

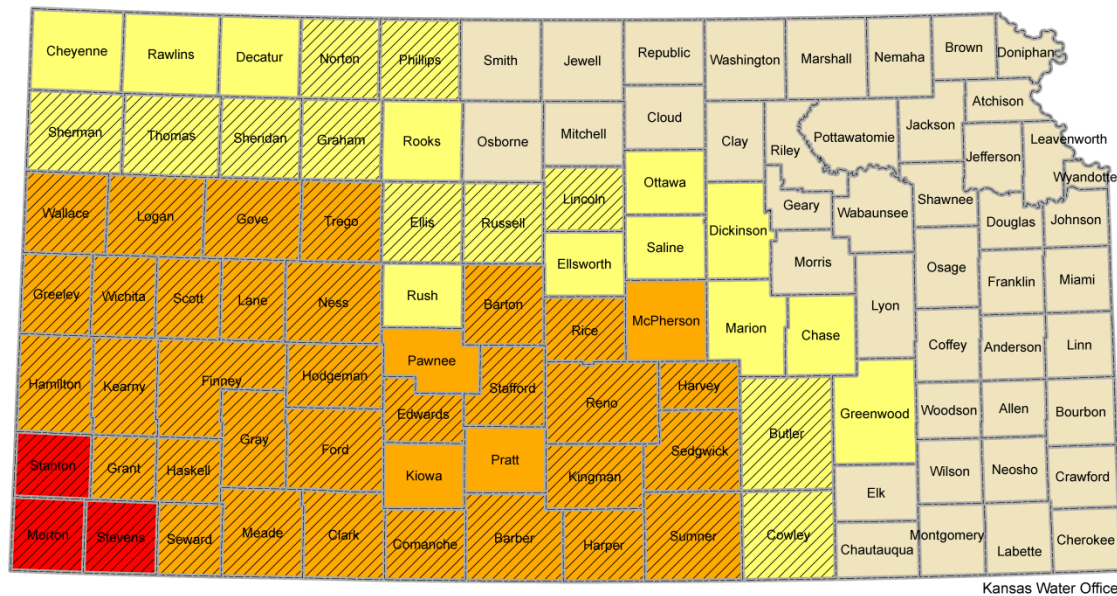
KANSAS WEEKLY DROUGHT UPDATE- JULY 18, 2011

Summary of Changes:





- All of Clark, Comanche, and Barber Counties, and much of Kingman, Pratt, Kiowa, Clark, Meade and Seward Counties are in D3 or D4 designations on the U.S. Drought Monitor.
- There has been an expansion of counties in eastern Kansas as abnormally dry (D0), or in moderate to severe drought (D1 – D2).
- The USGS streamflow conditions map indicate the southern half of the state had below normal stream flow (24% or less) for the past week.
- Orders on over 90 water rights/permits were in effect last week that require water rights/permits to cease pumping, in order to meet Minimum Desirable Streamflow. The orders are clustered in the south central counties.
- Cities in south central Kansas are beginning to feel the impact of drought to their water supplies. The City of Augusta (Butler County) which supplies water to Mulvane and Butler RWD4, and the City of Hesston (Harvey County) have implemented mandatory water use restrictions. The City of Goddard (Sedgwick County) has issued a water warning requesting voluntary water use restrictions.
- The outlook for the next few weeks is for minimal relief to the current pattern.

Drought conditions continue to expand in size and severity in Kansas. All regions of the state had triple digit temperatures, with the week's highest temperature of 114 degrees Fahrenheit at Medicine Lodge, (Barber County) on July 9th. Hazards Assessment predicts extreme temperatures through July 29th. A total of 62 counties are under state drought stages, with three counties in an emergency stage. A total of 46 counties are designated federal agricultural disasters due to drought, high winds and excessive temperatures and are now eligible for federal programs, along with the 20 counties contiguous to these counties. USDA agricultural disaster declarations are based on anticipated crop losses, while Kansas drought stages are based primarily on water resource conditions. Counties under Kansas drought stages and/or Federal Agricultural Disaster Declarations are shown on the map below.

