Oklahoma Water Resources Bulletin
& Summary of Current Conditions

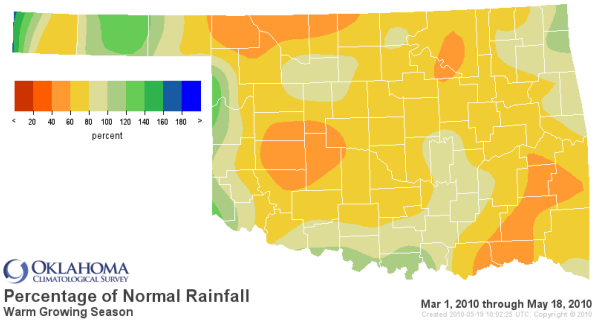
State of Oklahoma OWRB Water Resources Board the water agency

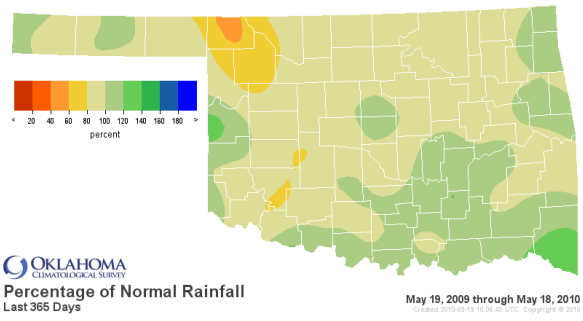
May 20, 2010

PRECIPITATION

Statewide Precipitation

Climate Division	Warm Growing Season March 1 – May 18, 2010 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921	Last 365 Days May 19, 2009 – May 18, 2010 Total Rainfall (inches)	Departure From Normal (inches)	Percent Of Normal	Rank Since 1921
Panhandle	5.06"	-0.38"	93%	34th wettest	18.42"	-2.68"	87%	33rd driest
North Central	5.79"	-2.59"	69%	29th driest	26.11"	-5.54"	82%	28th driest
Northeast	8.45"	-2.40"	78%	30th driest	40.81"	-1.16"	97%	34th wettest
West Central	5.31"	-2.53"	68%	23rd driest	27.59"	-1.50"	95%	36th wettest
Central	7.16"	-2.88"	71%	23rd driest	36.10"	-1.89"	95%	37th wettest
East Central	8.68"	-3.16"	73%	22nd driest	46.10"	+0.01"	100%	36th wettest
Southwest	5.51"	-2.30"	71%	26th driest	27.66"	-3.14"	90%	40th driest
South Central	8.67"	-1.89"	82%	37th driest	42.40"	+1.44"	104%	27th wettest
Southeast	8.05"	-4.62"	64%	10th driest	55.40"	+4.46"	109%	20th wettest
Statewide	7.01"	-2.48"	74%	19th driest	35.46"	-1.23"	97%	38th wettest

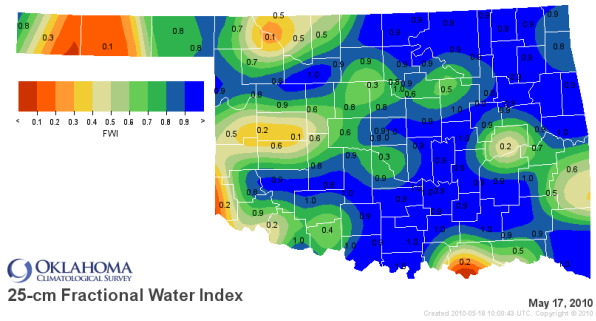


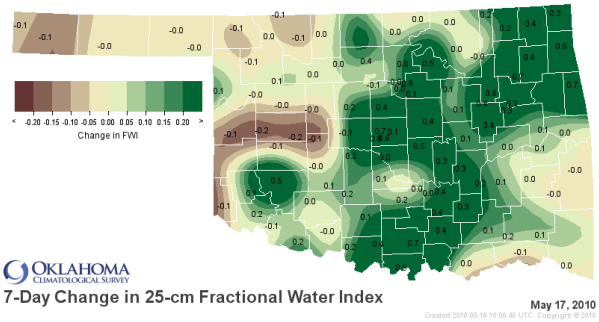


SOIL MOISTURE

Fractional Water Index[1]
May 17, 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 Wilting, 0.3 to 0.1 equals Plants Dying, and less than 0.1 equals Barren Soil.

