlook:

January 27—Drought continued to expand under a dry, unseasonably warm weather regime. In Texas, where temperatures averaged as much as 12 degrees above normal, declining pasture and wheat conditions were symbolic of increasing rainfall deficits and depleted soil moisture supplies. Moderate (D1) and Severe (D2) drought designations were expanded northward to encompass much of central Texas, with 90-day percent of normal precipitation averaging less than 10% over much of northern Texas. In Oklahoma, large precipitation departures (more than 6 inches) over the past 90 days across the state's southern tier resulted in a similar expansion of D1 and D2, although some rain (locally more than an inch) in east-central Oklahoma mitigated the drought expansion somewhat. Abnormal dryness was also noted in southern Kansas, where highs in the lower 70s exacerbated the impacts of developing moisture deficits.

According to the latest Drought Outlook (January 15), The drought over central and southern Texas has expanded northward into Oklahoma, and is expected to either persist or intensify during the next three months. In the West, drought is forecast to persist over much of California. Across the northern tier of states, signals from La Niña composites favor at least limited improvement for northwest Montana and for southwestern North Dakota. In the southern Atlantic region, the Feb-Apr 2009 precipitation forecast shows a tilt in the odds for drier than normal conditions. This results in drought expansion from Florida into coastal Georgia and South Carolina.

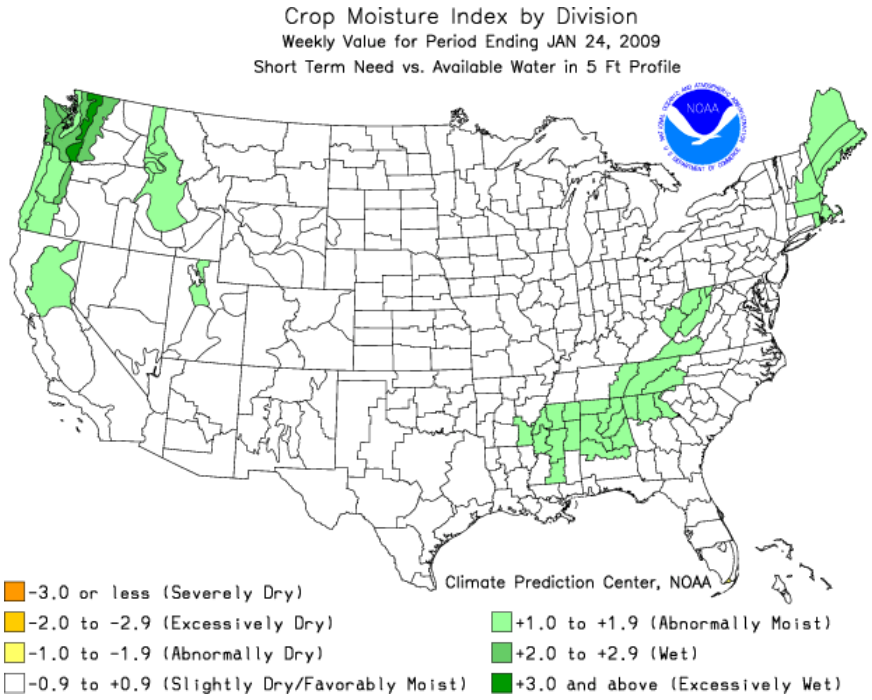
CROP REPORT

January 5, 2009—Topsoil and subsoil moisture conditions were down significantly from this time last year. Seventy-one percent of topsoil and 61 percent of subsoil moisture was rated in short to very short condition.

Despite the lack of moisture and strong winds in some areas, the conditions of all small grain crops were mostly in the good to fair range. The percentage of rye and wheat acres used for grazing was less than normal, primarily due to dry weather conditions. In some areas, early planted wheat was not developed enough to be grazed, and was in dire need of rainfall. Thirty-one percent of winter wheat was being grazed, four points behind normal.

Seventy-six percent of the state's pasture and range were in good to fair condition by the end of last month. Pond levels were beginning to get low in some parts of the state. Some hay and supplemental feeding were taking place.

Livestock were rated in mostly good to fair condition. Livestock marketings were average. Drinking water for livestock was beginning to be a major concern for producers in areas that have not received adequate rainfall.



RESERVOIR STORAGE

- 15 reservoirs are currently operating at less than full capacity (compared to 14 three weeks ago).
- 23 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs
January 28, 2009

