

Oklahoma Water Resources Bulletin & Summary of Current Conditions

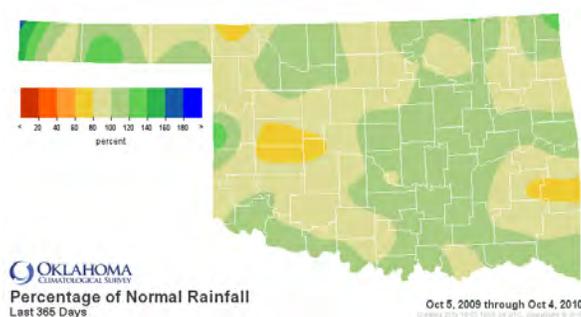
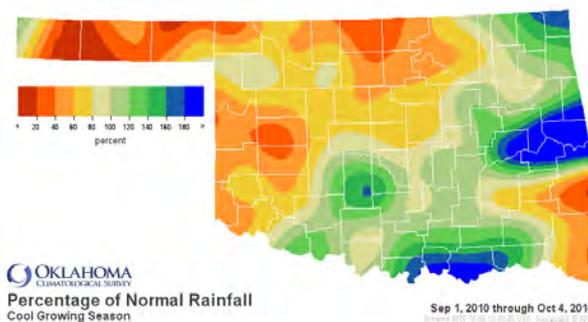


October 7, 2010

PRECIPITATION

Statewide Precipitation

CLIMATE DIVISION	Cool Growing Season September 1 – October 4, 2010				Last 365 Days October 5, 2009 – October 4, 2010			
	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	0.96"	-1.11"	46%	18th driest	21.10"	+0.00"	100%	38th wettest
North Central	1.92"	-1.56"	55%	22nd driest	31.18"	-0.47"	99%	36th wettest
Northeast	5.32"	+0.08"	101%	32nd wettest	43.67"	+1.70"	104%	25th wettest
West Central	1.76"	-1.60"	52%	26th driest	25.32"	-3.77"	87%	38th driest
Central	4.08"	-0.51"	89%	38th wettest	38.08"	+0.09"	100%	27th wettest
East Central	8.37"	+2.86"	152%	13th wettest	46.24"	+0.15"	100%	33rd wettest
Southwest	3.09"	-0.69"	82%	41st wettest	29.17"	-1.63"	95%	36th wettest
South Central	5.85"	+0.96"	120%	29th wettest	41.82"	+0.86"	102%	25th wettest
Southeast	4.38"	-0.83"	84%	43rd wettest	47.34"	-3.60"	93%	40th driest
Statewide	4.00"	-0.25"	94%	37th wettest	36.16"	-0.53"	99%	36th wettest

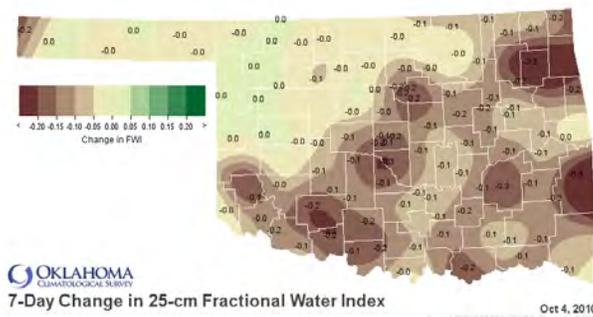
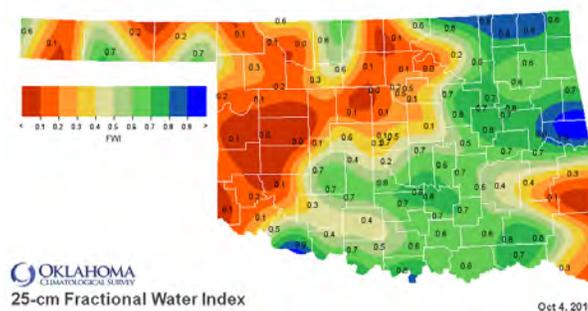


SOIL MOISTURE

Fractional Water Index¹

October 4, 2010

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 Wilted, 0.3 to 0.1 equals Plants Dying, and less than 0.1 equals Barren Soil.