DROUGHT INDICES

Palmer Drought Severity Index[1] and Standardized Precipitation Index[2] Through April 2010

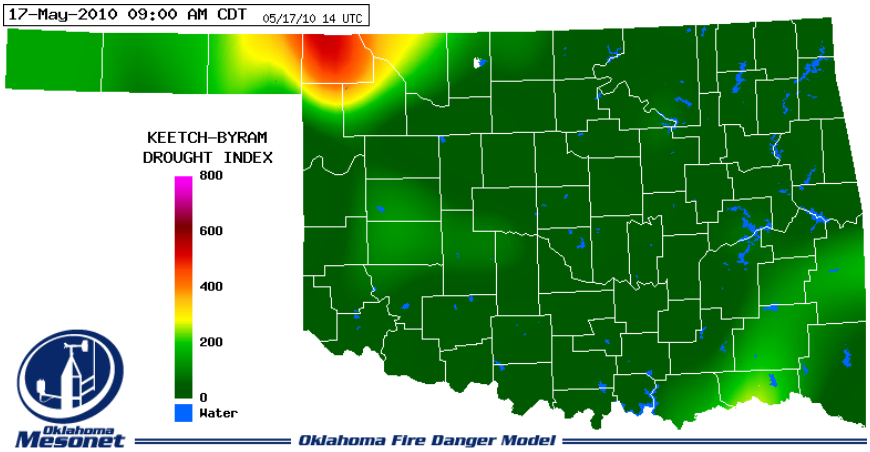
Climate Division	Current Status 5/15/2010	Value 5/15	Value 4/17	Change In Value	3-Month	6-Month	9-Month	12-Month
Northwest	MOIST SPELL	1.22	1.96	**-0.74**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
North Central	UNUSUAL MOIST SPELL	2.03	2.44	**-0.41**	NEAR NORMAL	MODERATELY DRY	NEAR NORMAL	NEAR NORMAL
Northeast	MOIST SPELL	1.05	1.54	**-0.49**	MODERATELY DRY	MODERATELY DRY	MODERATELY WET	NEAR NORMAL
West Central	UNUSUAL MOIST SPELL	2.05	2.59	**-0.54**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Central	UNUSUAL MOIST SPELL	2.16	2.59	**-0.43**	NEAR NORMAL	NEAR NORMAL	MODERATELY WET	NEAR NORMAL
East Central	NEAR NORMAL	0.33	0.76	**-0.43**	MODERATELY DRY	VERY DRY	NEAR NORMAL	NEAR NORMAL
Southwest	MOIST SPELL	1.71	2.15	**-0.44**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
South Central	UNUSUAL MOIST SPELL	2.22	2.41	**-0.19**	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	MODERATELY WET
Southeast	MOIST SPELL	1.32	2.35	**-1.03**	NEAR NORMAL	MODERATELY DRY	VERY WET	VERY WET

- No climate divisions are currently experiencing drought conditions, according to the PDSI.
- All nine climate divisions have undergone PDSI moisture decreases since April 17.
- Four 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 5/17/2010
Buffalo	Harper	Northwest	510
May Ranch	Woods	North Central	309
Beaver	Beaver	Northwest	297

- Stations currently at or above 600 (May 17) = 0
- Stations above 600 on April 19 = 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.

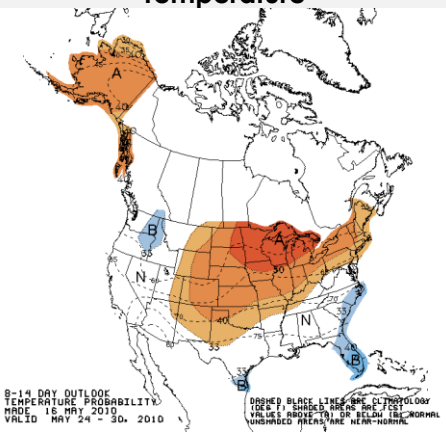
[2] The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while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

