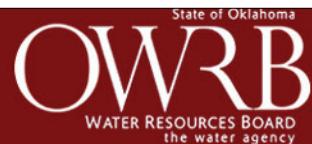


# Oklahoma Water Resources Bulletin & Summary of Current Conditions

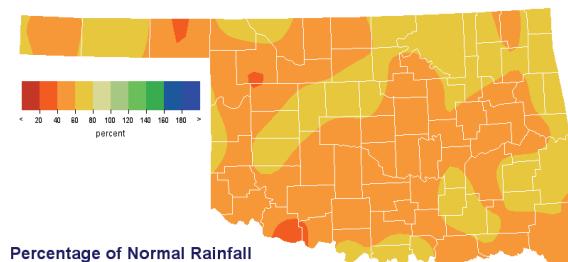
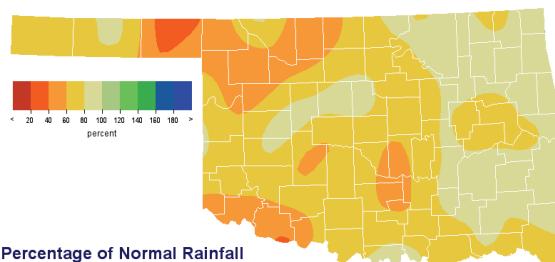


July 26, 2006

## PRECIPITATION

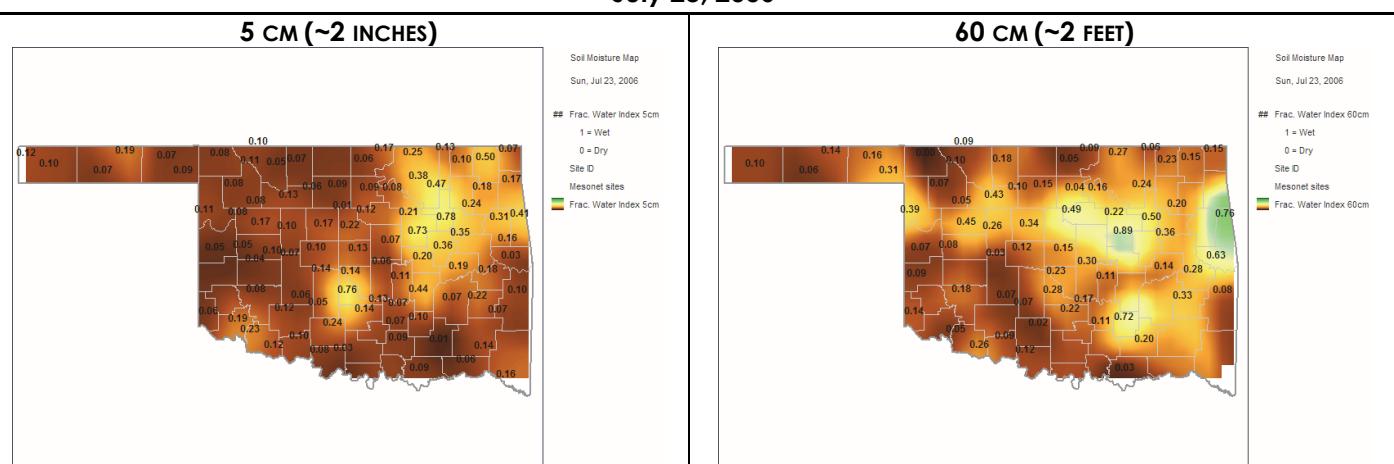
### Preliminary Statewide Precipitation

Climate Division (#)	Warm Growing Season March 1—July 24, 2006				Water Year October 1, 2005—July 24, 2006			
	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	6.78"	-4.96"	58%	7th driest	8.91"	-7.23"	55%	6th driest
North Central	10.60"	-6.01"	64%	11th driest	14.02"	-10.78"	57%	5th driest
Northeast	17.42"	-2.79"	86%	26th driest	21.31"	-11.99"	64%	7th driest
West Central	11.20"	-4.21"	73%	18th driest	13.54"	-9.32"	59%	5th driest
Central	13.46"	-5.49"	71%	17th driest	16.27"	-14.40"	53%	2nd driest
East Central	17.09"	-4.39"	80%	25th driest	21.24"	-16.35"	57%	3rd driest
Southwest	9.29"	-6.46"	59%	8th driest	11.73"	-12.50"	48%	1st driest
South Central	13.25"	-6.26"	68%	16th driest	18.11"	-15.40"	54%	3rd driest
Southeast	19.00"	-3.80"	83%	26th driest	26.04"	-16.81"	61%	4th driest
<b>Statewide</b>	<b>13.09"</b>	<b>-4.97"</b>	<b>72%</b>	<b>11th driest</b>	<b>16.72"</b>	<b>-12.78"</b>	<b>57%</b>	<b>2nd driest</b>