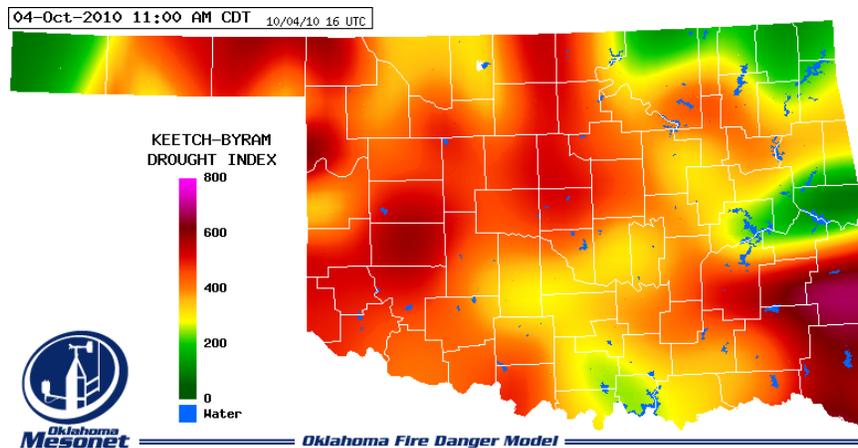
DROUGHT INDICES

Palmer Drought Severity Index ¹					Standardized Precipitation Index ² Through August 2010			
CLIMATE DIVISION	CURRENT STATUS 10/2/2010	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	9-MONTH	12-MONTH
		10/2	9/4					
Northwest	INCIPIENT DROUGHT	-0.98	-0.16	-0.82	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central	UNUSUAL MOIST SPELL	2.07	2.58	-0.51	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Northeast	INCIPIENT MOIST SPELL	0.76	-0.03	0.79	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	MODERATELY WET
West Central	MILD DROUGHT	-1.04	-0.84	-0.20	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Central	MOIST SPELL	1.04	0.05	0.99	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
East Central	MOIST SPELL	1.30	-1.72	3.02	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Southwest	INCIPIENT MOIST SPELL	0.82	0.39	0.43	MODERATELY WET	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	INCIPIENT MOIST SPELL	0.62	-1.47	2.09	MODERATELY DRY	VERY DRY	MODERATELY DRY	NEAR NORMAL
Southeast	MILD DROUGHT	-1.45	-2.77	1.32	NEAR NORMAL	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL

- Two climate divisions are currently experiencing drought conditions, according to the PDSI.
- Three climate divisions have undergone PDSI moisture decreases since September 4.
- Two climate divisions are experiencing near long-term dry conditions, according to the SPI.

Keetch-Byram Drought Fire Index³

MESONET STATION	COUNTY	CLIMATE DIVISION	CURRENT VALUE 10/4/2010	
Talihina	LeFlore	Southeast	674	<ul style="list-style-type: none"> • Stations currently at or above 600 (October 4) = 5 • Stations above 600 on September 8 = 22
Idabel	McCurtain	Southeast	652	
Mt Herman	McCurtain	Southeast	617	



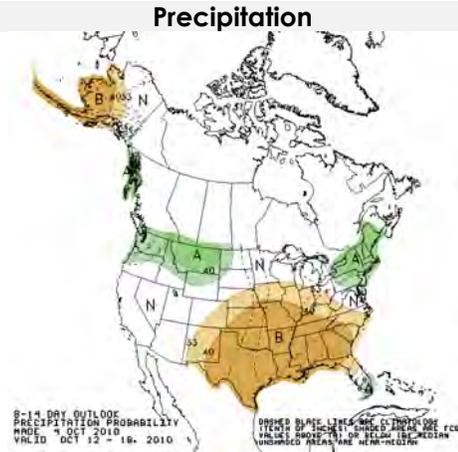
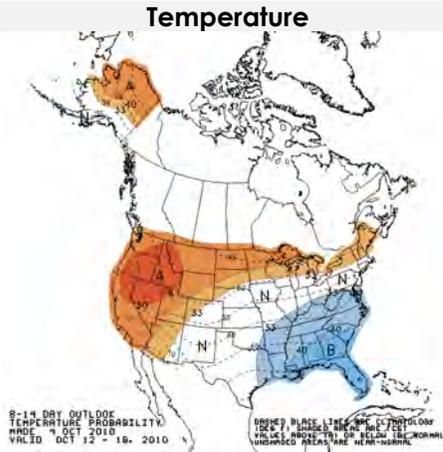
¹ The Palmer Drought Severity Index, the first comprehensive drought index developed in the United States, is calculated based on precipitation, temperature, and soil moisture. Though widely used by government agencies and states to trigger drought relief programs, the PDSI may underestimate or overestimate 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 October 12 – 18, 2010