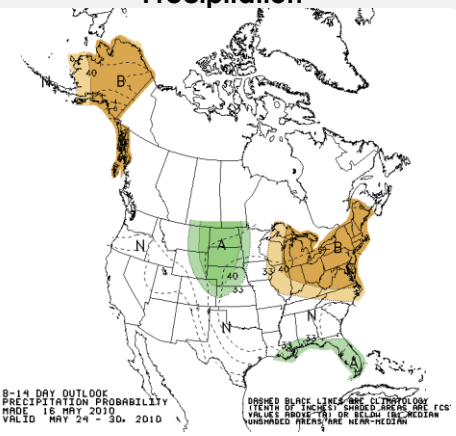
WEATHER/DROUGHT FORECAST

8- to 14-Day Outlook
May 24 – 30, 2010

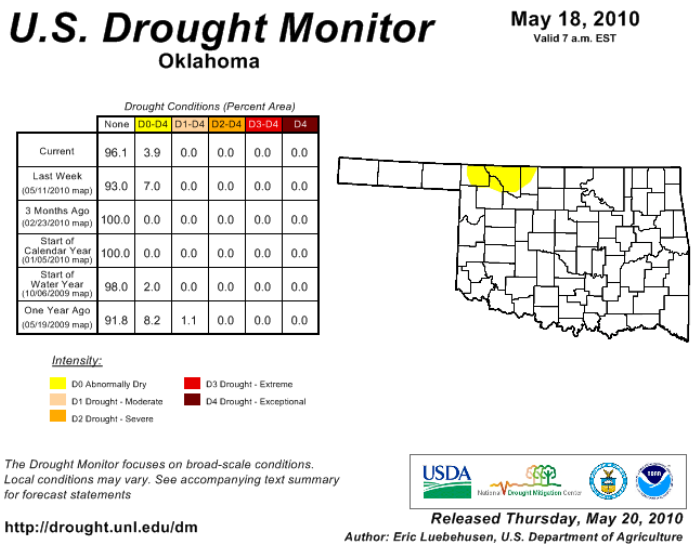
Temperature



Precipitation

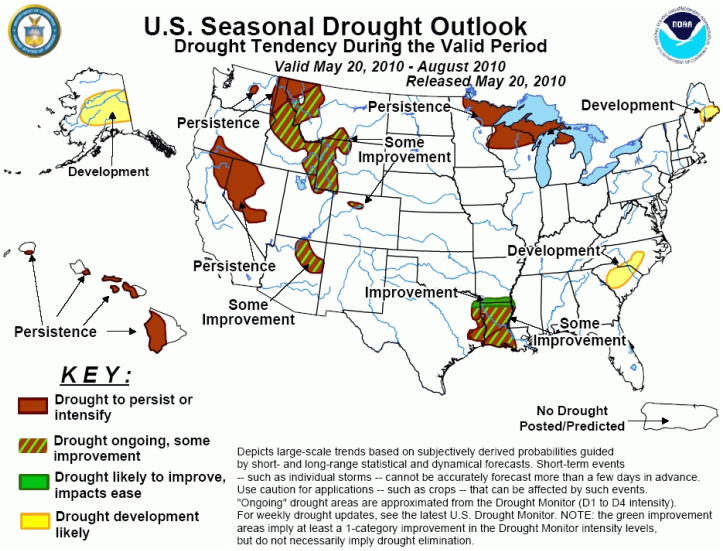


Regional Drought Summary & Outlook



May 18 – The latest U.S. Drought Monitor reports that locally heavy showers (up to 2 inches) in southwestern Oklahoma helped recharge stock ponds and alleviate lingering Abnormal Dryness (D0). Farther north, scattered showers in southern Kansas and north central Oklahoma were sufficient to prevent any further expansion of D0 in this region, although precipitation deficits persist in the short and longer term.

According to the Drought Outlook (May 20), drought across the interior central West is expected to persist through the heart of the drier (and more evaporative) time of year, but late-period monsoonal rains may bring some improvement to drought in northeastern Arizona and northern Colorado. Along the Louisiana/Arkansas border, heavy rains early in the period should lead to improvement, but with no significant indications of dryness or wetness through most of the forecast period farther south, only some improvement is expected in the remainder of the Louisiana and far eastern Texas drought region.



CROP REPORT

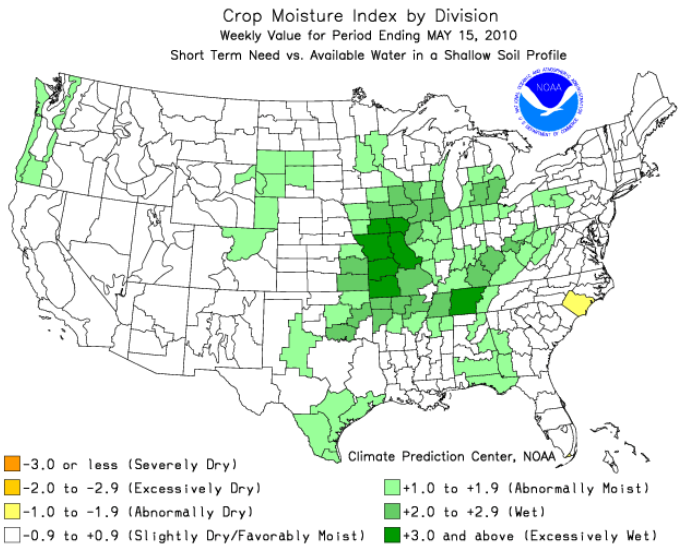
May 17, 2010 – The week began and ended with severe weather, including wind gusts up to 80 mph, softball-sized hail, and numerous tornadoes. At least 24 tornadoes from Monday's storm have been rated by the National Weather Service, ranging from EF-0 to EF-4. Three additional tornadoes struck the Tulsa area early Thursday morning and another severe thunderstorm brought hail to the Oklahoma City area Sunday night. However, these and other storms brought much rainfall to many areas of the state. Temperatures also varied widely with highs in the 80s and 90s to a low of 33 degrees in Boise City on Thursday. Topsoil and subsoil conditions improved from the previous week with 21 percent of topsoil and 9 percent of subsoil now rated as surplus. Overall, wet conditions allowed only 3.7 days suitable for field work.

