

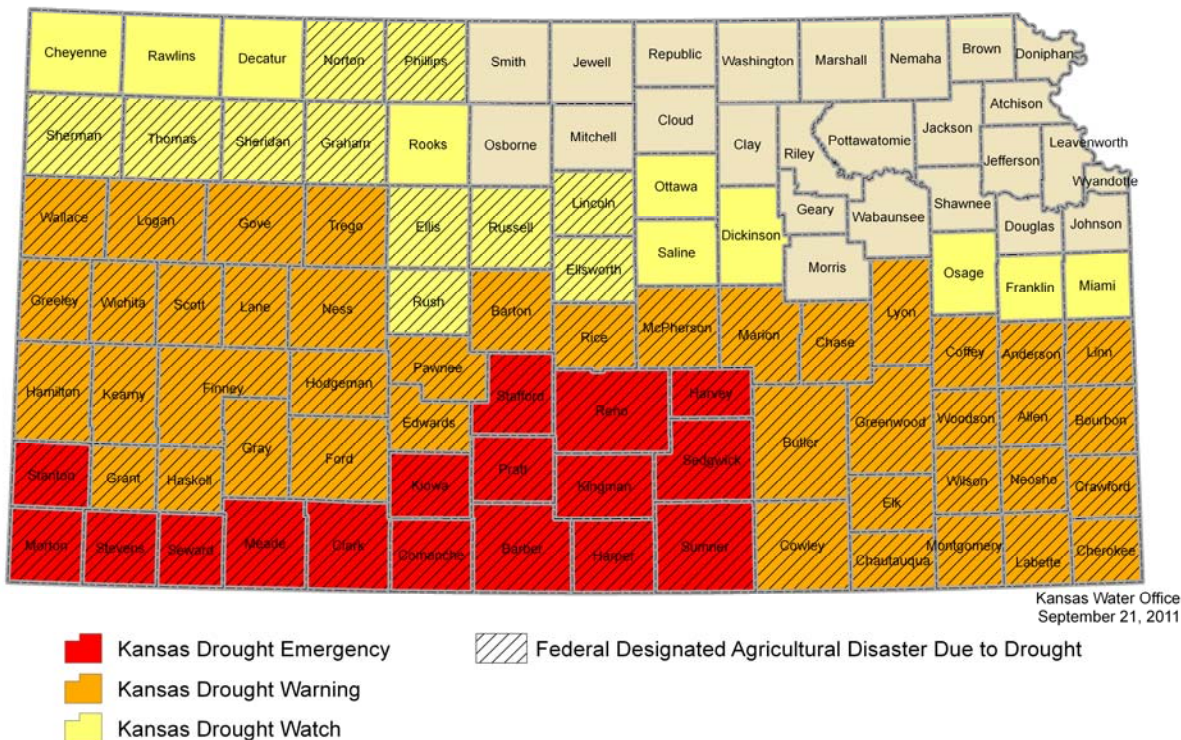
# KANSAS WEEKLY DROUGHT UPDATE – SEPTEMBER 26, 2011

## Summary of Conditions and Changes September 20-26:

- Twenty (20) additional counties were designated as Federal Agriculture Disaster by USDA designation S3176 on September 20, 2011. These counties are Allen, Anderson, Bourbon, Chase, Chautauqua, Cherokee, Coffey, Crawford, Elk, Ellsworth, Greenwood, Labette, Linn, Lyon, Montgomery, Neosho, Pawnee, Rush, Wilson and Woodson.
- The September 20, 2011 U.S. Drought Monitor indicates dry conditions continue affecting most of the state (84%). A slight increase northward occurred this past week in the abnormally dry and moderate drought in areas.
- City of Otis and community of Susank have implemented voluntary conservation measures. City of Ellsworth voluntary restrictions also active.
- Blue-green algae Warnings for Warnock Lake (Atchison County); Milford Lake (Clay, Geary and Dickinson Counties) have been downgraded to advisories. River Pond at Tuttle Creek (Pottawatomie and Riley Counties) no longer listed in either category.
- NOAA's Climate Prediction Center predicts La Niña will again dominate climatic conditions; meaning below normal precipitation is likely.

Counties under Kansas drought stages and/or Federal Agriculture Disaster Declarations are shown on the map below.

## Kansas Drought Conditions September 21, 2011



**County Drought Declarations:** A total of 80 counties are under state drought stages, with 17 counties in an emergency stage, 42 in Warning and 21 in Watch. State Emergency allows public water suppliers aid and opportunities to supplement their water supply, as well as provide opportunity for domestic and livestock water from emergency sources.

**Kansas Drought Emergency:** Barber, Clark, Comanche, Harper, Harvey, Kingman, Kiowa, Meade, Morton, Pratt, Reno, Sedgwick, Seward, Stafford, Stanton, Stevens, Sumner.

**Kansas Drought Warning:** Allen, Anderson, Barton, Bourbon, Butler, Chase, Chautauqua, Cherokee, Coffey, Cowley, Crawford, Edwards, Elk, Finney, Ford, Gove, Grant, Gray, Greeley, Greenwood, Hamilton, Haskell, Hodgeman, Kearny, Labette, Lane, Linn, Logan, Lyon, Marion, McPherson, Montgomery, Neosho, Ness, Pawnee, Rice, Scott, Trego, Wallace, Wichita, Wilson, Woodson.

**Kansas Drought Watch:** Cheyenne, Decatur, Dickinson, Ellis, Ellsworth, Franklin, Graham, Lincoln, Miami, Norton, Osage, Ottawa, Phillips, Rawlins, Rooks, Rush, Russell, Saline, Sheridan, Sherman, Thomas.

