Oklahoma Water Resources Bulletin
& Summary of Current Conditions

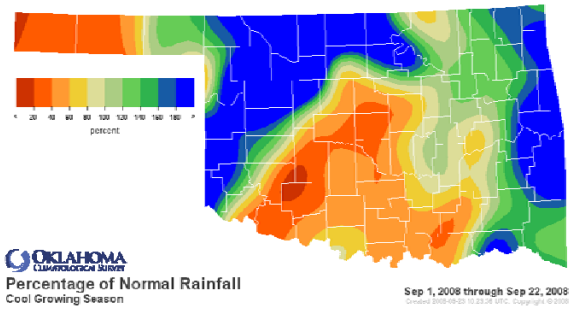
State of Oklahoma OWRB Water Resources Board the water agency

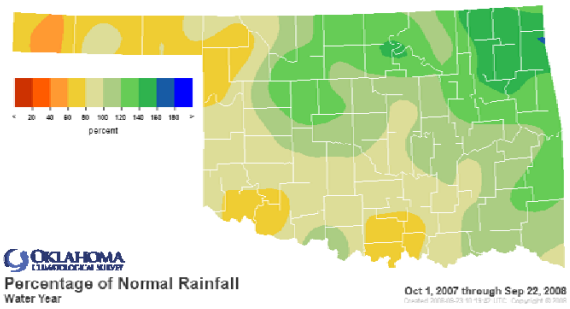
September 25, 2008

PRECIPITATION

Preliminary Statewide Precipitation

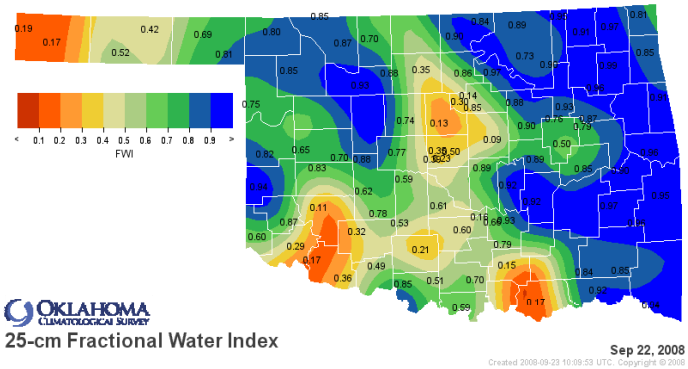
Climate Division (#)	Cool Growing Season September 1—22, 2008 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Water Year October 1, 2007—September 22, 2008 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	1.17"	-0.20"	85%	34th driest	14.92"	-5.68"	72%	16th driest
North Central	6.48"	+4.19"	282%	2nd wettest	35.56"	+4.74"	115%	9th wettest
Northeast	5.00"	+1.50"	143%	13th wettest	57.05"	+16.35"	140%	2nd wettest
West Central	4.69"	+2.46"	211%	8th wettest	28.06"	-0.23"	99%	30th wettest
Central	1.78"	-1.23"	59%	28th driest	37.86"	+0.97"	103%	23rd wettest
East Central	5.10"	+1.46"	140%	23rd wettest	52.82"	+8.05"	118%	10th wettest
Southwest	1.58"	-0.90"	64%	36th driest	26.16"	-3.74"	87%	38th driest
South Central	1.79"	-1.40"	56%	36th driest	33.55"	-6.25"	84%	27th driest
Southeast	5.59"	+2.24"	167%	12th wettest	56.68"	+6.96"	114%	15th wettest
Statewide	3.57"	+0.78"	128%	27th wettest	38.02"	+2.35"	107%	20th wettest