## SOIL MOISTURE

### Fractional Water Index<sup>1</sup> July 23, 2006



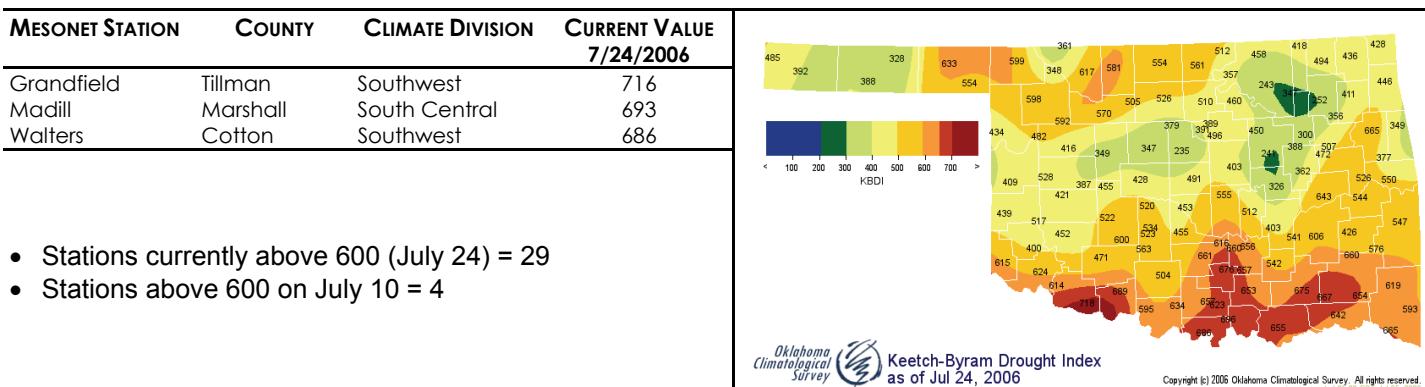
<sup>1</sup> The Fractional Water Index ranges from very dry soil having a value of 0 to soil at field capacity illustrated by a value of 1. Specifically, 1.0 to 0.8 equals Enhanced Growth, 0.8 to 0.5 equals Limited Growth, 0.5 to 0.3 equals Plants Wilting, 0.3 to 0.1 equals Plants Dying, and less than 0.1 equals Barren Soil.

## DROUGHT INDICES

Palmer Drought Severity Index <sup>1</sup>				Standardized Precipitation Index <sup>2</sup> Through June 2006				
CLIMATE DIVISION (#)	CURRENT STATUS 7/22/2006	VALUE		CHANGE IN VALUE	3-MONTH	6-MONTH	9-MONTH	12-MONTH
		7/22	7/8					
Northwest (1)	EXTREME DROUGHT	-4.04	-3.45	<b>-0.59</b>	VERY DRY	VERY DRY	MODERATELY DRY	MODERATELY DRY
North Central (2)	SEVERE DROUGHT	-3.64	-3.13	<b>-0.51</b>	NEAR NORMAL	MODERATELY DRY	MODERATELY DRY	NEAR NORMAL
Northeast (3)	SEVERE DROUGHT	-3.70	-3.89	<b>0.19</b>	NEAR NORMAL	NEAR NORMAL	VERY DRY	MODERATELY DRY
West Central (4)	SEVERE DROUGHT	-3.64	-3.21	<b>-0.43</b>	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL	NEAR NORMAL
Central (5)	EXTREME DROUGHT	-4.52	-4.34	<b>-0.18</b>	MODERATELY DRY	MODERATELY DRY	VERY DRY	MODERATELY DRY
East Central (6)	EXTREME DROUGHT	-4.54	-4.41	<b>-0.13</b>	NEAR NORMAL	NEAR NORMAL	VERY DRY	VERY DRY
Southwest (7)	EXTREME DROUGHT	-4.86	-4.51	<b>-0.35</b>	MODERATELY DRY	VERY DRY	VERY DRY	MODERATELY DRY
South Central (8)	EXTREME DROUGHT	-4.55	-3.92	<b>-0.63</b>	MODERATELY DRY	NEAR NORMAL	VERY DRY	NEAR NORMAL
Southeast (9)	EXTREME DROUGHT	-4.42	-4.06	<b>-0.36</b>	NEAR NORMAL	NEAR NORMAL	VERY DRY	VERY DRY

- All nine climate divisions are currently experiencing drought conditions.
- Eight climate divisions have undergone PDSI moisture decreases since July 8.

