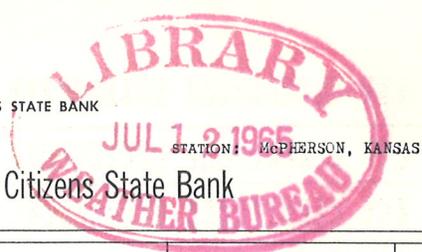


U. S. DEPARTMENT OF COMMERCE, WEATHER BUREAU
 IN COOPERATION WITH RADIO STATION KNEX AND THE McPHERSON & CITIZENS STATE BANK
 CLIMATOGRAPHY OF THE UNITED STATES NO. 20 - 14



LATITUDE 38° 20'
 LONGITUDE 97° 40'
 ELEV. (GROUND) 1495 Ft.

CLIMATOLOGICAL SUMMARY

STATION: McPHERSON, KANSAS

Brought to you through the courtesy of the McPherson & Citizens State Bank

MEANS AND EXTREMES FOR PERIOD 1893-1962 * ++

Month	Temperature (°F)							** Mean degree days	Precipitation Totals (Inches)							Mean number of days					Month			
	Means			Extremes					Mean	Greatest daily	Year	Snow, Sleet				Precip. .10 inch or more	Temperatures							
	Daily maximum	Daily minimum	Monthly	Record highest	Year	Record lowest	Year					Mean	Maximum monthly	Year	Greatest daily		Year	90° and above	Max.			Min.		
																			30° and below	32° and below		32° and below	0° and below	
(a)	70	70	70	70		70		30++	70	70		70	70	70	70	70	30#	30#	30#	30#	30#			
Jan.	40.2	19.9	30.1	72	13/28+	-22	3/19	1051	0.77	1.20	7/137	4.3	17.7	1898	10.0	26/149	2	0	8	27	2	Jan.		
Feb.	45.0	22.7	33.8	83	14/154+	-27	12/199	832	1.17	2.55	27/148	6.2	27.4	1900	20.0	25/112	3	0	5	22	1	Feb.		
Mar.	56.6	31.5	44.1	94	27/107	-11	11/148	663	1.60	1.97	19/195	4.3	27.5	1912	19.0	3/160	4	0	2	16	*	Mar.		
Apr.	68.3	43.0	55.7	97	29/110	10	3/136+	282	2.63	3.26	19/133	1.0	12.8	1901	12.0	2/101	4	*	0	4	0	Apr.		
May	76.7	52.7	64.7	106	23/139	22	1/109	102	4.28	3.83	31/120	T	T	1953+	T	22/193	7	3	0	*	0	May		
June	87.1	62.8	74.9	114	25/111	40	4/197	6	4.48	4.05	30/120	0	0				6	13	0	0	0	June		
July	93.1	67.6	80.4	117	24/136+	47	31/160	0	3.20	4.52	4/197	0	0				5	22	0	0	0	July		
Aug.	92.7	67.0	79.9	117	12/136	42	30/115	0	3.18	3.20	13/127	0	0				5	21	0	0	0	Aug.		
Sept.	83.8	58.4	71.1	109	3/147+	28	30/195	36	3.23	3.70	28/145	0	0				5	9	0	*	0	Sept.		
Oct.	71.6	46.5	59.1	98	3/154	12	30/117	223	2.21	3.40	3/142	0.2	4.3	1898	4.3	24/198	4	1	0	2	0	Oct.		
Nov.	55.7	32.7	44.2	85	3/24+	-3	13/140	624	1.31	3.14	3/138	1.5	12.8	1952	12.0	29/152	3	0	1	15	*	Nov.		
Dec.	43.3	23.3	33.3	81	24/155	-13	28/194	936	0.93	1.74	4/144	4.0	20.0	1895	14.0	24/118	2	0	5	26	*	Dec.		
Year	67.8	44.0	55.9	117	Aug. 12 1936+	-27	Feb. 12 1899	4755	28.99	4.52	July 4 1897	21.5	27.5	1912	20.0	Feb. 25 1912	50	69	21	112	3	Year		

(a) Average length of record, years.
 T Trace, an amount too small to measure.
 ** Base 65°F.

+ Also on earlier dates, months, or years.
 * Less than one half.

++ 1931-1960.
 # 1933-1962.

CLIMATE OF McPHERSON, KANSAS

McPherson is located about the center of the county bearing the same name. Drainage is about equally divided between the Smoky Hill River to the north and the Arkansas River southward. The broad and quite level fields of rich soil are well adapted to agriculture and especially to wheat farming.

A distinctly continental type of climate prevails with a good range in daily and seasonal temperatures and a rainfall regime providing 72% of the year's total from April through September. Extremes and variations in all weather elements do occur but the day by day run of the mill weather is quite conducive to the physical welfare and comfort of man and beast and good crop production.

Wind, humidity and sunshine records are not kept at McPherson but the record from the Weather Bureau office in Wichita provides close approximations. The prevailing wind direction is southerly with average mean hourly speeds increasing from 11.5 mph in July to 15.2 mph in April. Under stormy conditions, speeds up to 60 to 66 mph have been recorded with the higher velocities generally from the northwest. Highest relative humidities average 80 to 85% in the early mornings through May and June, dropping to an average of 43% late in the afternoons of August. The percent of the possible sunshine rises from 47% in February to 76% in October, indicating considerably more cloudiness in winter than in summer.

The crop season is awakened with the increase of daytime length, warming days, a more showery type of precipitation, rising wind velocities and a greater frequency of severe storms. The transition into summer brings high temperatures and a thunderstorm type of precipitation. The fall harvest season often has a period of bright sunny days and crisp cool nights. Leaden gray skies of winter begin to make their appearance in late November with snow flurries and at least freezing temperatures generally at night from mid-December to mid-March.

PRECIPITATION: The least chance of a measurable amount of precipitation during the year is from January 17 through January 30 when the chance of receiving 0.10 inch or more in a week drops to less than 35%. May and June are, of course, the months of heaviest rain. The chance of 0.10 inch or more per week rises to 80% in each of the 5 weeks from May 10 to June 13. Of particular notice is the slump in rainfall the latter part of July and early August when the normal drops to approximately 1/2 inch per week and returns to approximately 3/4 inch during the 5 weeks from August 9 through September 12.

With the shift in the general circulation pattern from the Gulf of Mexico as a rainfall source in wet years to the hot, arid section of the southwest United States in drought years, McPherson experiences a considerable variation in rainfall. One of the longest dry spells was the 65 days without more than 0.25 inch of rain on any day from March 29 to June 3, 1939. A dry period of 30 days without more than 0.25 inch of rain on any day April through September is apt to occur about twice in three years. The heaviest 24-hour rains, 4 to 4.50 inches have fallen in June and July but 24-hour falls of 3 to 4 inches have been recorded each month from April through November. More than one-fourth of the annual amount of snow falls in February. Eight of the 14 months with 15 inches or more of snow have been

Februarys and the greatest depth of snow on the ground was on February 25, 1912. During the winter of 1911-12, 62 inches of snow was recorded. In contrast, no more than a trace fell at any one time during the winter of 1903-4.

TEMPERATURES: Much of the year the average daily range is about 25° and over the years recorded extremes have varied 144°. Winter occasionally brings sudden and very pronounced changes but generally the temperature transitions are not severe. A few of the recorded extremes of temperature during the 72 years follows: The warmest month, July 1934, had a mean of 90.0°. Afternoon temperatures that month averaged 105.3° and in only 4 other months has the mean maximum averaged 100° or higher. In 1936 there were 68 days with maxima of 100° or higher, the greatest number for any one summer. The 24 days July 6-29, 1901, are the greatest number of consecutive days with 100° or higher. The summers of 1895, 1906, and 1915 had no 100° temperatures. January 1940, with a mean temperature of 14.4°--the coldest month--had 11 nights on which the temperature dropped below zero and only seven afternoons with above freezing temperatures. During the severe cold of January 29-February 13, 1899 there were 16 consecutive nights with zero or lower and on 3 days of this period the temperature did not rise above zero. Eight winters have passed without zero temperatures. McPherson has an average freeze-free period of approximately 185 days from April 20 to October 22. The earliest and latest dates of the last 32° freeze in the spring are March 29, 1941 and May 27, 1907. In the fall the earliest and latest dates of the first 32° freeze are September 20, 1918 and November 20, 1944. The table below gives the probability for the dates of last occurrence of temperatures of 16°, 20°, 24°, 28°, and 32° in the spring and the first in the fall.

	16°F	20°F	24°F	28°F	32°F
SPRING					
1 year in 10	Mar. 29	Apr. 7	Apr. 16	Apr. 25	May 5
2 years in 10	Mar. 23	Apr. 1	Apr. 11	Apr. 20	Apr. 30
5 years in 10	Mar. 11	Mar. 22	Apr. 2	Apr. 10	Apr. 20
FALL					
1 year in 10	Nov. 11	Nov. 6	Oct. 25	Oct. 16	Oct. 8
2 years in 10	Nov. 17	Nov. 11	Oct. 31	Oct. 21	Oct. 12
5 years in 10	Nov. 29	Nov. 22	Nov. 10	Oct. 30	Oct. 22

Severe storms are generally of short duration, local in nature and with variable damage. Considerable crop and property damage may result from the infrequent severe hail storms. Wind squalls occasionally occur and 8 tornadoes were reported in McPherson County from 1950-1962. Duststorms are confined to drought periods.

STATION HISTORY

This climatological history is based on a series of daily observations begun in 1876. No information is available regarding the earliest observers. F. T. Dinkle was observer from January 1889 until October 1890. On October 4, 1890 Edward F. Haberlein became observer and a most excellent weather record was compiled by him and his son Edward M. Haberlein over the 65 years of their combined service. Their reports contain many special items and comments about the weather and the various effects which adds much to this long record. On October 18, 1955 the station was moved approximately 3 miles south to Radio Station KNEX under supervision of Mr. Claude L. Hughes.

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 Weather Bureau, Popoka, Kansas