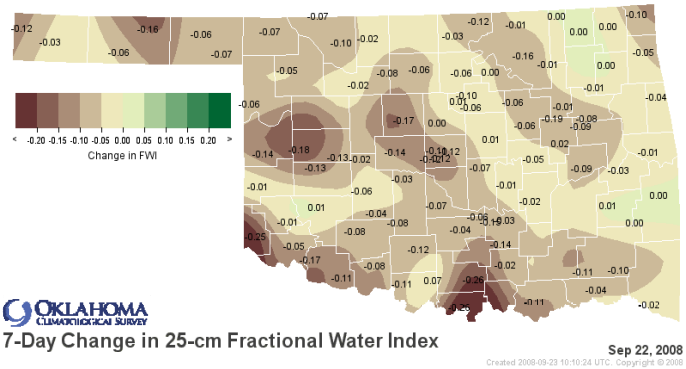




SOIL MOISTURE

Fractional Water Index[1]
September 22, 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 9/20/2008	Value 9/20	Value 8/23	Change In Value
Northwest (1)	MOIST SPELL	1.41	1.19	**0.22**
North Central (2)	EXTREME MOIST SPELL	5.17	2.99	**2.18**
Northeast (3)	EXTREME MOIST SPELL	5.55	5.10	**0.45**
West Central (4)	VERY MOIST SPELL	3.88	1.77	**2.11**
Central (5)	VERY MOIST SPELL	3.92	3.89	**0.03**
East Central (6)	VERY MOIST SPELL	3.95	3.29	**0.66**
Southwest (7)	MOIST SPELL	1.67	0.43	**1.24**
South Central (8)	MOIST SPELL	1.20	0.92	**0.28**
Southeast (9)	EXTREME MOIST SPELL	4.06	2.65	**1.41**

Standardized Precipitation Index[2] Through August 2008

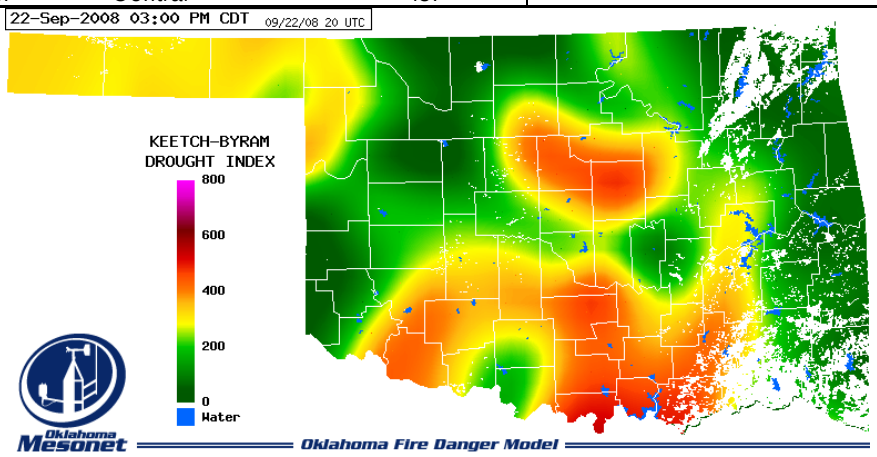
Climate Division (#)	3-Month	6-Month	9-Month	12-Month
Northwest (1)	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central (2)	MODERATELY WET	MODERATELY WET	VERY WET	MODERATELY WET
Northeast (3)	VERY WET	EXTREMELY WET	EXTREMELY WET	EXTREMELY WET
West Central (4)	MODERATELY WET	MODERATELY WET	VERY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

- No climate divisions are currently experiencing drought conditions, according to the PDSI.
- No climate divisions have undergone a PDSI moisture decrease since August 23.
- No 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 9/22/2008
Byars	Garvin	South Central	539
Burneyville	Love	South Central	521
Marshall	Logan	Central	487

- Stations currently above 600 (September 22) = 0
- Stations above 600 on August 26 = 0



[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.

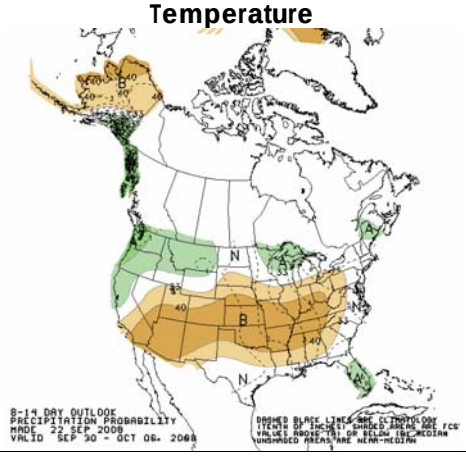
[2] The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while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