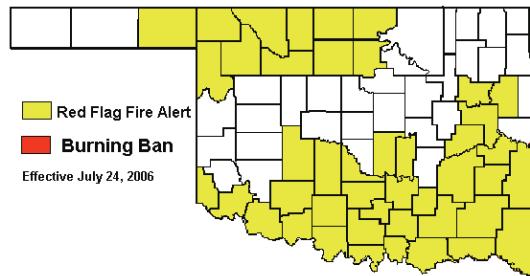
## Keetch-Byram Drought Fire Index<sup>3</sup>



- Stations currently above 600 (July 24) = 29
- Stations above 600 on July 10 = 4

## Statewide Wildfire Preparedness

As of July 24, a Red Flag Fire Alert is in effect for much of northern, southern and eastern Oklahoma where the fire danger is very high to extreme. Dry, grassy fuels will ignite easily when the humidity is low and the temperature and winds are high. Land bordering or near the Red Flag Fire Alert counties may have similar conditions requiring additional caution with outdoor burning. Officials urge citizens to avoid burning anything outdoors when winds exceed 20 mph and extreme caution is advised when conducting any outdoor burning.



<sup>1</sup> 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.

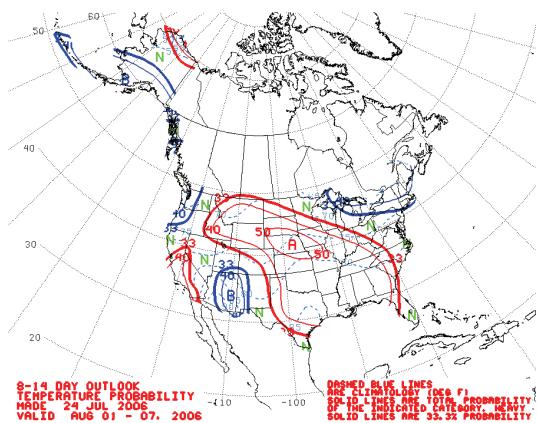
<sup>2</sup> The Standardized Precipitation Index, more sensitive than the PDSI, provides a comparison of precipitation over a specified period with precipitation totals from that same period for all years included in the historical record. The 3-month SPI provides a seasonal estimation of precipitation while the 6-month SPI can be very effective in showing precipitation over distinct seasons.

<sup>3</sup> 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.