Kansas Drought Conditions
As of July 1, 2011



Kansas Water Office

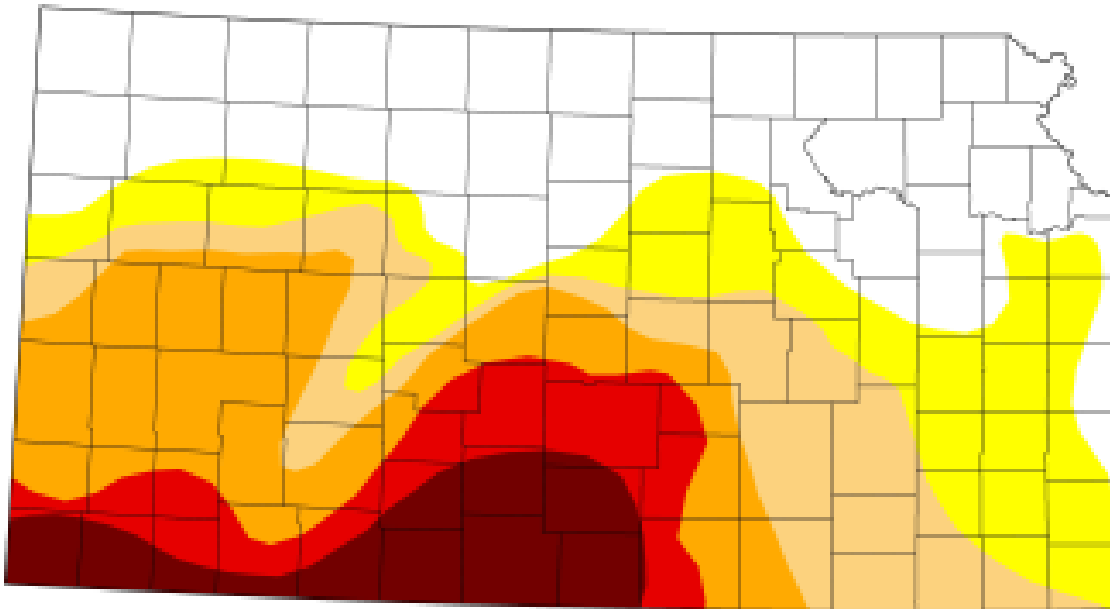
-  Federal Designated Agricultural Disaster Due to Drought
-  Kansas Drought Emergency
-  Kansas Drought Warning
-  Kansas Drought Watch

Public Water Supply Conditions

July 5, 2011 - Augusta (Butler County) declared a water emergency due to drought. Water sources for Augusta Lake and Santa Fe Lake are at historic lows; the El Dorado Lake supply pipeline is running close to capacity. Lawn watering restrictions were enacted July 11, 2011 by cities of Augusta and Mulvane. Augusta supplies Mulvane, Butler RWD4, and has an emergency connection to Butler RWD 6 and Sedgwick RWD.

On July 15th, City of Goddard (Sedgwick County) issued a water warning and asked residents to voluntarily conserve water. The City of Hesston (Harvey County) also issued mandatory restrictions last week on residential yard use (lawn and car washing). Hesston is experiencing declines in the city's water wells and the lowered ability to keep up with demand.

US Drought Monitor – July 12, 2011



Intensity:

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

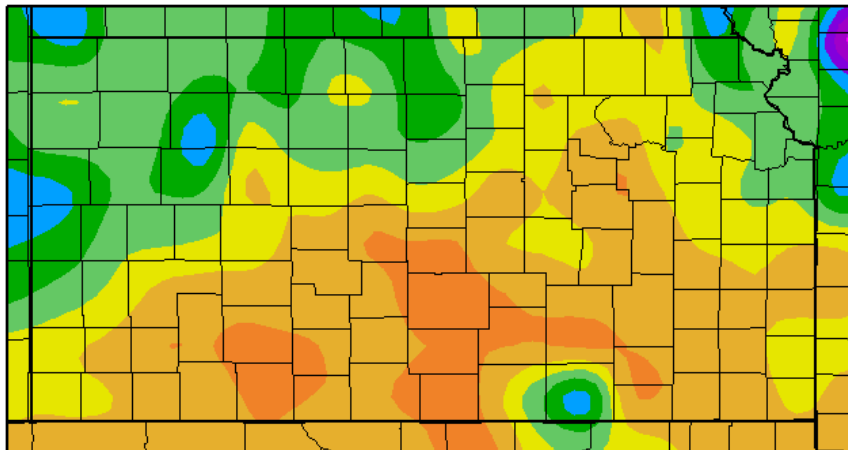
<http://drought.unl.edu/dm>



Departure from Normal Precipitation (in) 6/18/2011 – 7/17/2011

Recent Precipitation

Through July 15th, southwest Kansas is 7.03 inches below normal (1971- 2000) or 37% of normal. South-central Kansas was 9.02 inches shy, or 41% of normal. The lowest precipitation in June was Dodge City (Ford County) with 0.32 inches. Arkansas City, (Cowley County) had the most rain last week with 4.5 inches, July 13th. June 2011 ranks as the 10th driest on record (1895-2010) in Kansas with a statewide average total precipitation of 2.01 inches. This is 48 percent of normal.



Generated 7/18/2011 at HPRCC using provisional data.

Regional Climate Centers

Burn Bans Update

Most counties require permits prior to a burn and are controlling burns through that process. Counties that have burn bans in effect at this time include Barton, Clark, Harper, Lane, Meade, Pawnee and Seward. Other counties have had bans that expired, or have been repealed. A county issue a ban as they deem necessary at any time.

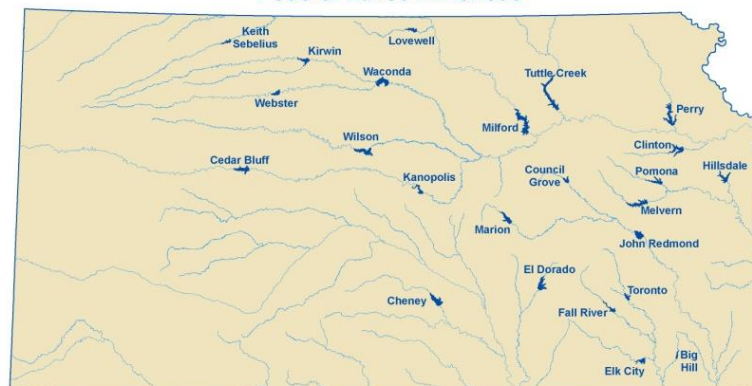
Reservoir Conditions

Kansas Federal Reservoirs			
Reservoir	Top of Multipurpose or Conservation Pool (Feet MSL)	Multipurpose/Conservation Pool Elevation (Feet MSL) 7/12/2011	Change from Top of Pool (Feet)
Kansas River Basin			
Norton ¹	2304.3	2296.95	-7.33
Harlan County, NE	1946	1946.72	0.72
Lovewell ¹	1582.6	1585.44	2.84
Milford ¹	1144.4	1154.87	10.47
Cedar Bluff	2144	2128.19	-15.81
Kanopolis ¹	1463	1465.13	2.13
Wilson ¹	1516	1516.85	0.85
Webster ¹	1892.5	1889.24	-3.26
Kirwin ¹	1729.3	1729.74	0.44
Waconda ¹	1455.6	1461.84	6.24
Tuttle Creek ¹	1075	1087.86	12.86
Perry ¹	891.5	895.75	4.25
Clinton ¹	875.5	875.62	0.12
Melvern ¹	1036	1036.01	0.01
Pomona ¹	974	974.99	0.99
Hillsdale ¹	917	917.34	0.34
Arkansas River Basin			
Cheney	1421.6	1419.93	-1.67
El Dorado	1339	1337.59	-1.41
Toronto ¹	901.5	901.93	0.43
Fall River ¹	948.5	949.17	0.67
Elk City ¹	796	794.22	-1.78
Big Hill	858	857.3	-0.70
Council Grove ¹	1274	1273.55	-0.45
Marion ¹	1350.5	1348.47	-2.03
John Redmond ¹	1039	1037.95	-1.05

