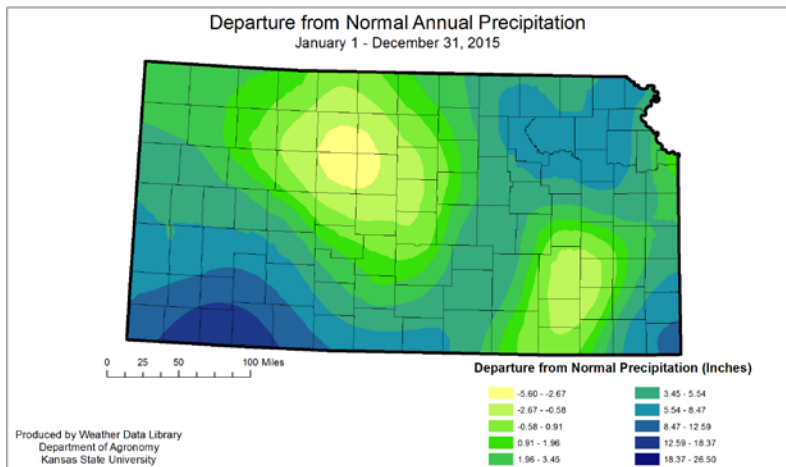


KANSAS CLIMATE SUMMARY

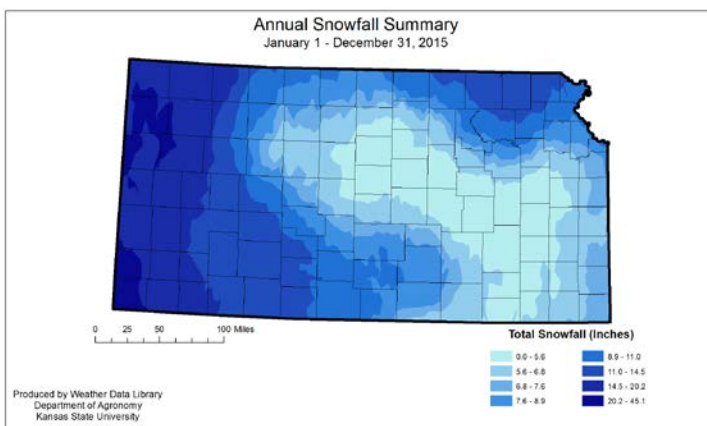
Annual Summary 2015

Warm and Wet

At the start of 2015, over 80 percent of the state was in some form of drought with almost 2 percent in extreme drought. By the end of the year, that had switched to almost 98 percent drought-free. The year ranked as the 15th wettest since 1895. The reversal took most of the year. State-wide average precipitation was below normal for the first 3 months, but switched to a wetter pattern in April. By May, only the Northwestern and North Central divisions were below average for the year-to-date. The Southwestern Division averaged 7.73 inches, over 2 ½ time the normal for May. The state-wide average was 7.57 inches, making it the third wettest May on record. A drier than average pattern in the late summer (August-September) allowed for drought conditions to reappear and expand. However, the year ended on a wet note, with both November and December averaging above normal. December state-wide average precipitation was 2.28 inches, more than double the normal December total. Only the Northwest Division had a drier than normal December, with an average of 0.50 inches, or 80 percent of normal. The greatest annual total for the year was recorded at Oswego, in Labette County, at 59.2 inches. The driest reporting station was 16.12 inches at Loretta, in Rush County, with just 16.12 inches. The greatest 24hr precipitation total reported was 6.9 inches at Sun City in Barber County on July 30th. Snow was less than average, but it did introduce the wet pattern to end the year. Atwood, in Rawlins County, saw 22 inches on the 12th of November. They ended the year with 34.1 inches, the highest total in the state.

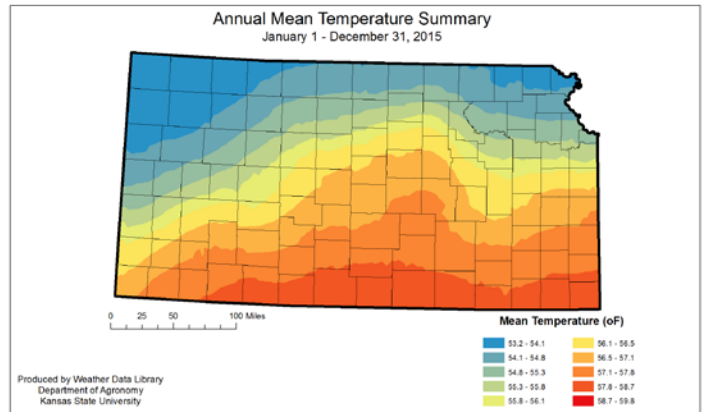


Snow was not as much of a factor in 2015. The biggest impact came as an early November event, which signaled the onset of wetter conditions at the end of the year. As noted earlier, the greatest total for the year was 34.1 inches at Atwood in Rawlins County. They also reported the greatest 24 hour total with 22 inches on the 11th of November. The state average annual snowfall for 2015 was 8.6 inches, well below last year's average of over 21 inches. The greatest snowfall totals were seen in the Northwestern Division, while several stations reported no snow at all in 2015. In the Southeast, much of the moisture that ended the year came as rain not snow. To the left is a map showing the snowfall distribution across the state for 2015:



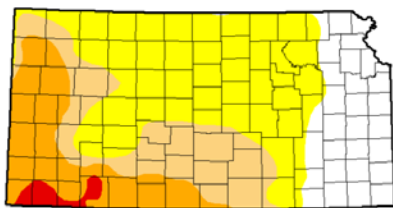
Temperatures averaged above normal for the year. State-wide average temperature in 2015 was 56.1 °F, which places it as the 11th warmest on record. Only February, May and October averaged below normal. September and December vied for the greatest departure from normal. September averaged 74.2 °F or 5.9 degrees warmer than normal; December averaged 37.7 °F or 5.8 degrees warmer than normal. Temperatures fluctuated considerably during the year, ranging from 110 °F at Hudson (Stafford County) on July 14th to -16 °F at St. Francis (Cheyenne County) on January 1st. Despite being warmer than average, all divisions also saw temperatures plunge below zero. Even the Southeast Division recorded sub-zero temperatures, the coldest of which was a -3 °F at Cassoday on January 8th. The average date for the last spring freeze was April 18th. The earliest start to the growing season was a last freeze on March 29th at various locations. Clay Center had the latest freezing temperature with 31 °F reported on May 22nd. There were widespread temperatures of 32 °F or

lower in western Kansas on the 12th of May. The first fall freeze was also early in parts of the state. The average date was October 13th, but there were reports of freezing temperatures parts of the state on September 19th and 20th. The latest first frost was reported at Big Hill Lake on November 22nd when temperatures plunged to 24 °F. The average length of the growing season was 200 days. The shortest growing season was at Dresden in Decatur County with 147 days. The station with the longest growing season was Yates Center, Woodson County, with 230 days.



Drought conditions have shifted over the year, but end in a similar pattern to the start of the year. While none of the state was in exceptional drought, almost 6 percent of the state was in extreme drought conditions. By the end of the year, the portion of the state in extreme drought dropped to 2 percent. Wet conditions during the summer eased the impacts significantly. By the end of the summer, most of the eastern half of the state had moved into a drought free status. Lack of moisture in the late fall resulted in deterioration. That meant abnormally dry conditions returned to the east. However, the wet end to the year substantially reduced the drought coverage across the state. Little change is expected during the winter. Normal spring

**U.S. Drought Monitor
Kansas**



January 6, 2015
(Released Thursday, Jan. 8, 2015)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0	D1	D2	D3	D4
Current	19.49	43.02	18.91	16.71	1.98	0.00
Last Week (2/25/14)	19.49	43.02	19.18	16.05	2.25	0.00
3 Months Ago (8/29/14)	24.89	30.35	25.25	17.25	2.25	0.00
Start of Calendar Year (1/1/15)	19.49	43.02	19.18	16.05	2.25	0.00
Start of Water Year (10/1/14)	18.51	25.36	26.63	17.13	2.37	0.00
One Year Ago (1/6/14)	4.71	49.37	13.04	29.30	5.98	0.00

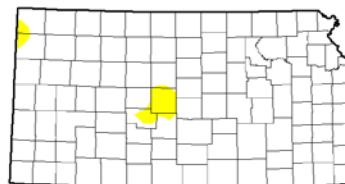
Intensity:
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
Brad Ropey
U.S. Department of Agriculture

<http://droughtmonitor.unl.edu/>

**U.S. Drought Monitor
Kansas**



December 29, 2015
(Released Thursday, Dec. 31, 2015)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0	D1	D2	D3	D4
Current	97.04	2.16	0.00	0.00	0.00	0.00
Last Week (12/22/15)	95.01	4.99	0.00	0.00	0.00	0.00
3 Months Ago (9/29/15)	90.79	14.72	4.49	0.00	0.00	0.00
Start of Calendar Year (1/1/15)	19.49	43.02	19.18	16.05	2.25	0.00
Start of Water Year (10/1/14)	90.79	14.72	4.49	0.00	0.00	0.00
One Year Ago (12/29/14)	19.49	43.02	19.18	16.05	2.25	0.00

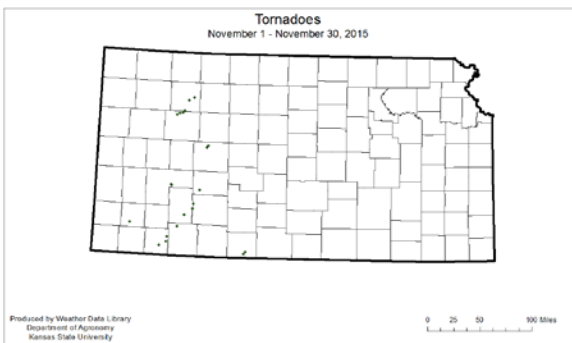
Author:
Chris Panomiro
NOAA/NWS/SR/CI/CEI

<http://droughtmonitor.unl.edu/>

Intensity:
 D0 Abnormally Dry D3 Extreme Drought
 D1 Moderate Drought D4 Exceptional Drought
 D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

rains are critical for continued improvement in drought conditions. The El Niño/Southern Oscillation (ENSO) has enhanced moisture across the region, and is expected to continue into the spring. The uncertainty of the continued El Niño provides little guidance for the summer seasonal outlook.