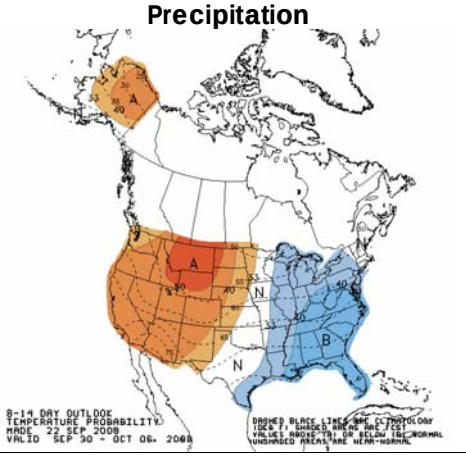
WEATHER/DROUGHT FORECAST

8- to 14-Day Outlook
September 30-October 6, 2008

Temperature



Precipitation

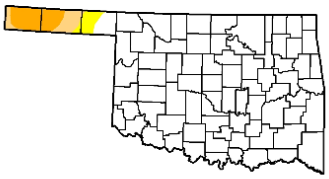


U.S. Drought Monitor
Oklahoma

September 23, 2008
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	93.3	6.7	5.4	3.5	0.0	0.0
Last Week (09/16/2008 map)	93.3	6.7	5.4	1.3	0.0	0.0
3 Months Ago (07/01/2008 map)	75.5	24.5	18.0	8.6	6.8	5.3
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 (09/25/2007 map)	95.6	4.4	0.0	0.0	0.0	0.0

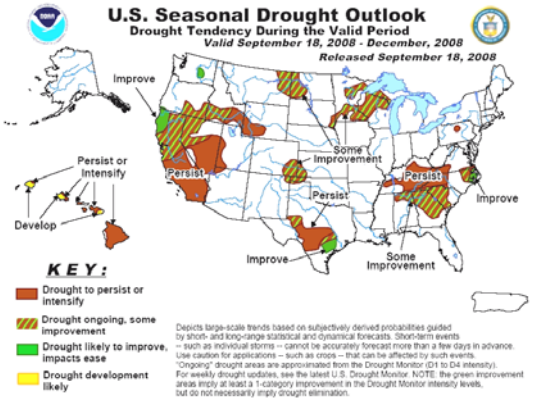


Intensity:
- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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, September 25, 2008
Author: R. Heim/L. Love-Brotak, NOAA/NESDIS/NCDC



Regional Drought Summary & Outlook:
September 23—D2 was expanded back into Cimarron County in the Oklahoma panhandle where precipitation deficits remained large, ponds continued low, and the Vegetation Drought Response Index showed continued dryness. Precipitation in this area amounted to less than 20% of normal for the last 30 days. Degradation of drought conditions occurred in south central Texas, where D3/D2/D1/D0 boundaries were expanded southeastward toward the coast at Refugio-Calhoun-Matagorda counties. D0 was also expanded to the Rio Grande River at Del Rio, and D2 was extended southward just east of that area. September rainfall so far has ranged from near zero to half an inch where normals are nearly 2 inches. The Edwards Plateau-South Central-Southern regions of Texas still have significant indications of drought on the long-term precipitation departure, streamflow, soil moisture, and Vegetation Drought Response Index maps.

According to the latest Drought Outlook, Tropical weather systems have chipped away at the edges of the drought areas over Texas and the southeast. Unfortunately the heaviest precipitation missed the core drought areas for both of these regions. At the moment the tropics are relatively quiet but the forecast models are suggesting a more active pattern over the Atlantic, Caribbean and Gulf of Mexico in about 10 days to two weeks. For the shorter ranges the models have now backed off on the idea of a tropical system developing in the western Gulf Of Mexico. The decrease in tropical activity leads to a more pessimistic forecast of improvement for interior Texas. The drought area over the northern Plains should see some improvement as medium range forecasts valid for late September indicate above normal precipitation for this region.