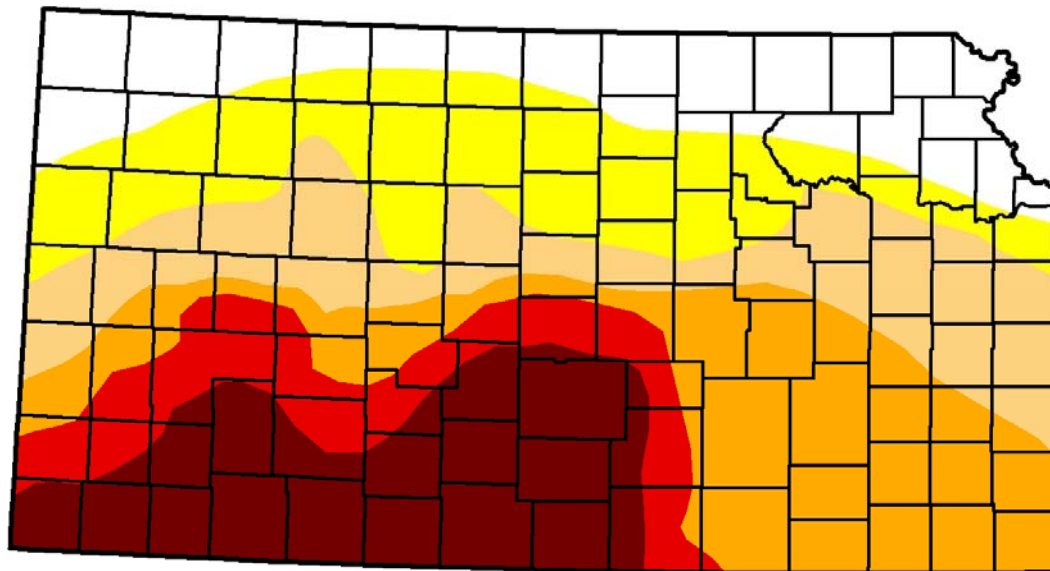
A total of 70 counties are designated federal agricultural disasters (S3117, S3061, S3156 & S3167) due to drought, high winds and excessive temperatures and are now eligible for federal programs, along with 15 contiguous counties. The August 23 request for the addition of 20 counties was approved by the Secretary of USDA on September 20. USDA agricultural disaster declarations are based on anticipated crop losses, while Kansas drought stages are based primarily on water resource conditions. Federal agricultural disasters have also been declared by the Secretary of USDA for areas of Colorado (S3125 & S3133) and Oklahoma (S3080 & S3139) that include Kansas counties as contiguous. These are all included in the Kansas declaration or as a contiguous county.

### General Conditions

The September 13, U.S. Drought Monitor showed abnormally dry conditions creeping north across the state. Much of South Central Kansas is in the Exceptional to Extreme drought category. Currently, just over 80% of the state is reported as abnormally dry to exceptional drought, up from 71% last week. ENSO (El Niño/La Niña – Southern Oscillation) is officially in a La Niña climatic pattern which generally produces less than normal precipitation for Kansas.

A description of the Drought Monitor process can be found in a separate document under useful links on the KWO drought page.

## US Drought Monitor – September 20, 2011



Intensity:

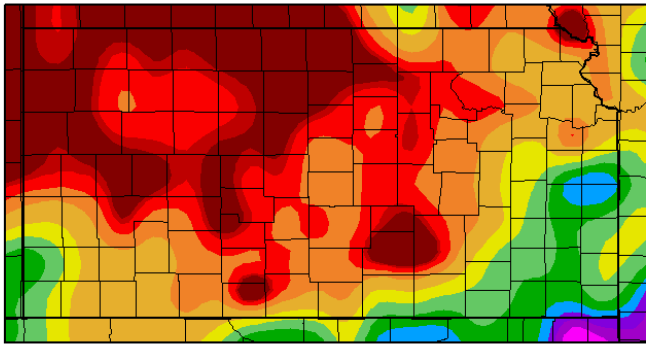
- |   |  |
|---|--|
|  D0 Abnormally Dry     |  D3 Drought - Extreme     |
|  D1 Drought - Moderate |  D4 Drought - Exceptional |
|  D2 Drought - Severe   |  |



## Climate (Precipitation and Temperature)

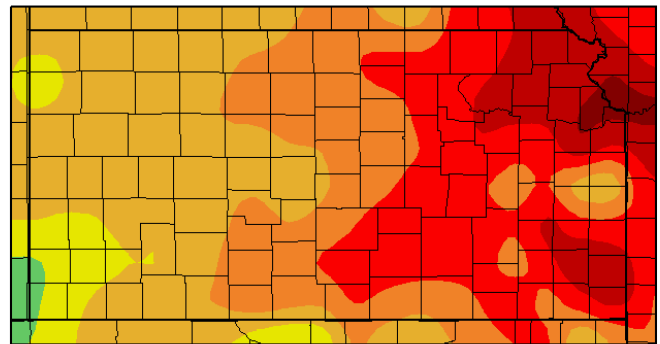
Precipitation (in)  
9/19/2011 - 9/25/2011

Departure from Normal Precipitation (in)  
9/19/2011 - 9/25/2011



Generated 9/26/2011 at HPRCC using provisional data.

Regional Climate Centers



Generated 9/26/2011 at HPRCC using provisional data.

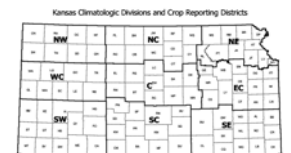
Regional Climate Centers

### Kansas Climate Division Precipitation Summary September 25, 2011 (inches)

Climate Division	September 19-25			September 1 to September 25			January 1 to September 25			April 1 to September 25		
	Actual	Normal	% Normal	Actual	Normal	% Normal	Actual	Normal	% Normal	Actual	Normal	% Normal
Northwest	0.01	0.40	3	0.32	1.53	20	13.45	17.51	75	12.31	15.31	79
West Central	0.01	0.43	1	0.42	1.60	26	10.82	16.98	64	9.29	14.77	63
Southwest	0.08	0.42	18	0.74	1.59	46	6.78	16.62	41	5.85	14.49	40
North Central	0.00	0.69	0	0.65	2.56	24	19.95	22.6	87	17.82	19.38	91
Central	0.03	0.71	3	1.07	2.59	40	14.46	23.58	61	11.94	19.99	60
South Central	0.03	0.72	4	0.85	2.62	30	9.73	23.01	41	7.63	19.31	38
Northeast	0.00	1.02	0	1.04	3.67	29	21.20	28.40	74	17.73	24.35	73
East Central	0.02	1.00	2	1.34	3.63	38	17.05	29.19	59	13.08	24.56	54
Southeast	0.10	1.02	8	1.84	3.67	50	19.77	29.83	65	14.40	24.40	59
<b>STATE</b>	<b>0.04</b>	<b>0.70</b>	<b>5</b>	<b>0.93</b>	<b>2.58</b>	<b>34</b>	<b>14.31</b>	<b>22.93</b>	<b>61</b>	<b>11.77</b>	<b>19.46</b>	<b>59</b>

Note: 1971-2000 normal value, 100 % =normal

Source: KSU Weather Data Library



## Public Water Supply Conditions

A Memorandum of Understanding (MOU) for emergency use of state fishing lake water under conditions of drought emergency declared by the Governor is in place. This will allow small communities and individuals within the emergency counties category to pump water from named state fishing lakes if they are in dire need of water. Individuals and communities need to contact the KWO for a water supply request and they will in turn be referred to the appropriate Kansas Department of Wildlife, Parks and Tourism office to obtain the necessary permit to withdraw the water. The MOU limits the types of water use and a fee may be set for use of the state fishing lakes' water supply. The priority order established for this MOU is domestic, municipal and then livestock uses, while also protecting the lake's fish population.

