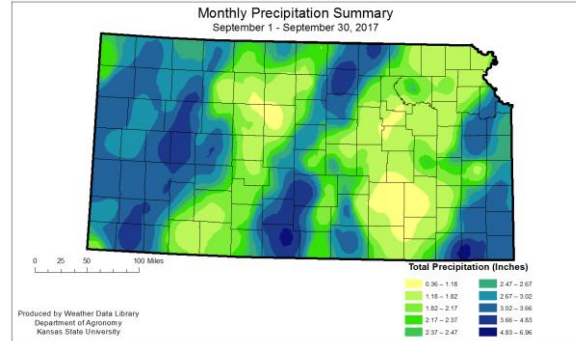


KANSAS CLIMATE SUMMARY

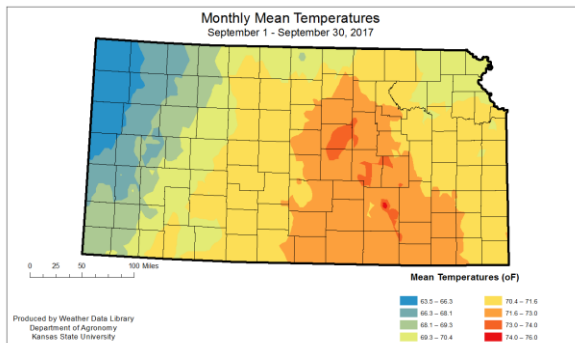
September 2017

Split Pattern

September saw a split pattern in the precipitation, with the heaviest rains in the western third of the state. All three western divisions saw more than 100 percent of normal, as did the South Central Division. None of the eastern divisions saw even half of their normal rainfall. This wasn't as much of a challenge in the East Central Division, which saw the only heavy precipitation in August. Statewide average precipitation was 2.09 inches or 94 percent of normal. Despite the overall low precipitation in the eastern third of the state, the greatest monthly total at a National Weather Service Coop (NWS) station was 6.79 inches at Mound Valley 3WSW, Labette County. The greatest monthly total at a Community Collaborative Rain Hail and Snow (CoCoRaHS) network station was 6.98 inches at Medicine Lodge 0.4 WSW, Barber County. The greatest daily totals for each network: 5.91 inches at Mound Valley 3WSW, Labette County, on the 19th (NWS); 6.40 inches at Preston 1.2 SE, Pratt County, on the 26th (CoCoRaHS).

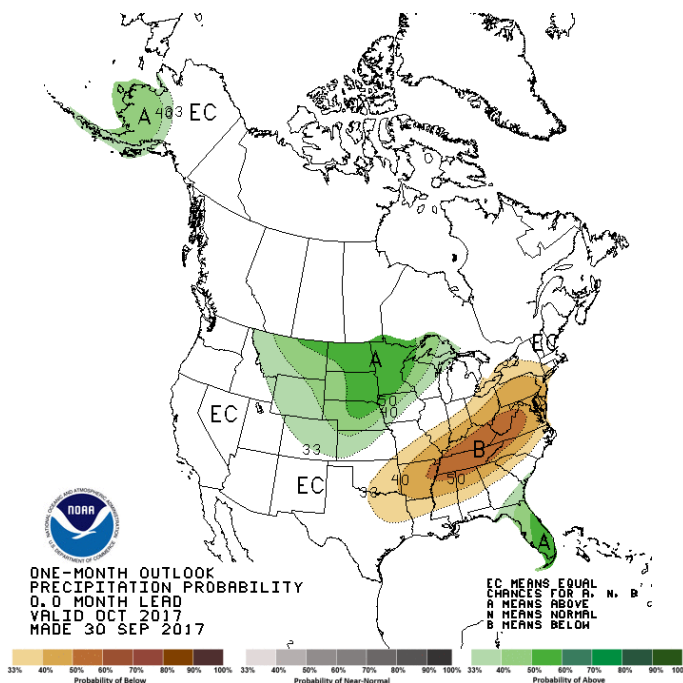
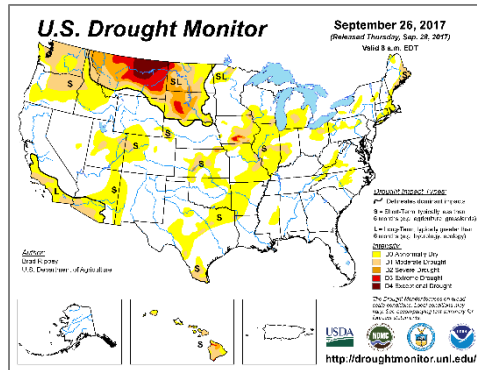


Temperatures averaged warmer than normal across all divisions. With all the rain, it isn't surprising that the western divisions came closest to normal for the month. The Southwest Division averaged 68.9 °F, or just 0.3 degrees warmer than normal. In contrast, the Northeastern Division averaged 70.5 °F or 3.2 degrees warmer than normal. The warmest reading for the month was 102 °F recorded at multiple locations and dates. The latest of those at Alton 6ESE on the 22nd. The coldest reading was 30 °F reported at Brewster 4W, Thomas County on the 6th. Most of the departure from normal came on the low temperature side. There were 67 new daily records for warm minimum temperatures, and only 51 new daily records for high maximum temperatures. Despite the warmth, there were 26 new record cold minimum temperatures and 6 new record low maximum temperatures. None of these set new records for the month.