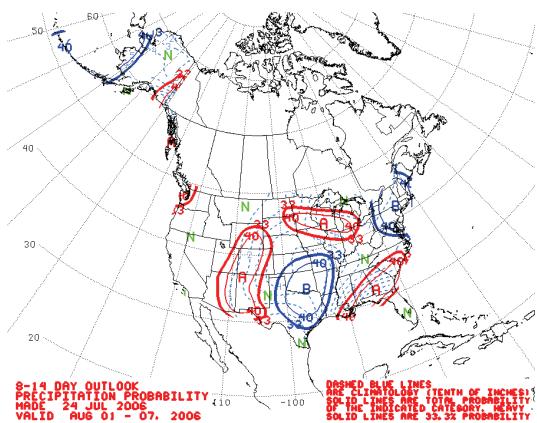
## WEATHER/DROUGHT FORECAST

**8 to 14-Day Forecast**  
August 1-7, 2006

### Temperature

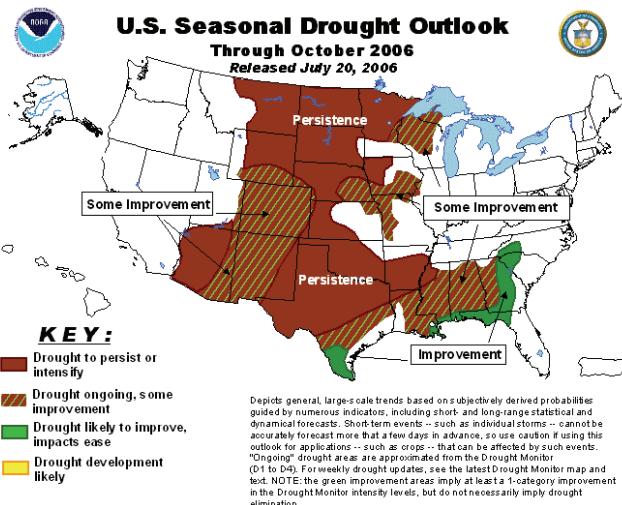
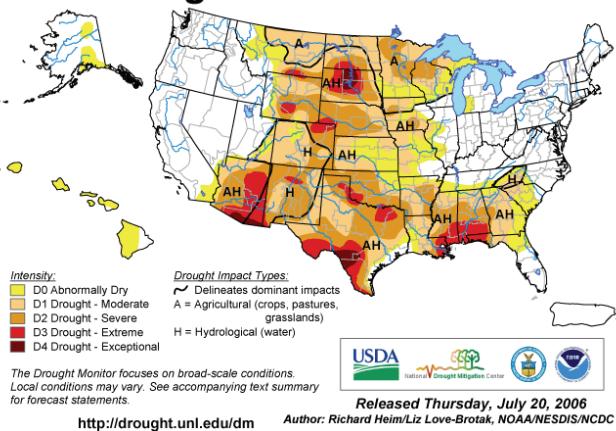


### Precipitation



### U.S. Drought Monitor

July 18, 2006  
Valid 8 a.m. EDT



### Drought Summary & Outlook—The Plains:

July 18—Widespread rain fell over eastern Kansas, northeast Oklahoma, southeast Missouri, northwest Indiana, and parts of Illinois. Otherwise, a dry pattern was the rule across the Plains where the lack of rain and oppressive heat ravaged farm and ranch land. The heat wave and dry weather came at a critical time for crops in the midwest. Corn is in the midst of its critical reproductive stages. Heat and moisture stress during this period leads to significant yield loss. With the exception of Kansas, the USDA rated 80% or more of the topsoil as short or very short (dry or very dry) across the Great Plains States, which amounted to increases of 10 to 20% compared to last week. Fifty percent or more of the pasture and range land was in poor to very poor condition across the Plains states (except for Kansas). In central Texas, inflows into the Colorado River since the first of the year have been tracking below those of the 1950s drought of record, with many tributaries reporting no flow. In parts of northwest Oklahoma, wells were running dry and most farm ponds and many streams were dry. D0 expanded in east central Wisconsin. D1 and D2 expanded from Minnesota and Wisconsin to Montana, from North Dakota to Nebraska, and across parts of Oklahoma and Texas.

According to the Drought Outlook, the ongoing drought should persist in Oklahoma and throughout much of the surrounding region. The summer monsoon rains are likely to offer short-term relief to the southwest, Colorado, and southern Wyoming although relief for water supplies will likely need to wait until next winter's snow season, at the earliest, since snow melt is the major source for water in the western U.S.

## CROP REPORT

July 24—Oklahoma was marred with another week of extremely high temperatures and virtually no precipitation. These conditions continued to take a toll on current crop conditions. Six of the nine districts had average maximum temperatures that reached triple digits by week's end. Little rainfall was reported for much of the state. Producers were in need of a break from the hot weather to help aid in crop and forage development. As a result of triple digit temperatures and no rainfall, topsoil and subsoil moisture supplies took another downward plunge last week. Ninety-five percent of both topsoil and subsoil were rated in the short to very short range. There were 6.7 days suitable for fieldwork.

Plowing of small grains was coming to a close last week with rye leading at 94 percent complete. Seedbed preparations for the 2007 small grain crops have begun in some areas of the state. As hot temperatures continued, cotton and soybeans were the most impacted by the drought-like conditions. Corn, sorghum and peanuts were holding their own. Corn in the silking stage of development was near completion at 98 percent while half the crop had reached the dough stage. Sorghum headed was 16 points below normal at 17 percent and some of the heads were beginning to turn colors. Peanuts pegging was winding down while pods were set on half the crop. Cotton setting bolls jumped 21 points from last week to 30 percent.