The State Fishing Lakes available for withdrawals for Emergency Declared counties include Atchison, Barber, Brown, Bourbon, Butler, Chase, Clark, Crawford, Goodman, Jewell, Kingman, Leavenworth, Lyon, Pott#1, Pott#2, McPherson, Miami, Mined Lands (Pits), Neosho, Osage, Ottawa, Saline, Scott, Shawnee, Sheridan, Washington, Wilson and Woodson Lakes.

Additional water may also be available for Drought Emergency counties from federal lakes. Water from U.S. Army Corps of Engineer lakes is available for domestic, industrial and livestock use but is prohibited for irrigation use. Requests from applicants must go through the KWO. It may also be possible to obtain water under surplus contracts from State owned storage in certain Corps lakes with water available for purchase. Bureau of Reclamation lake water may also be made available by temporary contract under drought conditions.

### **Local Public Water Supply Status**

**Barton County:** The community of Susank issued notice the week of September 21 for voluntary water conservation. Susank purchases water from the City of Otis (Russell County).

**Butler County:** Augusta has 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. Mandatory restrictions are in place for the cities of Augusta and Mulvane. Augusta supplies Mulvane, Butler RWD 4 and has an emergency connection to Butler RWD 6 and Sedgwick RWD 3. On August 2 it was estimated Augusta had 6 weeks of water supply left in the city lake. Butler RWD 4 has also requested conservation including outside watering restrictions. In addition, KDHE has issued a public health warning (no contact) for Santa Fe and Augusta City lakes due to blue-green algae.

**Dickinson County:** Dickinson RWD 2 has mandatory water restrictions in effect through October 31, 2011.

**Douglas County:** The City of Lawrence suspended use of Kansas River water on September 9 while investigating blue-green algae in the river water.

**Ellsworth County:** City of Ellsworth is in phase 1 of the city's water conservation plan which calls for voluntary conservation including limited outdoor watering. City well pumping is limited due to senior water rights (MDS) on the Smoky Hill River at Ellsworth.

**Gray County:** The City of Cimarron has mandatory watering restrictions in place.

**Greenwood County:** The City of Eureka has gone to water watch, for voluntary water conservation.

**Harper County:** Bluff City has water use restrictions in place.

**Harvey County:** The City of Hesston has issued mandatory restrictions on residential yard use (lawn and car washing). Hesston is experiencing declines in the city's water wells which has lowered the ability to keep up with demand.

**Haskell County:** The City of Sublette has implemented water rationing due to problems with two of their four wells.

**Johnson County:** City of Gardner has requested voluntary conservation measures. The Johnson County RWD No. 1 suspended use of Kansas River water while investigating blue-green algae in the river water.

**Kearny County:** City of Lakin has initiated voluntary water conservation measures.

**Labette County:** The City of Oswego is in a stage 1 water watch, voluntary water conservation measures, due to low water and increased daily usage.



As of September 26, 2011: Rain in eastern basins has resulted in marginal increases to natural flows that are diminishing rapidly.

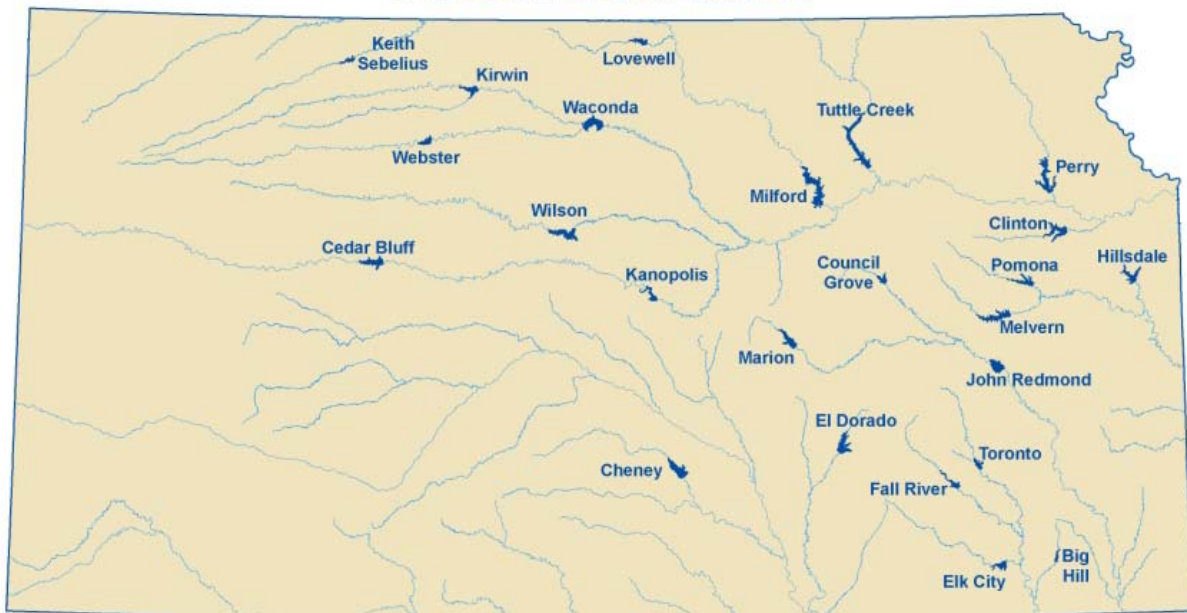
The reservoirs in the Marais de Cygnes basin (Hillsdale, Melvern and Pomona) are all below conservation pool but more than 90% full. River flow is sufficient with minimum releases.

The Neosho basin (Marion, Council Grove and John Redmond reservoirs) has had no consistent natural flows in the upper Neosho. Marion has 78%, Council Grove 84% and John Redmond 60% of storage remaining in the conservation pool. Releases continue from all three reservoirs. The water supply release continues from Council Grove Reservoir for Emporia which began July 1. MDS orders remain in effect upstream of Parsons for the Neosho and Cottonwood rivers. Releases continue from John Redmond to meet the needs of the water assurance district members.

The Smoky Hill basin conditions are varied. Kanopolis Reservoir was above conservation pool prior to releases to draw levels down to allow for periodic inspection of the embankment, control tower, outlet works and associated structures and maintenance of the stilling basin. There is no flow from Cedar Bluff to Pfeiffer. The City of Russell has water supply in Cedar Bluff, which is released when specific criteria and the need arises.

In the Verdigris basin there is a slight increase in natural flow, primarily in the lower basin. Elk City, and Toronto and Fall River continue releasing to supplement flow, for municipal and industrial needs. Elk City has 75%, Toronto 76%, Fall River 80% and Big Hill Reservoir 92% of conservation storage remaining. All four had inflow this past week.

### Federal Lakes in Kansas



## General Reservoir Conditions

### Kansas Federal Reservoirs

Reservoir	Top of Multipurpose/Conservation Pool (Feet MSL)	Multipurpose/Conservation Pool Elevation (Feet MSL) 9/26/2011	Change from Top of Pool (Feet)
<b>Kansas River Basin</b>			
Norton <sup>1</sup>	2304.3	2296.67	-7.63
Harlan County, NE	1946	1944.87	-1.13
Lovewell <sup>1</sup>	1582.6	1580.86	-1.74
Milford <sup>1</sup>	1144.4	1150.83	6.43
Cedar Bluff	2144	2126.9	-17.10
Kanopolis <sup>1</sup>	1463	1462.73	-0.27
Wilson <sup>1</sup>	1516	1515.76	-0.24
Webster <sup>1</sup>	1892.5	1886.18	-6.32
Kirwin <sup>1</sup>	1729.3	1728.43	-0.87
Waconda <sup>1</sup>	1455.6	1454.68	-0.92
Tuttle Creek <sup>1</sup>	1075	1085.79	10.79
Perry <sup>1</sup>	891.5	895.55	4.05
Clinton <sup>1</sup>	875.5	873.72	-1.78
Melvorn <sup>1</sup>	1036	1034.48	-1.52
Pomona <sup>1</sup>	974	973.03	-0.97
Hillsdale <sup>1</sup>	917	915.59	-1.41
<b>Arkansas River Basin</b>			
Cheney	1421.6	1417.7	-3.90
El Dorado	1339	1335.84	-3.16
Toronto <sup>1</sup>	901.5	900.36	-1.14
Fall River <sup>1</sup>	948.5	947.19	-1.31
Elk City <sup>1</sup>	796	793.13	-2.87
Big Hill	858	856.23	-1.77
Council Grove <sup>1</sup>	1274	1271.62	-2.38
Marion <sup>1</sup>	1350.5	1347.58	-2.92
John Redmond <sup>1</sup>	1039	1036.35	-2.65
1. Lake level management plan in place Source: U.S. Army Corps of Engineers			

### Lakes and Blue-green Algae

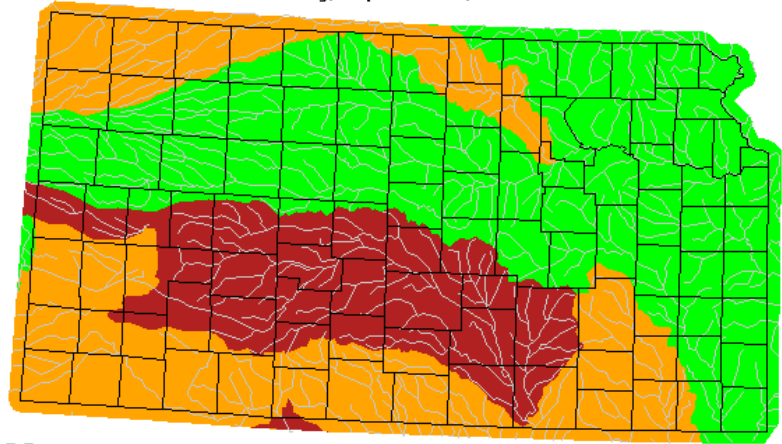
Kansas Department of Health and Environment (KDHE) has issued [Public Health Advisory or Public Health Warning](#) for some lakes in Kansas. These notification levels are determined by the concentration of a harmful toxin(s) or the concentration of cyanobacteria (commonly referred to as blue green algae) cell counts. High nutrient and light levels and warm water temperature contribute to algae blooms. Lakes affected as of September 23 include warnings: for Santa Fe Lake and Augusta City Lake (Butler County); East Lake, West Lake, and Camp Hawk Lake (Harvey County); Memorial Park Lake (Barton County); Rigg's Park Lake (Sedgwick County); Dillon Park Lake (Reno County); and Advisories are in effect for Marion County Lake (Marion County), and Logan City Lake (Phillips County). Warnings for Warnock Lake (Atchison County); Milford Lake (Clay, Geary and Dickinson Counties) have been downgraded to advisories. River Pond at Tuttle Creek (Pottawatomie and Riley Counties) no longer listed in either category.

## Streamflow Conditions

USGS seven 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 75 percentile is considered *above normal*, a streamflow which is between 25 and 75 percentiles is considered *normal* and a streamflow which is less than the 25 percentile is considered *below normal*. Color codes are for basins with streamflow averages less than 25 percent of historic values.

Historical Stream Flow Compared to Year

Sunday, September 25, 2011



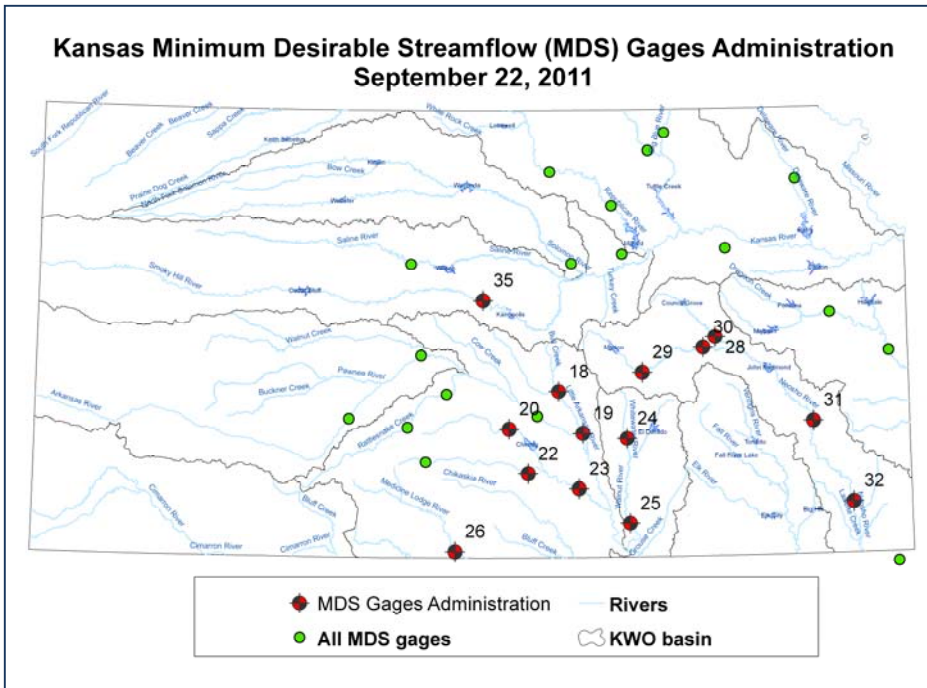
Explanation - Percentile classes						
Low	<10	10-24	25-75	76-90	>90	High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

The comparison of steamflow for September 25 indicates near normal conditions in the portions of the southeast. This reflects recent rain. Recent flows are compared to historical flows for all days of the year below normal flows are indicated in much more of the state, with portions of the north (Republican basin joining the Arkansas, Cimarron and Verdigris basins in being below normal.