CROP REPORT

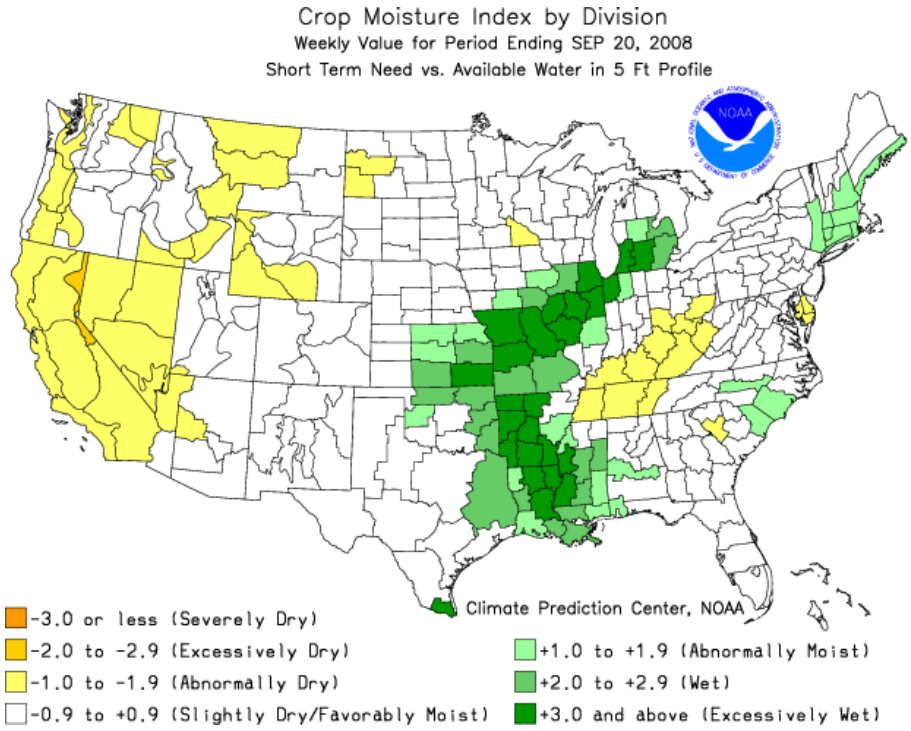
September 22, 2008— Last week's temperatures were usual for September and ranged from 88 degrees in Tipton to 40 degrees in Chickasha. Rain was scarce across the state. In areas where sunshine and warm temperatures occurred, soil moisture levels decreased and allowed producers to continue working in the field. There were 5.4 days suitable for fieldwork.

Last week, small grain planting increased significantly for wheat and rye. Fall army worms were reported being seen in early planted wheat fields in areas of the Panhandle. Over twenty percent of the state's cropland was reported having moderate to heavy insect activity. Winter wheat seedbed preparation increased eight percentage points from the previous week to reach 79 percent complete. Twenty percent of wheat had been planted by week's end. Rye seedbed preparation increased nine percentage points to reach 82 percent complete. Rye planted reached 45 percent complete by week's end, a 26 point increase from the previous week but three points behind the five-year average. Seedbed preparation for oats was 58 percent complete, eight points behind normal.

Row crop harvest was in full swing for those parts of the state that received adequate sunshine and warm temperatures. Fifty-nine percent of the state's corn had reached maturity by week's end, 24 points behind the five-year average. Just over one-third of the state's corn had been harvested by week's end, up five points from the previous week but 24 points behind normal. Sorghum headed increased two points from the previous week to reach 91 percent but was six points behind normal. Nearly two-thirds of the sorghum was coloring by the end of the week, an increase of five points from the previous week but 13 points behind normal. Thirty percent of the state's sorghum had reached maturity, eight points behind the five-year average. Fourteen percent of the state's sorghum had been harvested. Soybeans setting pods increased six points from the previous week to reach 94 percent, two points ahead of the five-year average. Twenty-one percent of soybeans were mature, up five points from the previous week but 21 points behind the five-year average. Peanuts mature reached 35 percent, up seven points from the previous week but 26 points behind normal. Cotton bolls were opening on 55 percent of the state's cotton by week's end, up 14 points from the previous week but three points behind the five-year average.

Hay cutting and baling activities continued in areas dry enough for fieldwork. Eighty-nine percent of the state's alfalfa had been cut for the fourth time, a two-point increase from the previous week. Alfalfa fifth cutting reached 39 percent complete by week's end. Other hay second cutting reached 67 percent, an increase of seven points from the previous week but nine points behind normal.

Pasture and grass conditions improved due to the previous week's moisture. 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 reported.