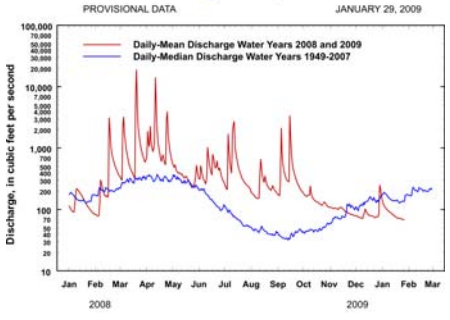
Lake or Reservoir	Normal Pool Elevation (feet)	Previous Elevation 01/05/2009 (feet)	Current Elevation 01/28/2009 (feet)	Change in Elevation (feet)	Current Flood Control Storage (acre-feet)
North Central					
Fort Supply	2004.00	2004.72	2004.30	(0.42)	563
Great Salt Plains	1125.00	1125.45	1125.45	0.00	3,776
Kaw*	1013.00	1013.44	1014.00	0.56	18,990
Northeast					
Birch	750.50	750.82	750.28	(0.54)	(252)
Copan	710.00	711.38	710.30	(1.08)	1,702
Fort Gibson	554.00	557.94	554.61	(3.33)	11,773
Grand*	742.00	742.08	741.99	(0.09)	(430)
Hudson	619.00	620.04	619.41	(0.63)	4,530
Hulah	733.00	733.96	733.27	(0.69)	1,665
Keystone*	723.00	722.17	719.72	(2.45)	(68,077)
Oologah*	636.00	636.73	638.18	1.45	64,349
Skiatook	714.00	713.04	712.77	(0.27)	(12,408)
West Central					
Canton	1615.40	1615.07	1615.77	0.70	2,937
Foss	1642.00	1641.97	1641.56	(0.41)	(2,939)
Central					
Arcadia	1006.00	1006.10	1006.04	(0.06)	74
Heyburn	761.50	761.02	761.06	0.04	(447)
Thunderbird	1039.00	1038.69	1038.64	(0.05)	(2,160)
East Central					
Eufaula*	585.00	584.46	584.65	0.19	(32,452)
Tenkiller	632.00	632.37	631.50	(0.87)	(6,550)
Southwest					
Fort Cobb	1342.00	1342.46	1342.26	(0.20)	1,012
Lugert-Altus	1559.00	1548.75	1549.57	0.82	(50,943)
Tom Steed	1411.00	1407.46	1407.18	(0.28)	(22,355)
South Central					
Arbuckle	872.00	868.20	867.87	(0.33)	(9,278)
McGee Creek**	175.90	175.70	175.62	(0.08)	(3,395)
Texoma*	615.80	616.60	615.93	(0.67)	7,259
Waurika*	951.40	950.84	950.82	(0.02)	(5,801)
Southeast					
Broken Bow*	599.50	599.84	597.64	(2.20)	(26,151)
Hugo*	404.90	406.82	405.27	(1.55)	7,298
Pine Creek*	438.00	440.14	438.34	(1.80)	1,312
Sardis	599.00	599.14	599.16	0.02	2,219
Wister	478.00	479.95	478.83	(1.12)	6,369

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

STREAMFLOW CONDITIONS

Baron Fork at Eldon

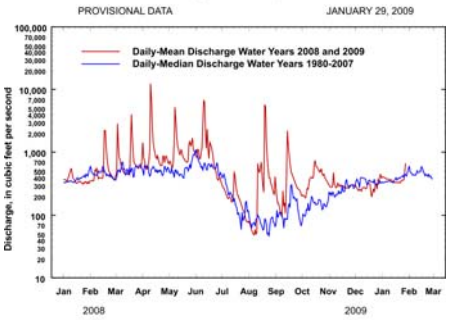
Baron Fork at Eldon, Oklahoma
Station No. 07197000 Northeast Oklahoma
Drainage Area 307 square miles



Comparison of daily discharges for waters year 2008 and 2009
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 years 2008 and 2009
and period of record
Data from U.S. Geological Survey

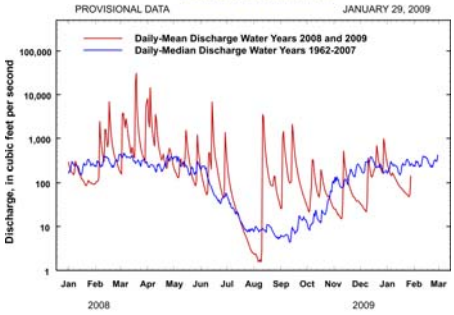
Cimarron River near Waynoka

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

Comparison of daily discharges for water years 2008 and 2009
and period of record
Data from U.S. Geological Survey

Glover River near Glover

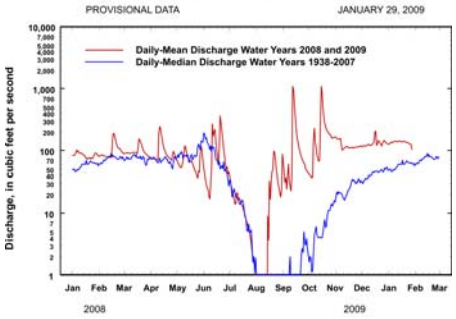
Glover River near Glover, Oklahoma
Station No. 07337900 Southeast Oklahoma
Drainage Area 315 square miles



Comparison of daily discharges for water years 2008 and 2009
and period of record
Data from U.S. Geological Survey

North Fork of the Red River near Carter

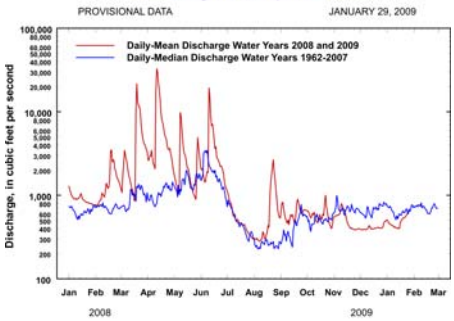
North Fork of the Red River near Carter, Oklahoma
Station No. 07301500 Southwest Oklahoma
Drainage Area 2,337 square miles



Comparison of daily discharges for water years 2008 and 2009
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 years 2008 and 2009
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**.