## Water Right Administration/Minimum Desirable Streamflow (MDS)

The map below shows the MDS gages related to Department of Agriculture, Division of Water Resouces water right administration at this time. The table below shows the gage name for the location on the map where administration is occuring, as well as providing flows in cubic feet per second (cfs) at selected gaging stations as of September 22 for streams where MDS is of interest.

Kansas Minimum Desirable Streamflow (MDS) Gages Administration  
September 22, 2011



**Streamflows as of September 22, 2011 in cfs**

<b>Gaging Station</b>	<b>Current Flow (CFS)</b>	<b>September MDS (CFS)</b>	<b>ADMIN</b>	<b>Map Location #</b>
Republican River at Concordia	205	80		
Republican River at Clay Center	328	100		
Smoky Hill River at Ellsworth	12	15	9/14/11	35
Saline River near Russell	3	2		
Mill Creek near Paxico	8	5		
Little Arkansas River at Alta Mills	3	8	5/12/11	18
Little Arkansas River at Valley Center	62	20	7/13/11	19
North Fork Ninnescah River above Cheney	15	5	7/21/11	20
South Fork Ninnescah River near Pratt	2	5	NA	
South Fork Ninnescah River near Murdock	72	30	7/21/11	22
Ninnescah River near Peck	50	30	7/21/11	23
Whitewater River near Towanda	3	5	05/13/11	24
Walnut River at Winfield	37	20	05/13/11	25
Medicine Lodge River near Kiowa	Dry	1	06/23/11	26
Chikaskia River near Corbin	17	5	09/10/11	36
Neosho River near Americus	21	5	08/06/11	28
Cottonwood River near Florence	30	10	08/06/11	29
Cottonwood River near Plymouth	111	20	08/06/11	30
Neosho River near Iola	46	40	08/06/11	31
Neosho River near Parsons	83	50	08/06/11	32

Chikaskia River: Orders effective September 10 for seven water rights/permits above Corbin remain in effect.

Little Arkansas River: Orders were effective May 12 and July 13 requiring cessation of pumping on sections of the Little Arkansas River. These orders pertain to the basin which drains to the Little Arkansas River between Alta Mills and Valley Center respectively. These orders remain in affect for 24 water rights/permits under administration above the Alta Mills gage.

Medicine Lodge River: The orders effective June 23 for two water rights/permits remain in effect.

Mill Creek (Wabaunsee County): Rain over the past weekend caused flow to peak at 33 cfs on Sunday, but the flow has been dropping since.

Neosho/Cottonwood River: Orders effective August 6 for 160 water rights/permits in the Neosho and Cottonwood basins remain in effect. A temporary stay beginning on September 20 until further notice was granted under two permits held by the U.S. Fish and Wildlife Service. Flows were above MDS at all MDS gages in the basin at the time and have continued to be since. The flow at Parsons, the most downstream gage and the one which controls whether MDS administration can be ceased, has been above MDS since September 18.

Ninnescah River: The orders effective July 21, for 12 water rights/permits above the Cheney, Peck and Murdock gages remain in effect. Flow has been above MDS at the above Cheney Reservoir gage since September 6. Flow has been above MDS at Murdock since September 3. Flow at Peck, which is the most downstream gage and the one that affects whether MDS administration can be ceased, rose above MDS on September 17, and has been above since.

Saline River: Flow is just above MDS at this time.

Smoky Hill River: Orders effective Wednesday, September 14, requiring cessation of diversion under 3 water rights remain in effect.

Walnut/Whitewater: Orders remain in effect for 61 water rights/permits above the Towanda gage.

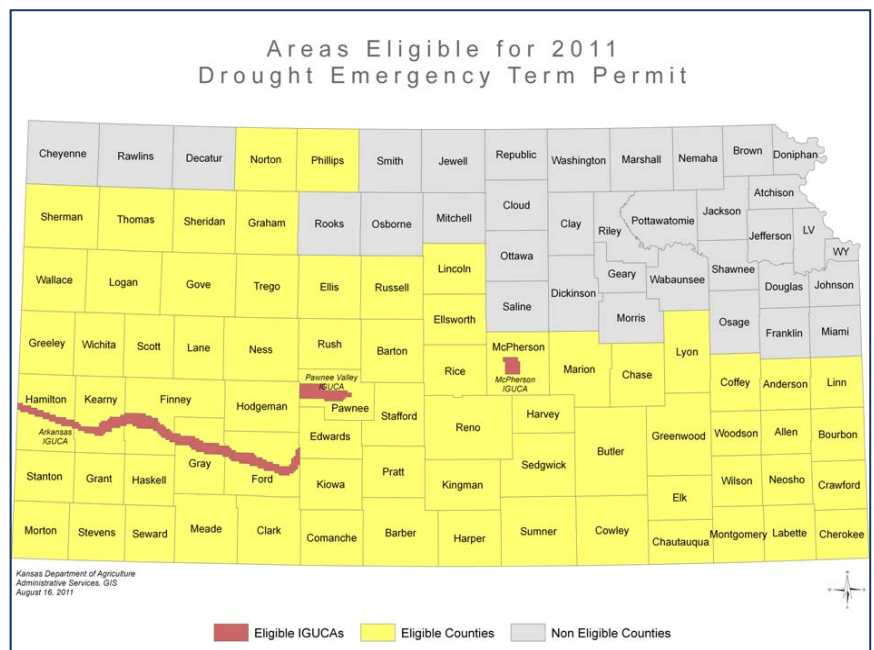
### Other Water Right Administration

In addition to MDS needs, administration of water rights/permits occurs when there is not enough water to meet all appropriations. Senior water rights needs, water quality and the protection of releases may also trigger the need. Notices were issued by DWR July 20, 2011 on the Elk River below Elk City Reservoir (Verdigris basin). Orders are in place protecting releases from Council Grove Reservoir for Emporia.

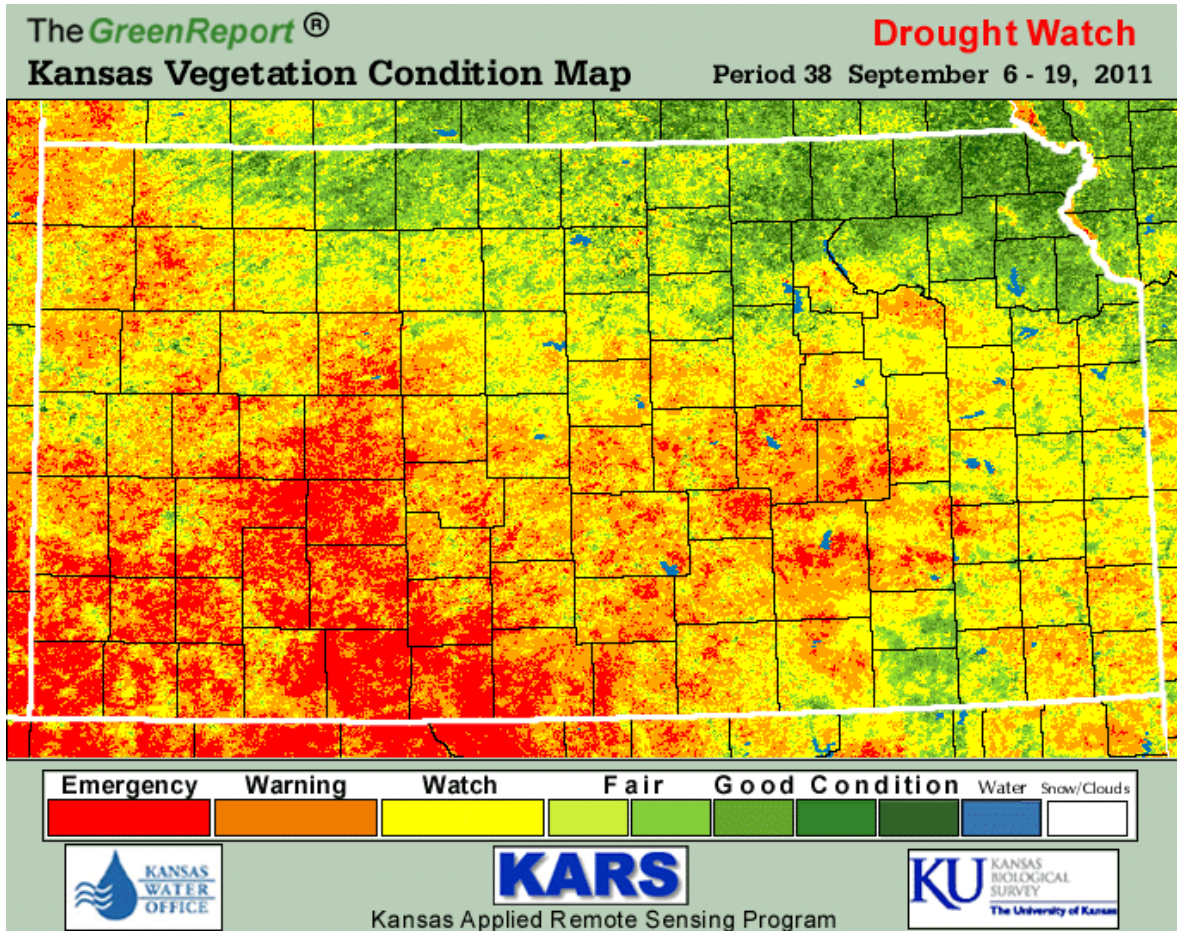
Effective August 11, 2011, the Chief Engineer also issued orders to 38 owners of 62 water rights on the Verdigris River and the Fall River to protect releases from conservation storage from three federal reservoirs. While the order is in effect, diversion of surface water from the Verdigris River and/or from the Fall River below Toronto Lake, Fall River Lake and Elk City Lake is prohibited without written permission of the Chief Engineer.

### 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. 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 for irrigation in order to complete the 2011 growing season. In general, this is available outside Intensive Groundwater Use Control Areas (IGUCAs) in the counties shown below. The term permit allocation will be based on the sum of the quantity authorized for 2011 and 2012. Three qualifying IGUCAs are Arkansas River IGUCA (Hamilton, Kearny, Finney, Gray and Ford Counties), Burrton IGUCA (Harvey County) and Pawnee Valley IGUCA (Pawnee County). Municipal water rights are also eligible.



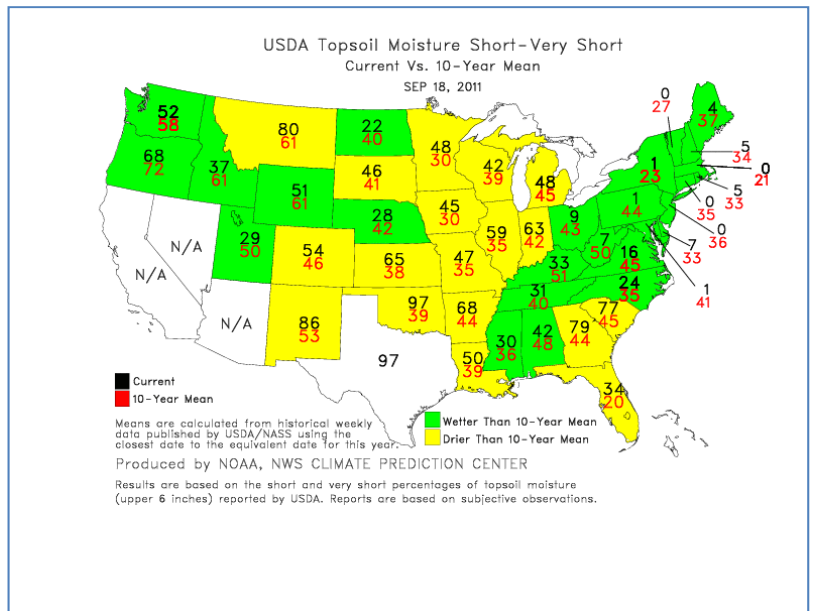
# Kansas Vegetative Conditions



## Crops, Feed and Livestock

For the week ending September 18, USDA reports for Kansas indicate topsoil moisture improved to 41 percent very short, 24 percent short, 33 percent adequate, and 2 percent surplus. Subsoil moisture supplies were rated 45 percent very short, 28 percent short, and 27 percent adequate.

The range and pasture condition was reported at 34 percent very poor, 26 percent poor, 23 percent fair, 16 percent good, and 1 percent excellent. Feed grain supplies in Kansas were rated at 12 percent very short, 19 percent short, 67 percent adequate, and 2 percent surplus. Hay and forage supplies were rated 24 percent very short, 30 percent short, 43 percent adequate, and 3 percent surplus. The stock water supplies were 26 percent very short, 22 percent short, 51 percent adequate, and 1 percent surplus.



## **Emergency Haying and Grazing**

Emergency haying and grazing of CRP acreage may be authorized to provide relief to livestock producers in areas affected by a severe drought or similar natural disaster. Emergency authorization is provided by either national Farm Services Agency (FSA) office authorization or by a state FSA committee determination utilizing the U.S. Drought Monitor. The state FSA committee may approve emergency grazing on a county-by-county basis if the county is designated as level "D2 Drought-Severe" according to the U.S. Drought Monitor. It may approve emergency haying on a county-by-county basis if the county is designated as "D3 Drought- Extreme" or "D4-Exceptional" according to the U.S. Drought Monitor.