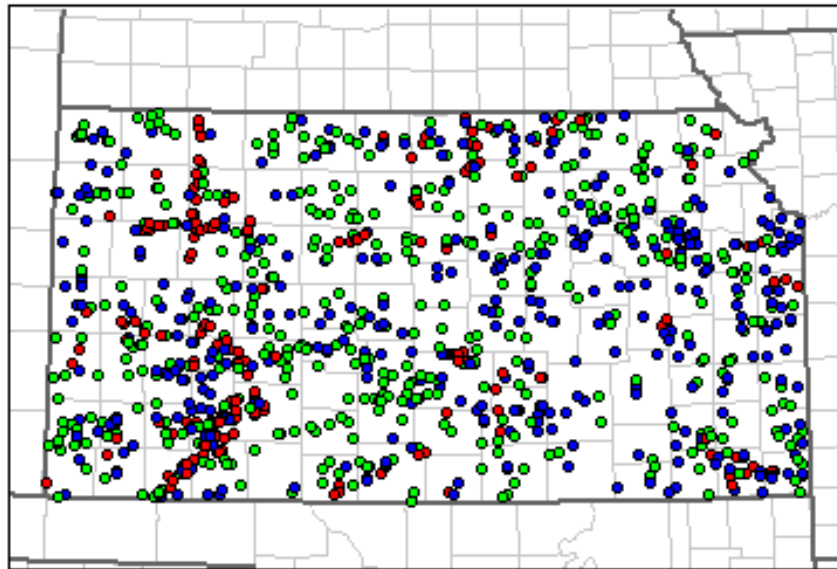


Severe weather was a factor in 2015, and the tornado season was more active than in previous years, particularly in November. Preliminary numbers from the Storm Prediction Center (SPC) show a total of 178 tornadoes in 2015. This compares to a five year average (2008-2012) of 116 tornadoes. There were 519 hail reports and 454 reports of damaging winds. According to the National Climatic Data Center (NCDC) storm database, there were 202 flood or flash flood events affecting over 75 counties through the end of September 2015. Preliminary damage reports total to property and crops from the floods was over 6.8 million dollars. Generally, these property

and crop damage reports are underestimated. In many cases, crop damage isn't immediately available and fails to be included in the storm total. Likewise, in property damage that is from uninsured losses often is also missing in the overall total. There were no excessive heat events reported in 2015, but there was one heat related fatality in Miami County. Dehydration was determined to be a significant factor in that fatality. Winter weather made its appearance in November. As noted earlier, severe weather included a tornado outbreak on the 16th. This was followed by blizzard conditions on the 18th and 19th. The month ended with a significant icing event from the 27th through the 29th. As of December 1st, Westar reported over 300 continuing outages, affecting more than 1,000 customers in the Hutchinson area alone.

Annual Severe Weather Report Summary - 2015

KS
Total Reports = 1151
Tornadoes = 178
Hail Reports = 519
Wind Reports = 454



● Tornado

● Wind Damage

● Hail

From Storm Prediction Center:

<http://www.spc.noaa.gov/climo/online/monthly/states.php?month=00&year=2015&state=KS>

Appendix:

Table 1							
Annual Summary							
Kansas Climate Division Summary							
	Precipitation (inches)			Temperature (°F)			
	2015 through December					Monthly Extremes	
Division	Total	Dep. ¹	% Normal	Ave	Dep. ¹	Max	Min
Northwest	20.84	-0.52	97	54.2	2.1	107	-17
West Central	21.67	0.90	103	55.1	1.7	106	-10
Southwest	28.23	8.33	141	57.4	2.3	108	-6
North Central	27.45	-0.56	96	55.4	2.0	108	-6
Central	28.57	-0.72	96	57.1	2.2	108	-6
South Central	34.90	3.58	111	57.7	1.3	110	-2
Northeast	39.55	4.55	112	54.8	1.4	102	-10
East Central	37.57	-0.35	97	56.5	1.5	103	-8
Southeast	41.69	0.20	99	57.9	1.1	104	-3
STATE	32.68	3.66	113	56.2	1.7	110	-17

1. Departure from 1981-2010 normal value
 2. State Highest temperature: 110 oF at Hudson (Stafford County) on July 14th.
 3. State Lowest temperature: -17 oF at St. Francis (Cheyenne County), January 1st
 4. Greatest Annual rainfall: 59.2 inches at Oswego, Labette County (NWS); 64.05 at Topeka 4.6 ESE, Shawnee County (CoCoRaHS).
 Source: KSU Weather Data Library

Maps:

