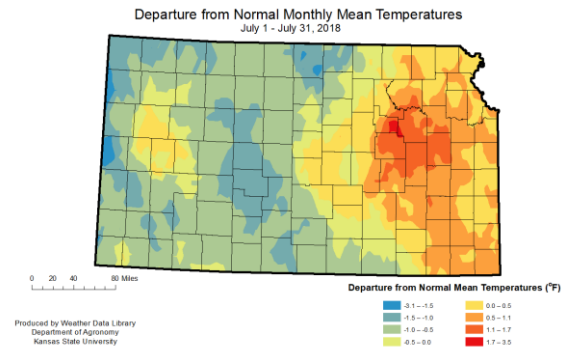


KANSAS CLIMATE SUMMARY

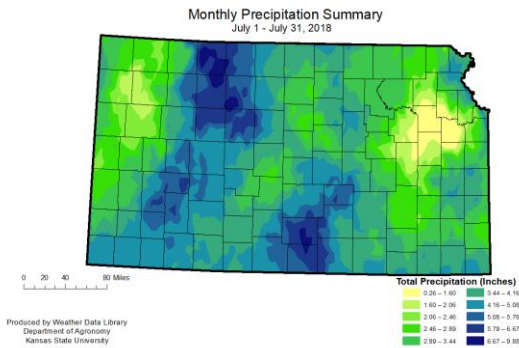
July 2018

Split Pattern

July started on a warm note but ended with a cool pattern. State-wide average temperature for the month was 79.0 °F. This was just 0.4 degrees warmer than normal, and ranks as the 55th warmest since 1895. The East Central Division had the greatest departure with an average of 79.8 °F which was 1.4 degrees warmer than normal. The six divisions in the central and western parts of the state were all within a half a degree Fahrenheit of normal. The Northwest Division was the coldest with an average of 76.2 °F and a departure of -0.5 degrees. There were just 4 new record daily warm maximum temperatures and only 4 new daily record warm minimum temperatures. None of the daily records set new monthly temperature records for July. Similar patterns were seen on the cold side. There were 2 new record coldest maximums and 2 record coldest minimum temperatures. The warmest temperature reported during the month was 112 °F at Ashland, Clark County on the 26th. The coldest temperature reported during July was 42 °F, reported at Brewster 4W, Sherman County, on the 26th.



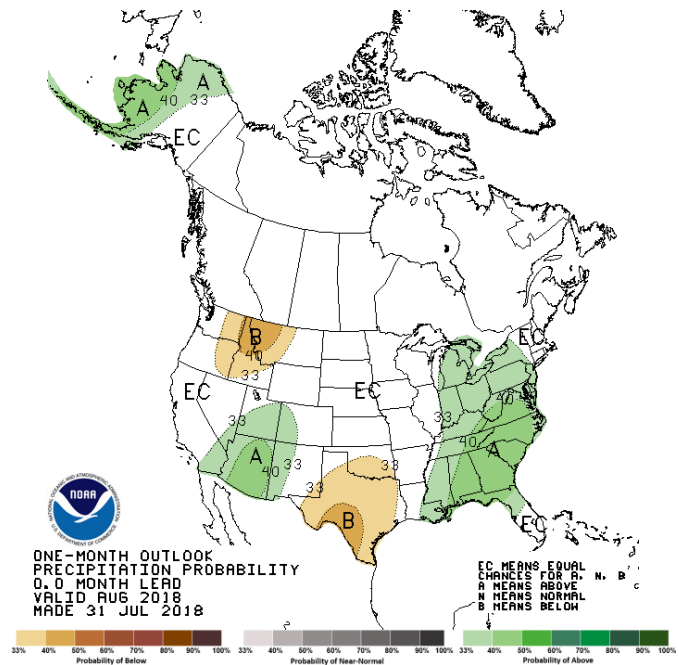
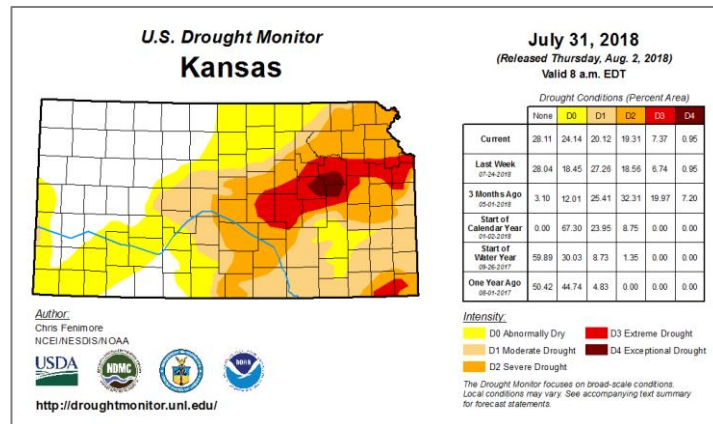
The July precipitation showed a similar split pattern, with the greatest rainfall totals in the western and central parts of the state. The state-wide average precipitation was 3.94 inches which was 110 percent of normal. The division with the largest surplus was the Southwest Division, with an average of 5.56 inches, or 205 percent of normal. During the last week of the month, 88 out of 106 reporting stations in the Southwest Division had 2 inches or more of precipitation, indicating a more general distribution than was the case in June. The East Central Division had the greatest shortfall, with an average of 2.20 inches creating a deficit of 2.10 inches. That translates to 50 percent of normal. The greatest monthly total for a National Weather Service Cooperative station was at



Hill City 1E, Graham County, with 9.88 inches. The Community Collaborative Rain, Hail and Snow network station with the greatest monthly precipitation was Pratt 1.6 SSE, Pratt County, with 10.06 inches on the 20th. Among the Kansas Mesonet stations, the Hill City station in Graham County had the greatest monthly total with 9.56 inches.

With the resurgence of moisture, severe weather reports during the month also increased. Tornado numbers continued on the low side with only 1 tornado reported. Unfortunately wind and hail caused significant damage. Complete damage estimates are not yet available. In one instance, storm damage contributed to a house explosion in Topeka. Several people were injured. Damage to the home was estimated at \$150,000 with damage to neighboring homes at \$100,000. Total storm reports: 1 tornado, 50 hail events, and 135 reports of damaging wind.

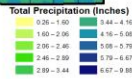
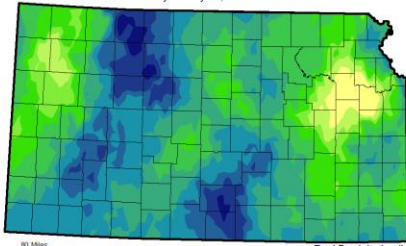
Not surprisingly, the above normal rain in the west brought improvements in the drought conditions there. Unfortunately, the lack of rain coupled with warmer temperatures resulted in expansion of the drought in the east. Exceptional drought reappeared, and extreme drought has shifted into Central and East Central Kansas. Currently, 28 percent of the state is drought free, while just under 1 percent is in exceptional drought conditions. The August outlook has equal chances for above or below normal precipitation across the state. The temperature outlook is also neutral statewide. That combination is unlikely to result in significant improvement of the drought conditions in the east, as consistent above normal moisture would be needed to bring relief.



Appendix:

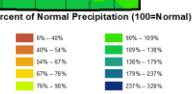
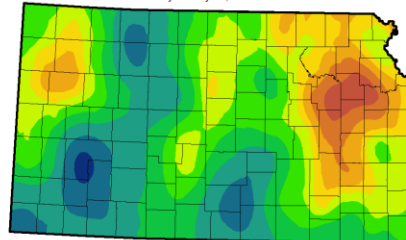
Precipitation and Temperature Maps

Monthly Precipitation Summary
July 1 - July 31, 2018



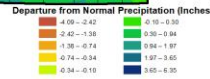
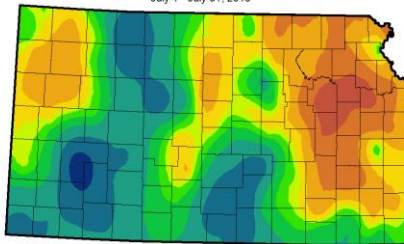
Produced by Weather Data Library
Department of Agronomy
Kansas State University

Percent of Normal Monthly Precipitation
July 1 - July 31, 2018



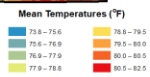
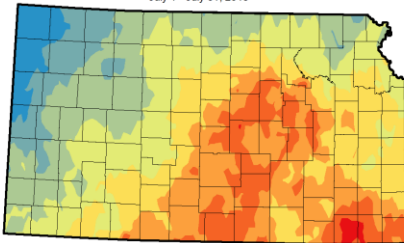
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Departure from Normal Monthly Precipitation
July 1 - July 31, 2018



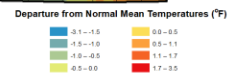
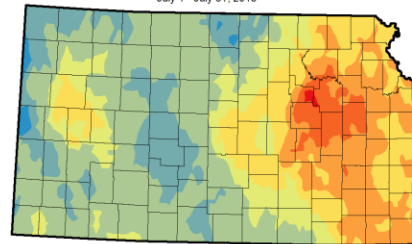
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Monthly Mean Temperatures
July 1 - July 31, 2018



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Departure from Normal Monthly Mean Temperatures
July 1 - July 31, 2018



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Table 1.

Table 1										
Jul-18										
Kansas Climate Division Summary										
	Precipitation (inches)						Temperature (°F)			
	Jul-18			2018 through July			Ave	Dep. 1	Monthly Extremes	
Division	Total	Dep. 1	% Normal	Total	Dep. 1	% Normal			Max	Min
Northwest	3.20	-0.29	89	11.87	-2.29	82	76.2	-0.5	100	50
West Central	3.80	0.36	109	13.70	0.01	99	77.6	0.3	105	54
Southwest	5.66	2.89	205	14.03	1.30	110	78.7	-0.2	112	51
North Central	3.68	-0.43	90	14.92	-3.11	83	78.8	-0.2	103	52
Central	4.36	0.42	110	13.97	-4.94	75	80.1	0.3	104	55
South Central	4.99	1.46	140	17.93	-2.10	89	80.3	-0.1	103	61
Northeast	3.05	-1.33	69	13.94	-7.83	66	78.9	1.0	103	55
East Central	2.20	-2.10	50	13.35	-10.16	56	79.8	1.4	102	56
Southeast	3.38	-0.69	83	18.64	-7.03	72	80.5	1.2	103	57
STATE	3.94	0.21	110	14.92	-3.75	82	79.0	0.4	112	50

1. Departure from 1981-2010 normal value

2. State Highest temperature: 112 oF at Ashland, Clark County, on the 21st.

3. State Lowest temperature: 42 oF at Brewster 1W, Sherman County, on the 27th.

4. Greatest 24hr: 5.45 inches at Hill City 1E, Graham County, on the 1st (NWS); 5.66 inches at Weskan 0.4 NNW, Wallace County, on the 20th (CoCoRaHS).

Source: KSU Weather Data Library

July Summary							
Station ¹	Precipitation (inches)			Temperature of F			
	Total	Departure	Percent Normal	Mean	Departure	Extreme (Date)	
						Highest	Lowest
West							
Burlington, CO	1.55	-1.58		75.0	0.5	100 (19)	48 (31)
Dodge City	3.93	0.85		79.4	-0.2	103 (20)	55 (31)
Garden City	9.13	6.35		77.6	-0.6	102 (20,19)	54 (31)
Goodland	1.03	-2.44		75.5	-0.2	100 (19)	50 (31)
Guymon, OK	1.37	-1.29		80.0	0.4	110 (20)	53 (31)
Hill City	4.08	0.37		78.4	-0.7	100 (12, 4)	55 (31)
Lamar, CO	1.05	0.08		67.1	2.5	91 (19,22)	40 (2)
McCook, NE	6.61	3.36		76.4	0.5	98 (12,11)	51 (31)
Springfield, CO	3.76	0.93		75.2	-1.0	104 (20)	48 (31)
Central							
Concordia	2.55	-1.37		77.3	-1.8	97 (12,3)	56 (31)
Hebron, NE	2.67	-1.46		77.3	0.2	100 (12)	56 (31)
Medicine Lodge	5.17	1.79		80.6	-1.5	99 (13,12)	58 (31)
Ponca City, OK	2.99	-0.34		82.1	0.3	103 (19)	60 (31)
Salina	3.05	-1.24		80.7	-0.5	101 (12,3)	59 (31)
Wichita (ICT)	4.59	1.27		82.1	1.0	101 (19)	62 (31,30)
East							
Bartlesville, OK	3.34	-0.07		80.3	-0.8	102 (19)	60 (8)
Chanute	3.24	-1.13		80.3	0.8	98 (19)	58 (27)
Falls City, NE	1.21	-3.83		76.7	-0.8	100 (12)	57 (25)
Johnson Co. Exec. Apt	3.27	-0.45		78.6	0.3	99 (12)	61 (31)
Joplin, MO	2.06	-1.75		80.7	0.5	102 (19)	58 (27)
Kansas City (MCI), MO	5.29	0.84		78.9	0.6	100 (12)	59 (31)
St. Joseph, MO	1.10	-4.09		77.2	0.1	98 (13,12)	55 (25)
Topeka (TOP)	0.49	-3.33		80.3	1.3	101 (12,11)	57 (31)
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							

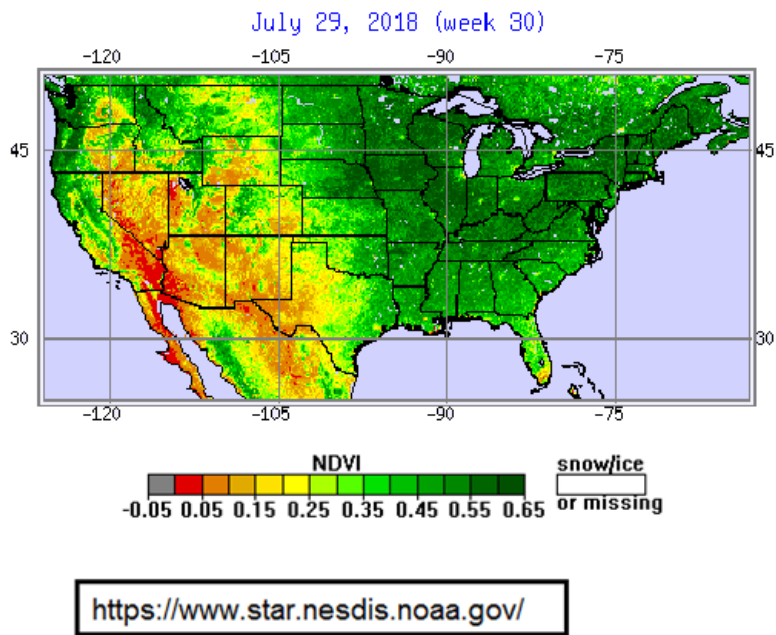


Figure 1. Current Greenness Map (NOAA)

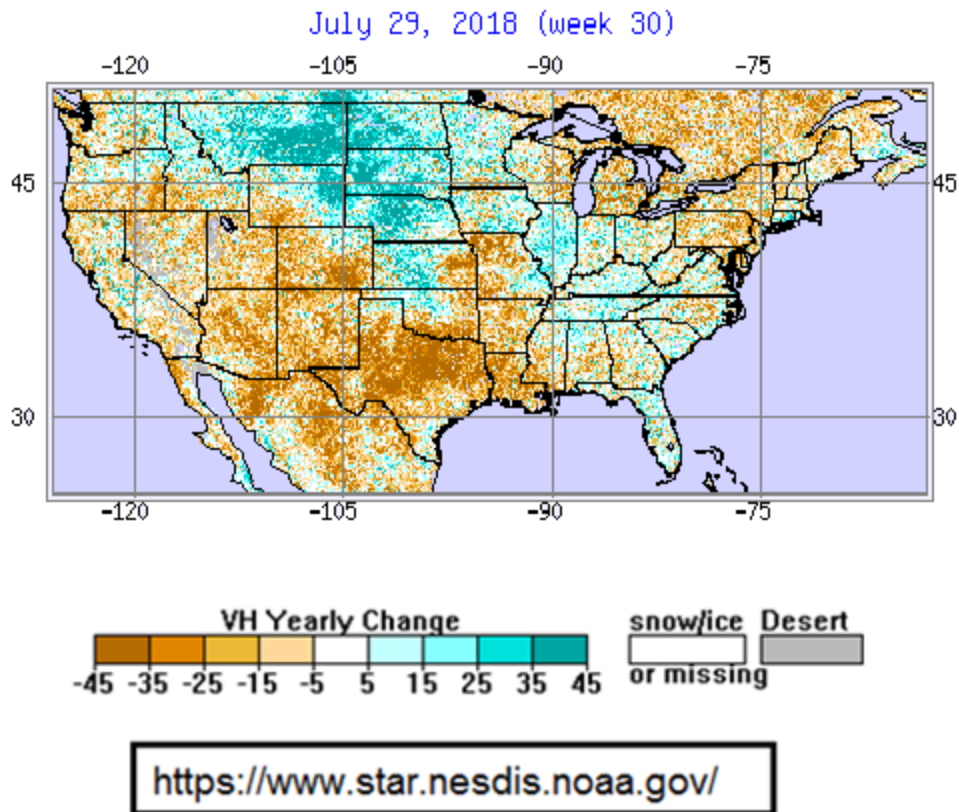


Figure 2. Change in Vegetative Health from 2017