The following counties are approved for emergency haying by FSA: Barber, Barton, Butler, Chase, Clark, Comanche, Cowley, Edwards, Elk, Ellsworth, Finney, Ford, Grant, Gray, Greenwood, Hamilton, Harper, Harvey, Haskell, Hodgeman, Kearny, Kingman, Kiowa, Lane, Lyon, Marion, McPherson, Meade, Morton, Ness, Pawnee, Pratt, Reno, Rice, Rush, Scott, Sedgwick, Seward, Stafford, Stanton, Stevens, Sumner, Trego, Wichita, Wilson and Woodson Counties.

Counties approved for emergency grazing include: Barber, Barton, Butler, Chase, Chautauqua, Cherokee, Clark, Comanche, Cowley, Edwards, Elk, Ellis, Ellsworth, Finney, Ford, Gove, Graham, Grant, Gray, Greeley, Greenwood, Hamilton, Harper, Harvey, Haskell, Hodgeman, Kearny, Kingman, Kiowa, Labette, Lane, Logan, Lyon, Marion, McPherson, Meade, Montgomery, Morris, Morton, Neosho, Ness, Pawnee, Pratt, Reno, Rice, Rush, Scott, Sedgwick, Seward, Stafford, Stanton, Stevens, Sumner, Trego, Wallace, Wichita, Wilson and Woodson.

Emergency haying is allowed to September 30. Emergency grazing in approved counties, normally allowed through September 30, was extended to October 31, 2011. Emergency haying and grazing is not allowed on the same acreage. All livestock must be removed by the end of this grazing period. In addition FSA will allow producers nationwide to use harvested hay from expiring CRP acres rather than destroy the hay as normally required. There are nearly 230,000 expiring acres in Kansas.

CRP participants in approved counties shall contact the local FSA county office to request emergency haying or grazing on an individual contract basis prior to haying or grazing. Payments are reduced when these options are utilized. Producers should contact their local FSA office prior to haying or grazing. More information can be found on the USDA FSA web pages:

<http://www.apfo.usda.gov/FSA/webapp?area=home&subject=copr&topic=crp-eg>.

USDA's Farm Service Agency (FSA) in Kansas allows eligible ranchers and livestock producers to apply under the Livestock Forage Disaster Program (LFP) for losses incurred during the 2011 grazing season up to October 1, 2011. Forage sorghum, pasture and small grain programs are available under LFP, eligibility varies. As of September 22, 52 Kansas counties are eligible for the forage sorghum LFP; 58 Kansas counties are eligible for the pasture and hay LFP; and ten counties are eligible for the LFP Long Season Small Grains program. Current maps of program eligibility can be found at:

<http://www.fsa.usda.gov/FSA/webapp?area=home&subject=diap&topic=lfp>

An executive order was signed by the Governor July 27 suspending certain motor carrier rules and regulations for people hauling hay to livestock. Those include rules on permits, load sizes and nighttime travel of oversized loads. The executive order will be in effect until it's rescinded or until drought emergency and disaster declarations are lifted.

USDA Risk Management Agency provides information on crop insurance and drought damaged crops can be found at [http://www.rma.usda.gov/fields/ks\\_rso/2011/droughtfaq.pdf](http://www.rma.usda.gov/fields/ks_rso/2011/droughtfaq.pdf).

## **Burn Bans and Fires**

Most counties require permits prior to a burn and are controlling burns through that process. A county issues a ban as they deem necessary at any time, for a specific time period or until repealed. Dry conditions in much of

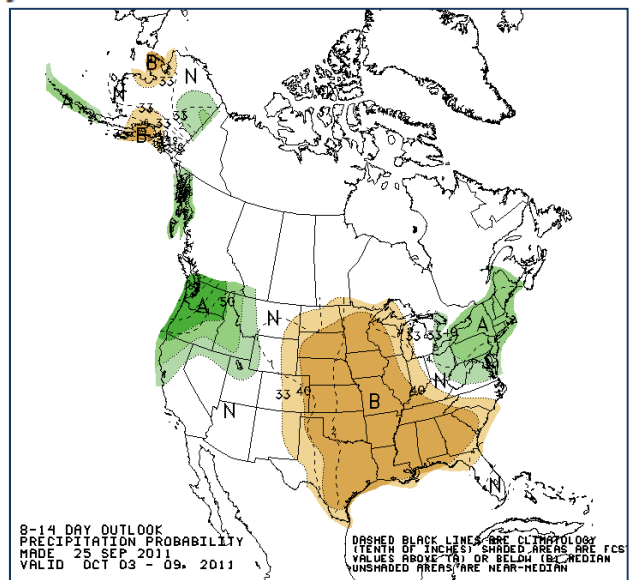
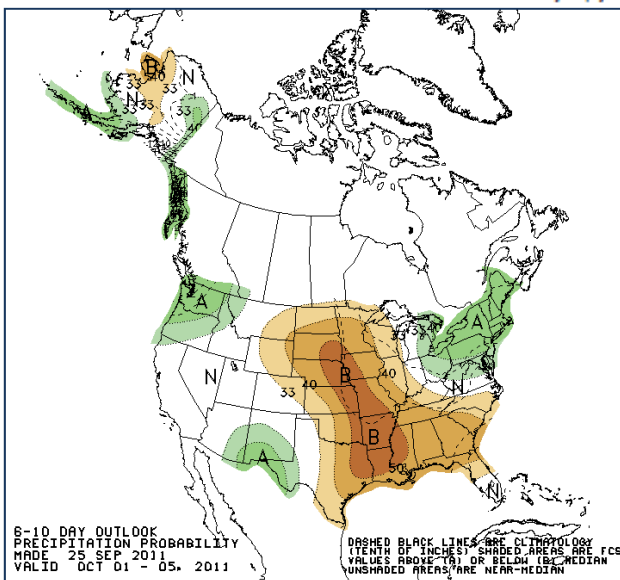
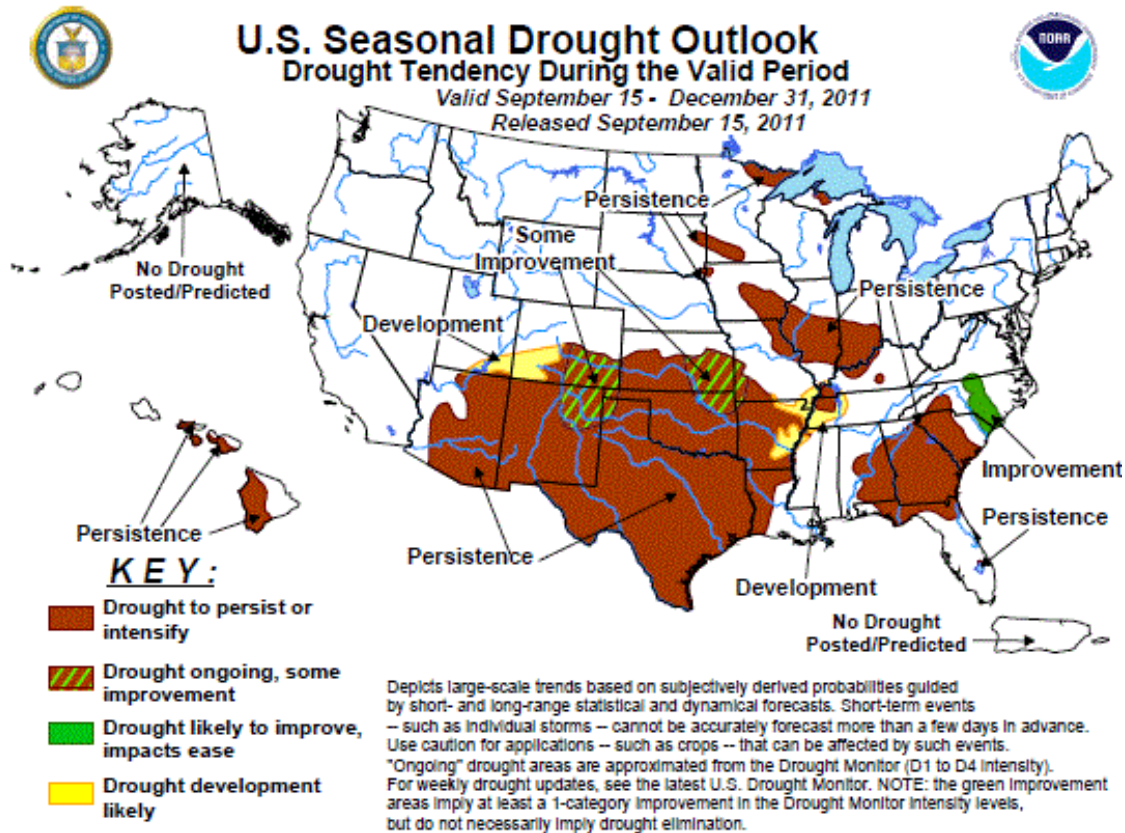
Kansas allow fires to start or spread easily. Please contact your county officials before you burn. Conditions continue that allow fires to start easily.

The National Weather Service has issued Fire Weather/Red Flag Warnings for many Kansas areas each day due to critical fire weather conditions. Outlooks change daily. See <http://www.spc.noaa.gov/fire/> for current information.

September 23<sup>rd</sup>, the burn ban that has been in effect in Crawford County since July 22 was lifted. September 21 a grass fire at US 77 and 132rd and two others were reported in Cowley County.

### Future Outlook

The National Weather Service prediction for September 15-December 31, 2011 includes the strengthening and continuation of La Nina which elevates the chances for exceptional drought to persist across the southern Plains. At the beginning of the period, a cold frontal passage is expected to bring 1-2.5 inches of rainfall to southeast Kansas and northeast Oklahoma where some improvement is forecast.



The Kansas Weekly Climate Summary and Drought Report is compiled each week when conditions warrant, by the Kansas Water Office (KWO). Information from various federal, state, local and academic sources is used. Some of the data is preliminary and subject to change once final data is available. The KWO web site, [KWO Drought](#), contains additional drought information including links to other agencies with drought information and past issues of the Kansas Climate Summary and Drought Report. Kansas State Climatologist, Mary Knapp, is the primary source of the narrative on weather. She works closely with meteorologists throughout the state and region. Details of current conditions at Evapotranspiration (ET) and Mesonet sites across Kansas are available at <http://www.ksre.k-state.edu/wdl/>.

## **RESOURCES and ACTIVITIES**

The [U.S. Drought Monitor](#), from the National Drought Mitigation Center at the University of Nebraska-Lincoln, provides a “big picture” perspective of conditions across the nation. In the Kansas county drought stage scheme, a Drought Watch equates roughly to moderate drought in the U.S. Drought Monitor, while a Drought Warning is the equivalent of severe drought. A Drought Emergency is reserved for extreme or exceptional drought. Palmer Drought Severity Index - The Palmer Index (PDSI) is one indicator used in the U.S. Drought Monitor.

The [High Plains Regional Climate Center](#) provides precipitation and temperature summary maps.

The U.S. Geological Survey (USGS) [Drought Watch](#) provides information on 7-day average streamflow measured at long-term gaging stations and compares them to normal flows.

The Kansas Department of Agriculture-Division of Water Resources monitors stream flow using the USGS gages for determination of administrative needs. Administration may be needed due to [Minimum Desirable Streamflow \(MDS\)](#) requirements, impairments, and reservoir release protection.

The water levels of the federal lakes fluctuate during a year according to the management plan. [Lake level management](#) plans are posted on the Kansas Water Office web site [www.kwo.org](http://www.kwo.org).

The Kansas Applied Remote Sensing Program (KARS) at the University of Kansas produces a [Kansas Green Report](#) each week during the growing season. For a full set of national and regional **GreenReport®** maps, go to: <http://www.kars.ku.edu/products/greenreport/greenreport.shtml>. This Kansas Vegetation Drought Response Index map is developed weekly by the Kansas Biological Survey using state drought triggers as its key. In addition the Vegetation Drought Response Index, by the National Drought Mitigation Center provides another a national perspective on vegetation conditions. VegDRI maps may be found at <http://veg dri.unl.edu/>

The National Weather Service (NWS) provides fire weather products and services for Kansas that include the Rangeland Fire Danger Index, Fire Weather Forecasts, Red Flag Watches/Warnings, and Spot Forecasts. The five NWS offices that serve Kansas websites may be accessed from the [NWS Offices' page](#).

The [Seasonal Drought Outlook](#), developed by the NOAA Climate Prediction Center (NOAA CPC), assesses the likelihood for improvement, persistence or deterioration in drought conditions for areas currently experiencing drought as identified by the U.S. Drought Monitor.

[Responding to Drought: A Guide for City, County and Water System Officials](#) provides an overview of Kansas county drought stage declarations, local planning and coordination, disaster declarations, and available state and federal assistance. [The 2007 Municipal Water Conservation Plan Guidelines](#) and the Drought Vulnerability Assessment Report, both by Kansas Water Office, provide guidance regarding drought preparedness and response.

[USDA has programs for agricultural](#) producers and businesses for drought affected areas. In some cases a eligibility is dependent on a federal disaster declaration but other programs are triggered by specific conditions.

Please contact Diane Coe at the Kansas Water Office (785) 296-3185 or [diane.coe@kwo.ks.gov](mailto:diane.coe@kwo.ks.gov) should you have any questions or suggestions.