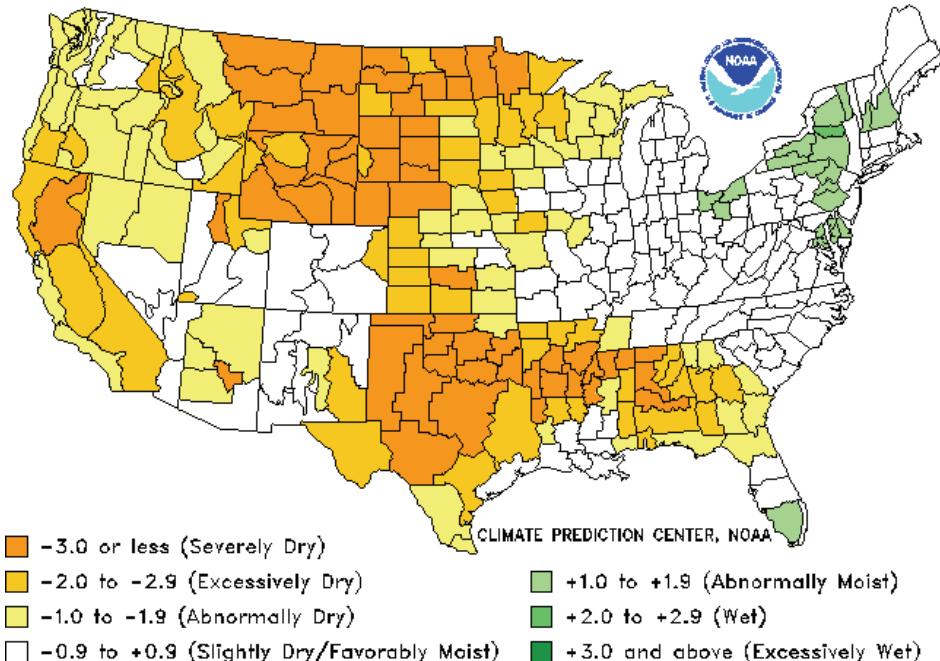
Alfalfa hay remained in mostly fair to poor condition while other hay continued in mostly poor to very poor condition. Extremely dry conditions and hot weather continued to plague producers as they were cutting what little hay was left in the fields. Producers were experiencing below average yields and many were baling anything they could to help offset the low hay supplies due to the drought. Alfalfa third cuttings were 82 percent complete, while other hay first cuttings were slightly below normal at 87 percent. Watermelon harvest was well ahead of normal at 78 percent. Peaches continued with a light fruit set.

Pasture conditions fell from the previous week with two-thirds of the pastures in Oklahoma in poor to very poor condition. Pastures were burning up from the extreme hot temperatures last week. Some pastures have been grazed to the bare ground. High temperatures and lack of rain continued to cause stress on native pastures. Livestock were rated in mostly fair-to-poor condition. A large number of ranchers continued supplemental feeding of their cattle. Hay supplies continued to be very limited for cattle and, partly because of this, cattle marketings remained high.

Crop Moisture Index by Division

Weekly Value for Period Ending 22 JUL 2006

Short Term Need vs. Available Water in 5 Ft Profile



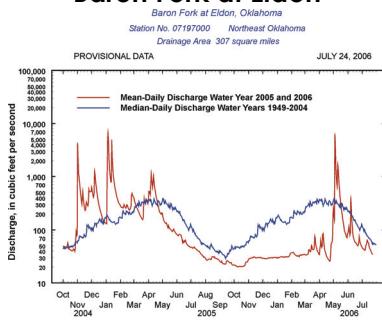
## RESERVOIR STORAGE

- 1.1 percent decrease (91.0%) in total storage from that recorded on July 10 (92.1%)
- 22 reservoirs have experienced lake level decreases
- 22 reservoirs are currently operating at less than full capacity (compared to 22 two weeks ago)
- 3 reservoirs remain below 80 percent of their total conservation storage