Severe weather was extremely limited this month. The Storm Prediction Center's storm data base only notes two hail events recorded in September, and no records of wind damage or tornadoes. The most damaging event of the month was the flooding in South Central, KS, following the heavy rains from the 25th through the 26th of September.

The variable precipitation coupled with warmer than normal temperatures resulted in expansion of the abnormally dry condition. Areas of the state with much lower than normal precipitation had an expansion of moderate drought. The October outlook calls for wetter than normal conditions from Southwest to North Central KS, with equal chances of above or below normal precipitation across the rest of the state. This is coupled with increased chances of above normal temperatures in the eastern half of the state, with equal chances of above or below normal temperatures across the rest of the state. The much cooler than normal temperatures that have started the month will reduce some of the evaporative demand and the rainy start will alleviate some of the drought.



Appendix:

Precipitation and Temperature Maps

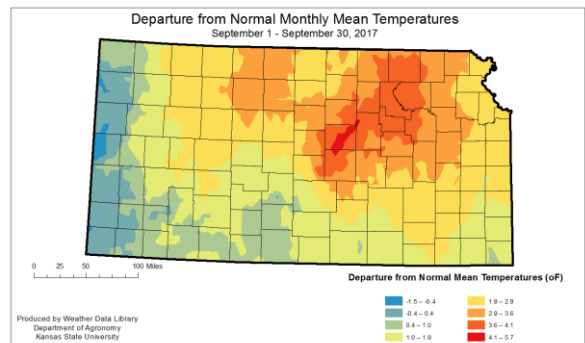
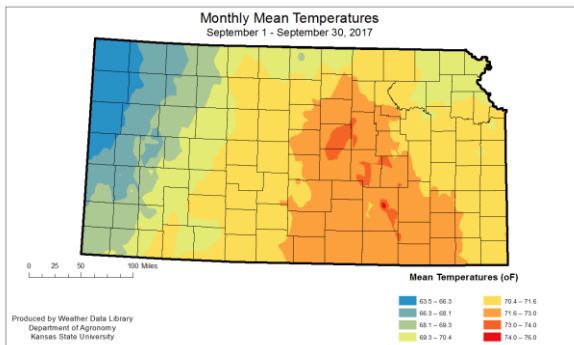
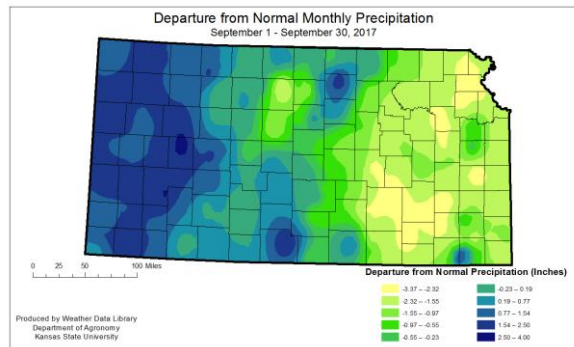
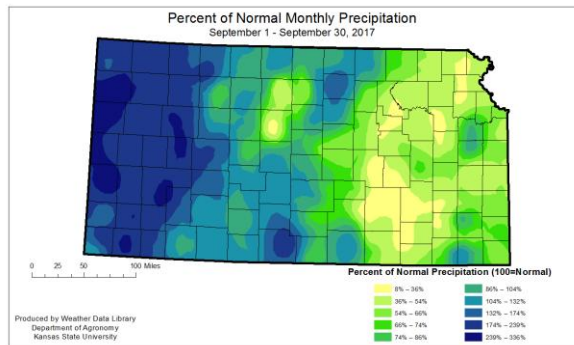
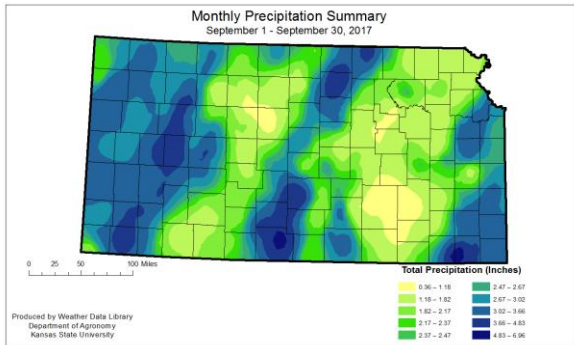


Table 1.