1. Lake level management plan in place

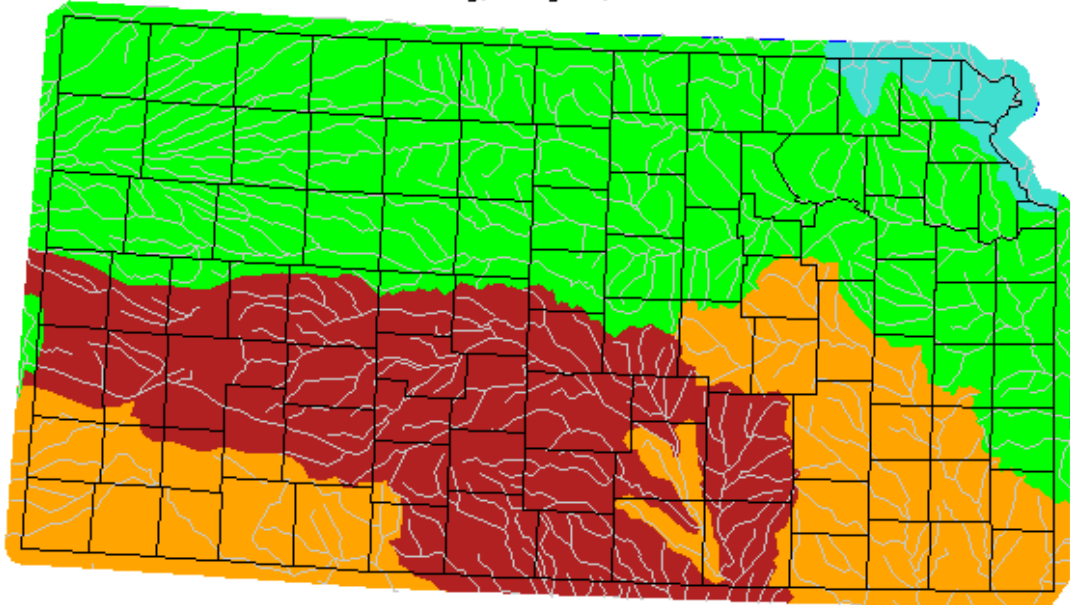
Source: U.S. Army Corps of Engineers

Federal Lakes in Kansas



Streamflow Conditions

Sunday, July 17, 2011



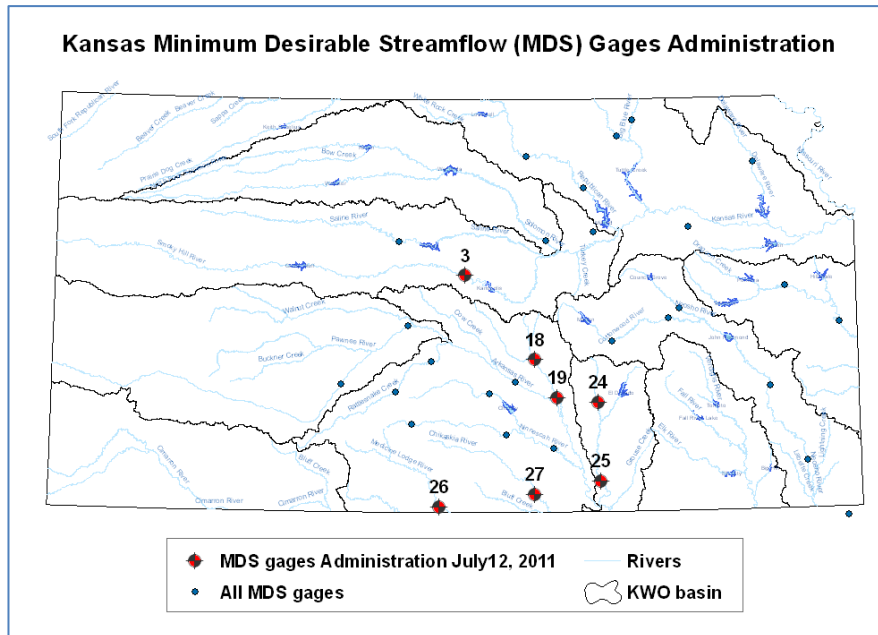
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

USGS 7 day average stream flow compared to normal flow values recorded for the same day of the year during all years measurements have been collected. In general, a streamflow which is greater than the 75th percentile is considered *above normal*, a streamflow which is between 25th and 75th percentiles is considered *normal* and a streamflow which is less than the 25th percentile is considered *below normal*. Color codes are for basins with streamflow averages less than 25 percent of historic values.