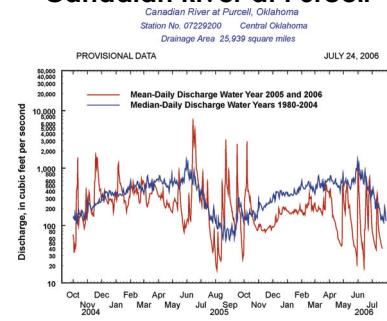
Storage in Selected Oklahoma Lakes & Reservoirs			
July 24, 2006			
Climate Division Lake or Reservoir	Conservation Storage (acre-feet)	Present Storage (acre-feet)	Percent of Conservation Storage
<b>North Central</b>			
Fort Supply	13,900	12,570	90.4
Great Salt Plains	31,420	28,071	89.3
Kaw*	411,871	411,871	100.0
<b>Regional Totals/Averages</b>	<b>457,191</b>	<b>452,512</b>	<b>99.0</b>
<b>Northeast</b>			
Birch	19,225	18,619	96.8
Copan	34,634	32,741	94.5
Fort Gibson	365,200	344,340	94.3
Grand	1,672,000	1,613,399	96.5
Hudson	200,300	200,300	100.0
Hulah	22,565	22,565	100.0
Keystone	555,019	555,019	100.0
Oologah	552,219	552,219	100.0
Skiatook	322,700	259,998	80.6
<b>Regional Totals/Averages</b>	<b>3,743,862</b>	<b>3,599,200</b>	<b>96.1</b>
<b>West Central</b>			
Canton	111,310	94,678	85.1
Foss	165,480	144,352	87.2
<b>Regional Totals/Averages</b>	<b>276,790</b>	<b>239,030</b>	<b>86.4</b>
<b>Central</b>			
Arcadia	27,520	27,520	100.0
Heyburn	7,105	6,390	89.9
Thunderbird	119,600	88,700	74.2
<b>Regional Totals/Averages</b>	<b>154,225</b>	<b>122,610</b>	<b>79.5</b>
<b>East Central</b>			
Eufaula*	2,432,591	2,087,714	85.8
Tenkiller	654,100	639,032	97.7
<b>Regional Totals/Averages</b>	<b>3,086,691</b>	<b>2,726,746</b>	<b>88.3</b>
<b>Southwest</b>			
Fort Cobb	80,010	76,997	96.2
Lugert-Altus	132,830	37,430	28.2
Tom Steed	88,970	46,179	51.9
<b>Regional Totals/Averages</b>	<b>301,810</b>	<b>160,606</b>	<b>53.2</b>
<b>South Central</b>			
Arbuckle	72,400	69,305	95.7
McGee Creek	113,930	113,930	100.0
Texoma*	2,701,706	2,419,597	89.6
Waurika*	190,200	152,346	80.1
<b>Regional Totals/Averages</b>	<b>3,078,236</b>	<b>2,755,178</b>	<b>89.5</b>
<b>Southeast</b>			
Broken Bow*	958,180	875,648	91.4
Hugo*	198,067	198,067	100.0
Pine Creek*	68,446	68,446	100.0
Sardis	274,330	266,832	97.3
Wister	60,162	58,087	96.6
<b>Regional Totals/Averages</b>	<b>1,559,185</b>	<b>1,467,080</b>	<b>94.1</b>
<b>State Totals</b>	<b>12,657,990</b>	<b>11,522,962</b>	<b>91.0</b>

## STREAMFLOW CONDITIONS

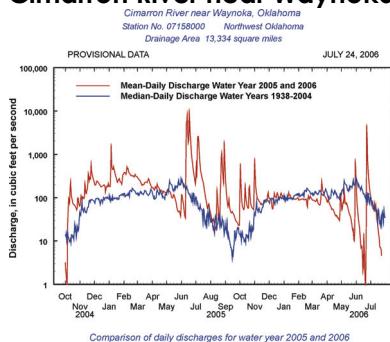
### Baron Fork at Eldon



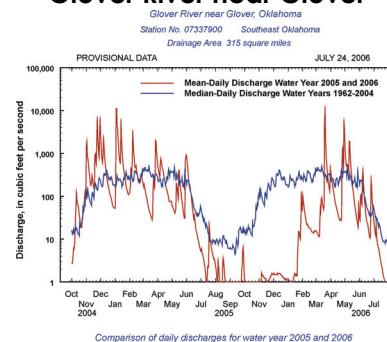
### Canadian River at Purcell



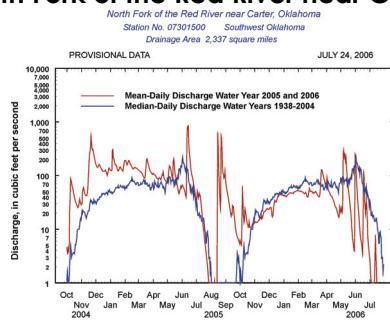
### Cimarron River near Waynoka



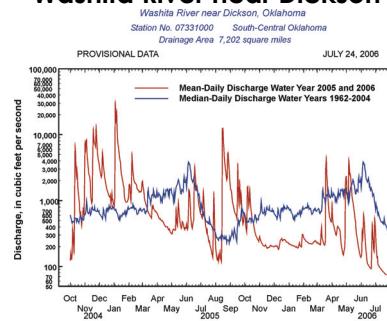
### Glover River near Glover



### North Fork of the Red River near Carter



### Washita River near Dickson



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.state.ok.us](http://www.owrb.state.ok.us) and <http://www.mesonet.ou.edu/public>.