Table 1 Sep-17 Kansas Climate Division Summary										
Division	Precipitation (inches)						Temperature (°F)			
	Sep-17			2017 through September			Ave	Dep. ¹	Monthly Extremes	
	Total	Dep. ¹	% Normal	Total	Dep. ¹	% Normal			Max	Min
Northwest	1.71	0.19	110	18.41	0.00	100	66.1	0.9	102	36
West Central	2.62	1.02	167	21.25	3.36	119	67.4	1.1	100	36
Southwest	2.45	0.83	154	23.11	6.05	136	68.9	0.3	101	42
North Central	2.37	-0.26	91	23.45	-0.49	97	70.9	3.1	102	41
Central	1.69	-0.82	70	22.85	-2.14	92	72.2	3.1	101	40
South Central	2.80	0.20	110	28.34	2.27	109	71.6	1.4	99	43
Northeast	1.44	-2.17	41	26.02	-3.25	88	70.5	3.2	94	42
East Central	1.74	-1.92	45	29.31	-1.95	92	70.9	2.7	96	42
Southeast	1.54	-2.47	37	35.84	2.42	106	71.6	2.0	98	43
STATE	2.09	-0.53	94	25.69	1.07	105	70.0	2.0	102	36

1. Departure from 1981-2010 normal value

2. State Highest temperature: 102 oF at multiple locations/dates; latest at Alton 6ESE on the 22nd.

3. State Lowest temperature: 30 oF at Brewster 4W, Thomas County, on the 6th.

4. Greatest 24hr: 5.91 inches at Mound Valley 3WSW, Labette County, on the 19th (NWS); 6.40 inches at Preston 1.2 SE, Pratt County, on the 26th (CoCoRaHS).

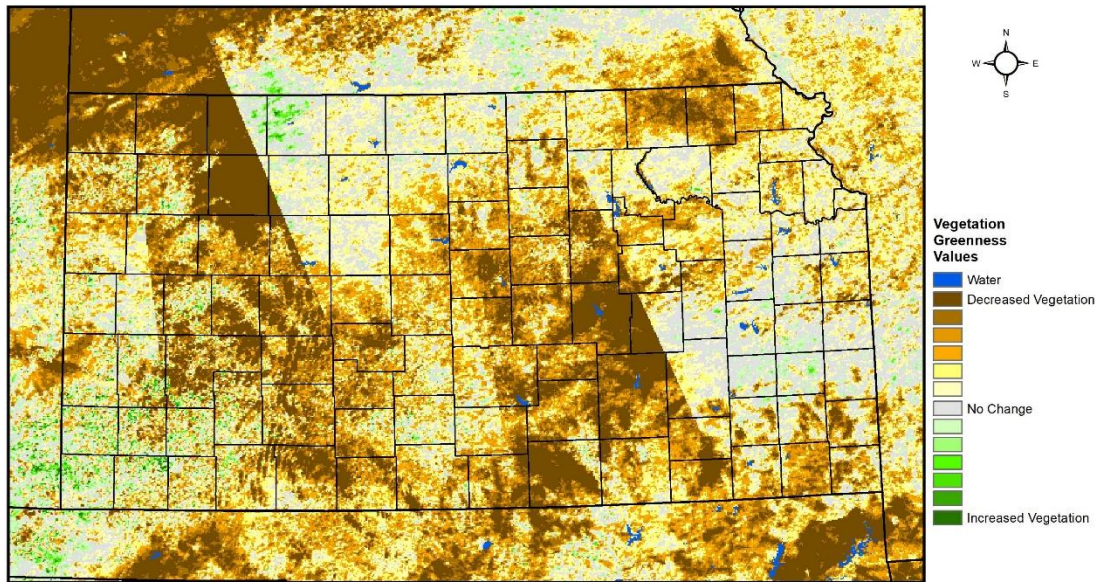
Source: KSU Weather Data Library

September Summary							
Station ¹	Precipitation (inches)			Temperature of F			
	Total	Departure	Percent Normal	Mean	Departure	Extreme (Date)	
						Highest	Lowest
West							
Burlington, CO	1.24	0.10	109%	64.5	1.1	97 (3)	37 (27,20)
Dodge City	1.54	-0.13	92%	72.0	2.8	101 (21)	45 (6)
Garden City	4.71	3.24	320%	69.8	1.6	98 (19,15)	43 (6)
Goodland	3.85	2.63	316%	65.8	1.2	96 (3)	38 (27)
Guymon, OK	4.79	3.00	268%	71.1	0.7	99 (14)	48 (6)
Hill City	1.38	-0.50	73%	71.2	3.7	101 (21)	41 (6)
Lamar, CO	2.29	1.04	183%	66.9	0.4	97 (21,3)	39 (20,19)
McCook, NE	3.08	1.64	214%	68.4	4.0	101 (3)	36 (6)
Springfield, CO	3.66	2.42	295%	65.4	1.2	93 (3)	39 (20)
Central							
Concordia	5.25	2.34	180%	70.7	2.7	95 (14)	44 (7,6)
Hebron, NE	2.04	-0.88	70%	70.7	4.8	97 (15,14)	43 (7,6)
Medicine Lodge	5.95	3.85	283%	72.4	1.2	98 (21)	45 (6)
Ponca City, OK	3.44	0.15	105%	74.5	2.4	97 (4)	46 (6)
Salina	1.83	-0.87	68%	75.1	4.9	100 (21)	46 (6)
Wichita (ICT)	2.34	-0.80	75%	73.8	2.8	98 (21,4)	46 (6)
East							
Bartlesville, OK	1.25	-2.59	33%	71.6	0.3	97 (4)	44 (6)
Chanute	3.59	-0.08	98%	72.2	2.3	94 (4)	47 (7,6)
Falls City, NE	2.90	-0.65	82%	70.8	4.1	93 (14)	44 (7,6)
Johnson Co. Exec. Apt	2.21	-2.30	49%	70.5	1.9	89 (21)	49 (6)
Joplin, MO	1.49	-3.46	30%	72.6	1.8	92 (20,4)	48 (6)
Kansas City (MCI), MO	2.80	-1.82	61%	71.1	2.9	90 (21)	46 (7)
St. Joseph, MO	1.03	-2.39	30%	70.3	3.7	93 (22,21)	42 (6)
Topeka (TOP)	1.78	-1.88	49%	71.9	3.6	92 (22,21)	46 (7)

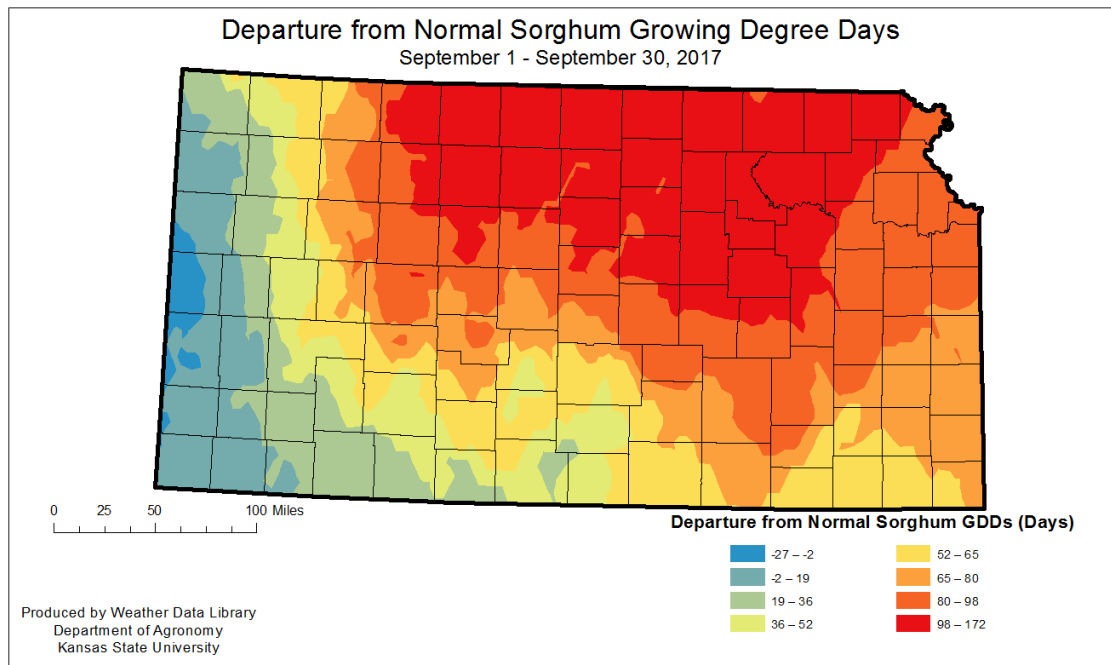
1. Airport Automated Observation Stations (NWS/FAA)
2. Departure from 1981-2010 normal value
T - Trace; M - Missing; --- no normal value from which to calculate departure or percent of normal
Source: National Weather Service F-6 Climate Summaries

Vegetative Health Index Map:

Kansas Vegetation Condition Comparison
 Late-Sept/Early-Oct 2017 compared to the 28-Year Average for Late-Sept/Early-Oct



0 25 50 100 150 200 Miles
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Sorghum Growing Degree Days compared to Normal