Water Right Administration/Minimum Desirable Streamflow (MDS)

On the right is a map of MDS gages related to Department of Agriculture, Division of Water Resources water right administration at this time.

The table below shows flows in cubic feet per second (cfs) at selected gaging stations as of July 13th for streams where MDS remains of interest.



Streamflows as of July 13, 2011 in cfs				
Gaging Station	Current Flow (CFS)	July MDS (CFS)	ADMIN 7/13/11	Map Location
Republican River at Concordia	504	150		
Republican River at Clay Center	857	200		
Smoky Hill River at Ellsworth	27	35	7/8/11	#3
Saline River near Russell	5	2		
Arkansas River near Hutchinson	78	80		
Little Arkansas River at Alta Mills	1	8	5/12/11	#18
Little Arkansas River at Valley Center	8	20	7/13/11	#19
North Fork Ninnescah River above Cheney	8	10		
South Fork Ninnescah River near Pratt	4	5		
South Fork Ninnescah River near Murdock	44	30		
Ninnescah River near Peck	24	30		
Whitewater River near Towanda	13	10	05/13/11	#24
Walnut River at Winfield	179	30	05/13/11	#25
Medicine Lodge River near Kiowa	0	6	06/23/11	#26
Chikaskia River near Corbin	8	16	06/23/11	#27

Arkansas River: The flow at Hutchinson has been hovering around MDS for the last couple of days.

Little Arkansas River: Orders went out July 11th under 17 water rights/permits requiring cessation of pumping. These orders pertain to the basin which drains to the Little Arkansas River between Alta Mills and Valley Center. This makes 24 water rights/permits under administration above the Alta Mills gage.

Ninnescah: Flows at the Above Cheney gage have been declining very slowly and have hovered about MDS for the last couple of days. The flow at the Pratt gage has been below MDS last five days. The flow at the Murdock gage is declining very slowly, but so far has not threatened MDS. The flow at the Peck gage has been below MDS the last four days. The reach between Murdock and Peck appears to be a losing reach. If it weren't, the flow at Murdock would be enough to sustain the flow at Peck above MDS. Since Peck is the most downstream gage, if it becomes necessary to issue orders, all streams tributary above the Peck gage would be subject to administration.

Smoky Hill River: Orders went out July 6th under 5 water rights/permits requiring cessation of diversion. On July 13th, orders remain in effect for 4 water rights/ permits. These water rights are located above the Ellsworth gage and below the confluence of Big Creek with the Smoky Hill River.

Saline River: Flows have remained barely above MDS at the Russell gage; DWR is watching this closely.

Walnut/Whitewater: Flows at the Towanda gage have been above MDS since July 1, however because the flow has been below MDS downstream at the Winfield gage for most of July, orders for water rights/permits above the Towanda gage remain in effect. Heavy rains Tuesday night produced a large runoff spike at the Winfield gage, however the flow is already beginning to recede. It is likely that the flow will fall below MDS within a week or so, unless there is more rain. There are currently 60 water rights/permits under MDS orders.

Orders remain in effect for the Walnut River (60 water rights (WR)), the Medicine Lodge River (2 WR), and the Chikaskia River (7 WR).

Water Right Term Permit Opportunity

A 2011 Drought Emergency Term Permit is available from Kansas Department of Agriculture, Division of Water Resources for the below counties in Kansas that have received the USDA emergency drought declarations plus four additional counties experiencing severe drought. The one-time, drought-focused term permit allows holders of existing water rights the flexibility to borrow a portion of next year's authorized quantity in order to complete the 2011 growing season. The term permit allocation will be based on the sum of the quantity authorized for 2011 and 2012.

Future Outlook