Regional Drought Summary & Outlook

U.S. Drought Monitor Oklahoma

October 5, 2010
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	66.3	33.7	4.2	0.0	0.0	0.0
Last Week (09/28/2010 map)	66.3	33.7	4.2	0.0	0.0	0.0
3 Months Ago (07/13/2010 map)	92.8	7.2	4.7	0.0	0.0	0.0
Start of Calendar Year (01/01/2010 map)	100.0	0.0	0.0	0.0	0.0	0.0
Start of Water Year (11/01/2009 map)	66.3	33.7	4.2	0.0	0.0	0.0
One Year Ago (10/05/2009 map)	98.0	2.0	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.

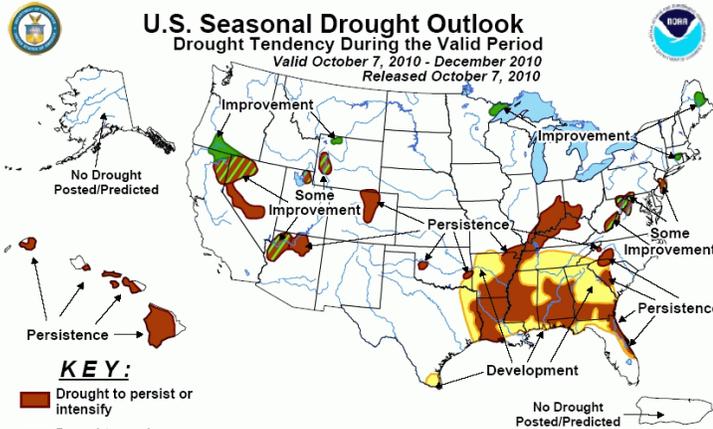
<http://drought.unl.edu/dm>



Released Thursday, October 7, 2010

Author: Laura Edwards, Western Regional Climate Center

U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period Valid October 7, 2010 - December 2010 Released October 7, 2010



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.

October 5 – The latest U.S. Drought Monitor reports that in the south, southwestern Louisiana has been lagging behind normal precipitation for several weeks. In the last 30 to 60 days, rainfall deficits have been steadily increasing. This week, extreme drought is shown in this region to reflect the impacts and low stream flow measurements of five to ten percentile for the last week and month. The western U.S. remains largely unchanged from last week. A small area of moderate drought, D1, was expanded in northeastern Colorado to reflect rainfall deficits over the last two months. Reports of poor rangeland conditions around the area were a factor as well. This area has been slowly degrading.

In the extended outlook for the next six to ten days, cooler temperatures are projected to prevail in the Atlantic states from Massachusetts to Florida. Warmer temperatures than normal will settle in California and the northern states from Washington to Wisconsin. Across the contiguous US, below average precipitation is expected for the bulk of the states, with some exceptions for northern Montana and the Northeast..

According to the Drought Outlook (October 7), the October - December period indicates drought improvement for the Northeast, Upper Midwest, northern Wyoming and southern Oregon, with some improvement to drought conditions over northern Nevada, parts of Utah, western Wyoming, northwest Arizona, the central Appalachians and the mid-Atlantic. Drought conditions are likely to persist and/or intensify in the southeast, the lower Ohio Valley, the southern Plains, central Nevada, eastern Colorado, with drought expected to develop across areas in the southeast not currently in moderate drought conditions.

CROP REPORT

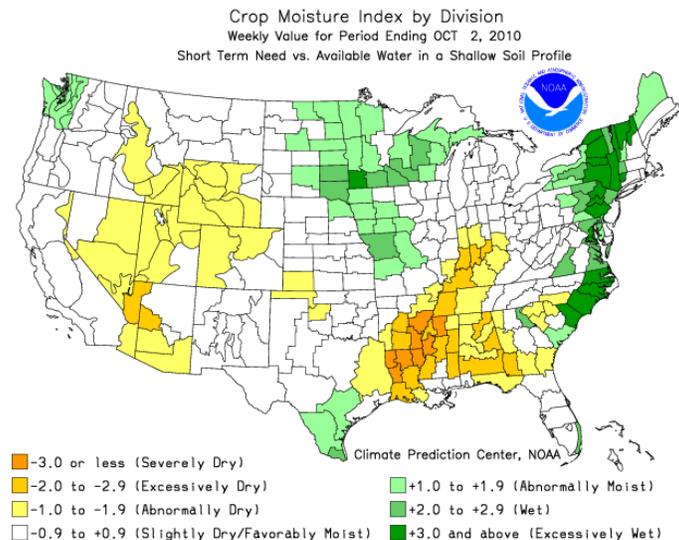
October 4, 2010 – Beautiful fall weather was enjoyed across Oklahoma last week, but the lack of precipitation caused some delay in planting of wheat and other small grains. Average temperatures were mostly in the low sixties, although the highs and lows ranged considerably. Topsoil and subsoil moisture conditions were rated mostly in the adequate to short range with 14 percent and 15 percent rated very short, respectively. As a result of the limited rainfall, there were 6.7 days suitable for field work.

Small grain planting continued last week. However, in some areas the lack of moisture has postponed planting. Wheat seedbed preparation was 90 percent complete by Sunday and 50 percent of wheat was planted, a 20 point increase from the previous week; 23 percent of wheat had emerged. Rye seedbed preparation was virtually complete by the end of the week. Seventy-three percent of rye was planted by Sunday; 42 percent had emerged. Seventy-two percent of oat seedbeds were prepared by Sunday while 21 percent of oats were planted and five percent had emerged. Canola planting was 63 percent complete by Sunday, an increase of 29 points from the previous week, and 20 percent of the canola plants had emerged.

Harvest was underway for all row crops by the end of the week. Ninety-two percent of corn was harvested by week's end, 20 points ahead of the five-year average. Sorghum coloring reached 96 percent complete and 65 percent of sorghum had matured by Sunday, 17 points ahead of normal. The sorghum harvest was 34 percent complete by week's end, 12 points ahead of normal. Forty-eight percent of the soybean crop had matured by Sunday and 19 percent of the crop had been harvested. Eighty-one percent of peanut plants had matured by week's end, 15 points ahead of normal. Twenty-six percent of the peanut crop had been dug by Sunday and 11 percent were combined. Cotton bolls opening reached 95 percent complete, 16 points ahead of normal; 11 percent of cotton acres were harvested by week's end, eight points ahead of the five-year average.

The fourth cutting of alfalfa was 95 percent complete and the fifth cutting reached 54 percent complete by week's end. The second cutting of other hay was 83 percent complete by Sunday.

Pastures and grasses were rated mostly in the good to fair range with 21 percent rated poor or very poor. There continued to be some reports of fall armyworms and stinkbugs. Livestock conditions rated mostly in the good to fair range with eight percent rated excellent.



RESERVOIR STORAGE

- 24 reservoirs are currently operating at less than full capacity (compared to 26 four weeks ago).
- 19 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs					
October 6, 2010					
Lake or Reservoir	Normal Pool Elevation (feet)	Previous Elevation 09/08/2010 (feet)	Current Elevation 10/06/2010 (feet)	Change in Elevation (feet)	Current Flood Control Storage (acre-feet)
North Central					
Fort Supply	2004.00	2003.82	2003.51	(0.31)	(835)
Great Salt Plains	1125.00	1125.32	1125.17	(0.15)	1,427
Kaw*	1008.00	1007.84	1007.99	0.15	(157)
Northeast					
Birch	750.50	749.11	749.73	0.62	(872)
Copan	710.00	709.74	709.82	0.08	(702)
Fort Gibson	554.00	553.72	553.06	(0.66)	(17,578)
Grand*	741.00	741.42	741.03	(0.39)	1,291
Hudson	619.00	619.20	619.06	(0.14)	663
Hulah	733.00	733.92	733.22	(0.70)	720
Keystone*	723.00	723.90	723.04	(0.86)	675
Oologah*	638.00	637.75	638.11	0.36	3,481
Skiatook	714.00	712.49	711.53	(0.96)	(25,329)
West Central					
Canton	1615.40	1614.93	1614.72	(0.21)	(5,316)
Foss	1642.00	1641.28	1640.79	(0.49)	(8,041)
Central					
Arcadia	1006.00	1005.05	1005.77	0.72	(409)
Heyburn	761.50	760.50	760.73	0.23	(667)
Thunderbird	1039.00	1037.78	1037.59	(0.19)	(8,378)
East Central					
Eufaula*	585.00	583.28	584.66	1.38	(31,529)
Tenkiller	632.00	630.61	632.52	1.91	6,812
Southwest					
Fort Cobb	1342.00	1341.30	1341.16	(0.14)	(3,125)
Lugert-Altus	1559.00	1540.14	1539.64	(0.50)	(88,853)
Tom Steed	1411.00	1409.55	1409.10	(0.45)	(11,587)
South Central					
Arbuckle	872.00	871.78	871.97	0.19	(70)
McGee Creek**	175.90	175.66	175.65	(0.01)	(3,031)
Texoma*	616.80	616.38	616.25	(0.13)	(42,185)
Waurika*	951.40	950.93	951.17	0.24	(2,332)
Southeast					
Broken Bow*	602.00	593.55	592.80	(0.75)	(128,176)
Hugo*	404.70	401.83	401.54	(0.29)	(41,744)
Pine Creek*	433.00	431.69	432.62	0.93	(1,037)
Sardis	599.00	597.87	597.58	(0.29)	(18,827)
Wister	478.00	476.89	477.03	0.14	(5,685)

* indicates seasonal pool operation

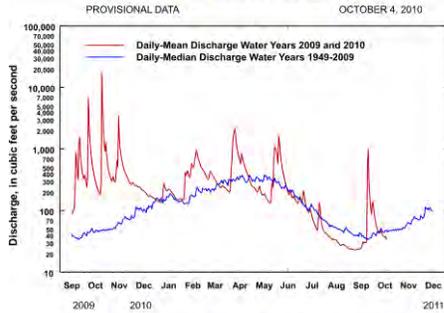
** elevation in meters

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

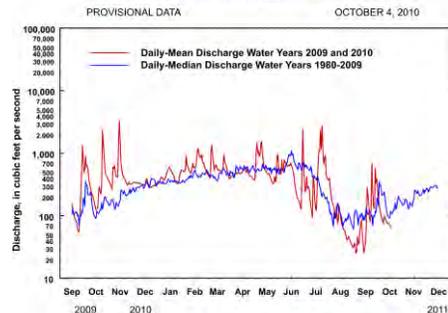


Comparison of daily discharges for water years 2009 and 2010 and period of record

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

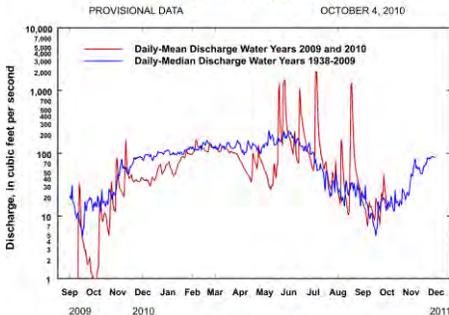


Comparison of daily discharges for water years 2009 and 2010 and period of record

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

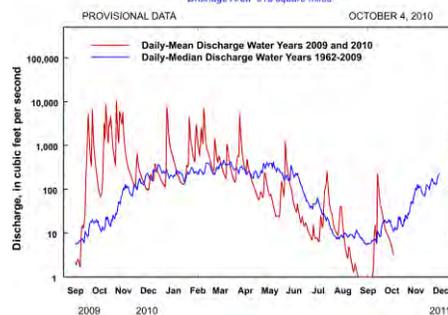


Comparison of daily discharges for water years 2009 and 2010 and period of record

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

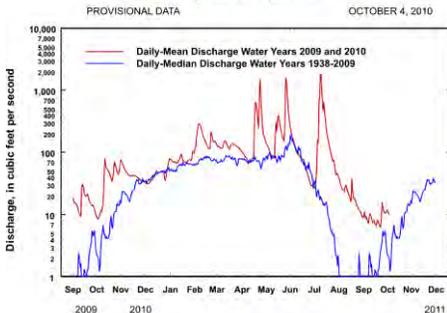


Comparison of daily discharges for water years 2009 and 2010 and period of record

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 7,337 square miles

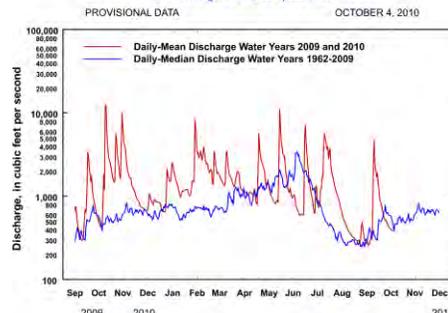


Comparison of daily discharges for water years 2009 and 2010 and period of record

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 2009 and 2010 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.