Conditions continued to be rated mostly in the good to fair range for all three crops. Wheat headed reached 95 percent complete, two points behind normal, while 41 percent of wheat was in the soft dough stage of development by week's end, 13 points behind the five-year average. Forty two percent of the rye crop was in the soft dough stage by Sunday, a 22 point increase from the prior week, but still 33 points behind normal. Oats jointing reached 90 percent complete, only one point behind normal. Oats headed increased 13 points to reach 46 percent complete, while 10 percent of oats are now in the soft dough stage of development.

The wet conditions limited fieldwork and planting while benefiting the crop already planted. Corn planted reached 95 percent complete by Sunday and 76 percent of the corn crop had emerged by week's end, both four points ahead of the five-year average. Seedbed preparation for sorghum is at 77 percent complete, only one point ahead of the week prior; 27 percent of the sorghum crop was planted by week's end. Soybean seedbed preparation also increased one point from the previous week to 70 percent complete, while soybeans planted reached 31 percent complete. Peanut seedbed preparations were 93 percent complete, just one point behind normal, while peanuts planted reached 57 percent complete, 18 points ahead of normal. Cotton seedbed preparations continued with 93 percent complete, on track with the five-year average. Cotton planted increased seven points, but was three points behind normal. The watermelon crop reached 82 percent planted, a 27 point increase from the previous week, and 15 points ahead of the five-year average.

Rainfall limited hay baling in some areas but overall alfalfa hay cutting increased 16 points to 73 percent, 15 points ahead of normal. The first cutting of other hay increased six points to 29 percent complete, three points ahead of normal. Alfalfa and other hay were mostly rated in the good to fair range.

Pasture and range conditions were rated mostly in the good to fair range, while spraying and fertilization continued. Livestock conditions rated mostly in the good to fair range.



RESERVOIR STORAGE

- 6 reservoirs are currently operating at less than full capacity (compared to 9 four weeks ago).
- 9 reservoirs have experienced lake level decreases.

Storage in Selected Oklahoma Lakes & Reservoirs
May 17, 2010

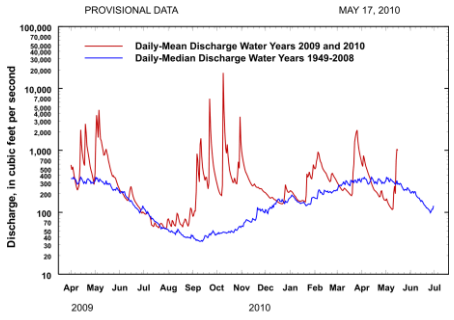
Lake or Reservoir	Normal Pool Elevation (feet)	Previous Elevation 04/20/2010 (feet)	Current Elevation 05/17/2010 (feet)	Change in Elevation (feet)	Current Flood Control Storage (acre-feet)
North Central					
Fort Supply	2004.00	2004.47	2004.60	0.13	1,126
Great Salt Plains	1125.00	1125.37	1125.48	0.11	4,028
Kaw*	1010.00	1009.96	1011.95	1.99	33,952
Northeast					
Birch	750.50	750.85	750.95	0.10	515
Copan	710.00	710.21	711.63	1.42	9,250
Fort Gibson	554.00	552.77	552.52	(0.25)	(27,340)
Grand*	743.10	742.06	746.89	4.83	177,722
Hudson	619.00	619.59	620.77	1.18	19,821
Hulah	733.00	734.02	735.90	1.88	16,503
Keystone*	723.00	724.09	724.61	0.52	29,693
Oologah*	638.00	637.60	640.90	3.30	94,911
Skiatook	714.00	714.25	714.12	(0.13)	1,313
West Central					
Canton	1615.40	1615.60	1615.72	0.12	2,540
Foss	1642.00	1641.70	1641.89	0.19	(735)
Central					
Arcadia	1006.00	1007.25	1007.31	0.06	2,455
Heyburn	761.50	762.23	762.17	(0.06)	653
Thunderbird	1039.00	1039.88	1039.38	(0.50)	2,318
East Central					
Eufaula*	585.00	585.57	586.52	0.95	148,918
Tenkiller	632.00	632.30	632.75	0.45	9,825
Southwest					
Fort Cobb	1342.00	1342.25	1342.32	0.07	1,246
Lugert-Altus	1559.00	1546.08	1550.30	4.22	(47,573)
Tom Steed	1411.00	1407.29	1407.23	(0.06)	(22,081)
South Central					
Arbuckle	872.00	873.18	873.39	0.21	3,328
McGee Creek**	175.90	176.19	175.97	(0.22)	849
Texoma*	617.10	614.98	618.16	3.18	82,901
Waurika*	951.40	952.09	951.72	(0.37)	3,244
Southeast					
Broken Bow*	601.80	599.22	601.45	2.23	(4,521)
Hugo*	406.00	406.35	406.33	(0.02)	4,668
Pine Creek*	442.50	441.28	442.25	0.97	(1,185)
Sardis	599.00	599.13	599.05	(0.08)	693
Wister	478.00	478.24	479.62	1.38	10,626