RESERVOIR STORAGE

- 7 reservoirs are currently operating at less than full capacity (compared to 11 four weeks ago).
- 14 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs
September 24, 2008

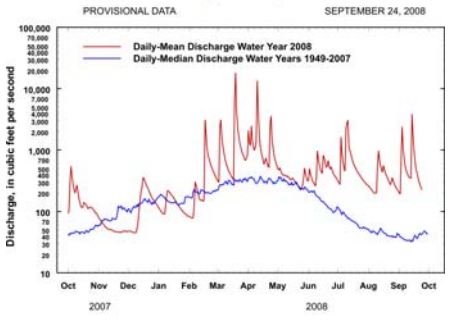
Lake or Reservoir	*Normal Pool Elevation* (feet)	*Previous Elevation 08/26/2008* (feet)	*Current Elevation 09/24/2008* (feet)	*Change in Elevation* (feet)	*Current Flood Control Storage* (acre-feet)
North Central					
Fort Supply	2004.00	2004.21	2004.70	0.49	131
Great Salt Plains	1125.00	1125.01	1127.54	2.53	23,624
Kaw*	1008.00	1008.16	1018.74	10.58	201,395
Northeast					
Birch	750.50	750.44	750.77	0.33	309
Copan	710.00	710.61	710.43	(0.18)	2,440
Fort Gibson	554.00	556.39	561.35	4.96	160,149
Grand*	741.00	742.12	745.75	3.63	213,250
Hudson	619.00	621.17	620.36	(0.81)	15,150
Hulah	733.00	734.30	733.65	(0.65)	4,008
Keystone	723.00	723.43	731.00	7.57	212,523
Oologah*	638.00	641.47	643.59	2.12	190,642
Skiatook	714.00	713.53	713.03	(0.50)	(9,785)
West Central					
Canton	1615.40	1614.85	1616.30	1.45	7,244
Foss	1642.00	1641.67	1641.77	0.10	(1,536)
Central					
Arcadia	1006.00	1006.46	1006.12	(0.34)	223
Heyburn	761.50	760.53	760.92	0.39	(555)
Thunderbird	1039.00	1040.75	1039.21	(1.54)	1,281
East Central					
Eufaula*	585.00	585.33	585.12	(0.21)	11,588
Tenkiller	632.00	632.73	635.73	3.00	49,155
Southwest					
Fort Cobb	1342.00	1342.84	1342.18	(0.66)	701
Lugert-Altus	1559.00	1543.28	1542.34	(0.94)	(79,839)
Tom Steed	1411.00	1409.11	1408.55	(0.56)	(14,737)
South Central					
Arbuckle	872.00	870.60	870.12	(0.48)	(4,326)
McGee Creek**	175.90	176.29	176.20	(0.09)	3,823
Texoma*	616.50	617.39	616.48	(0.91)	(1,475)
Waurika*	951.40	951.96	951.61	(0.35)	2,129
Southeast					
Broken Bow*	602.50	601.03	602.91	1.88	5,994
Hugo*	404.50	404.69	408.57	3.88	63,819
Pine Creek*	438.90	440.32	440.33	0.01	5,968
Sardis	599.00	598.96	599.65	0.69	9,017
Wister	478.00	479.74	483.50	3.76	48,654

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

STREAMFLOW CONDITIONS

Baron Fork at Eldon

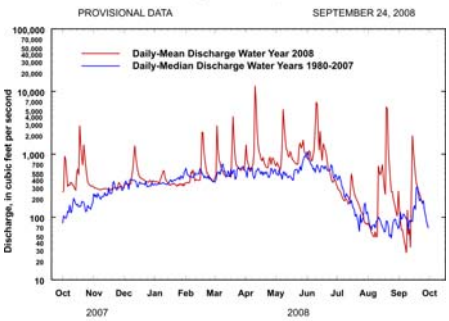
Baron Fork at Eldon, Oklahoma
Station No. 07197000 Northeast Oklahoma
Drainage Area 307 square miles



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

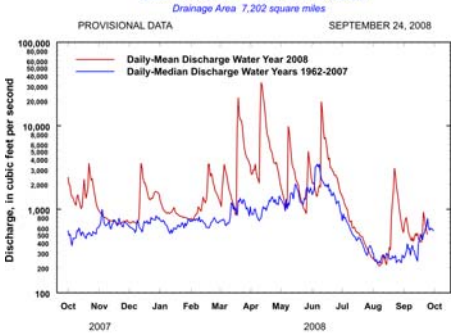
North Fork of the Red River near Carter

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**.