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

STREAMFLOW CONDITIONS

Baron Fork at Eldon

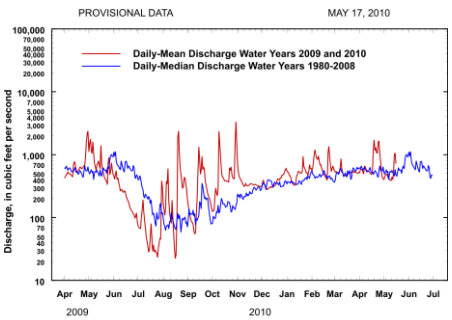
Baron Fork at Eldon, Oklahoma
Station No. 07197000 Northeast Oklahoma
Drainage Area 307 square miles



Comparison of daily discharges for waters year 2009 and 2010
and period of record
Data from U.S. Geological Survey

Canadian River at Purcell

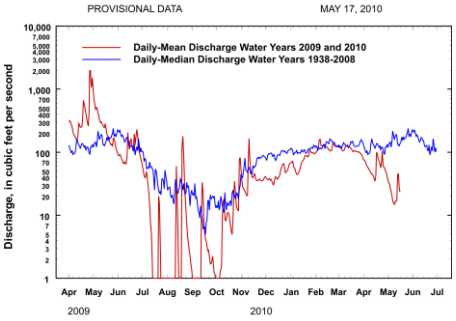
Canadian River at Purcell, Oklahoma
Station No. 07229200 Central Oklahoma
Drainage Area 25,939 square miles



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
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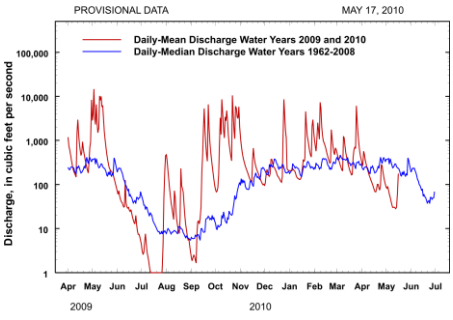
Data from U.S. Geological Survey

Glover River near Glover

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



Comparison of daily discharges for water years 2009 and 2010
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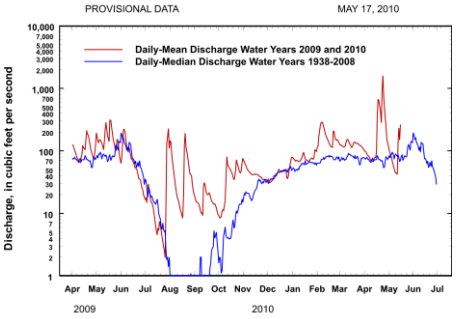
Data from U.S. Geological Survey

North Fork of the Red River near Carter

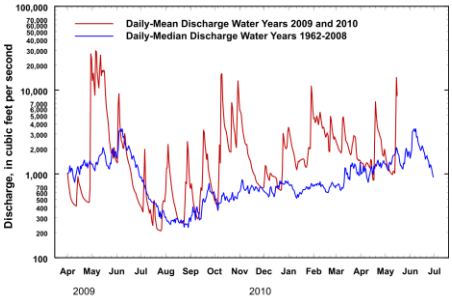
North Fork of the Red River near Carter, Oklahoma
Station No. 07301500 Southwest Oklahoma
Drainage Area 2,337 square miles



Comparison of daily discharges for water years 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
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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.
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