

1999

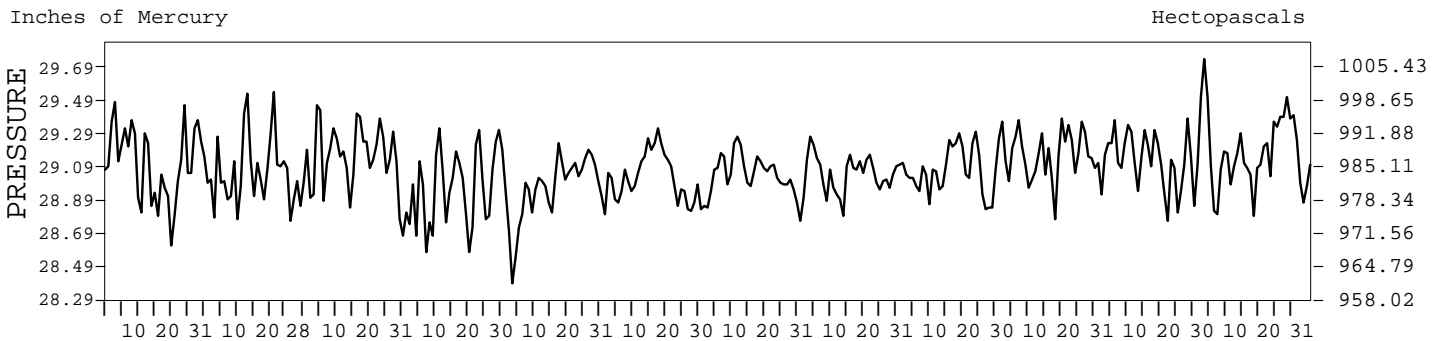
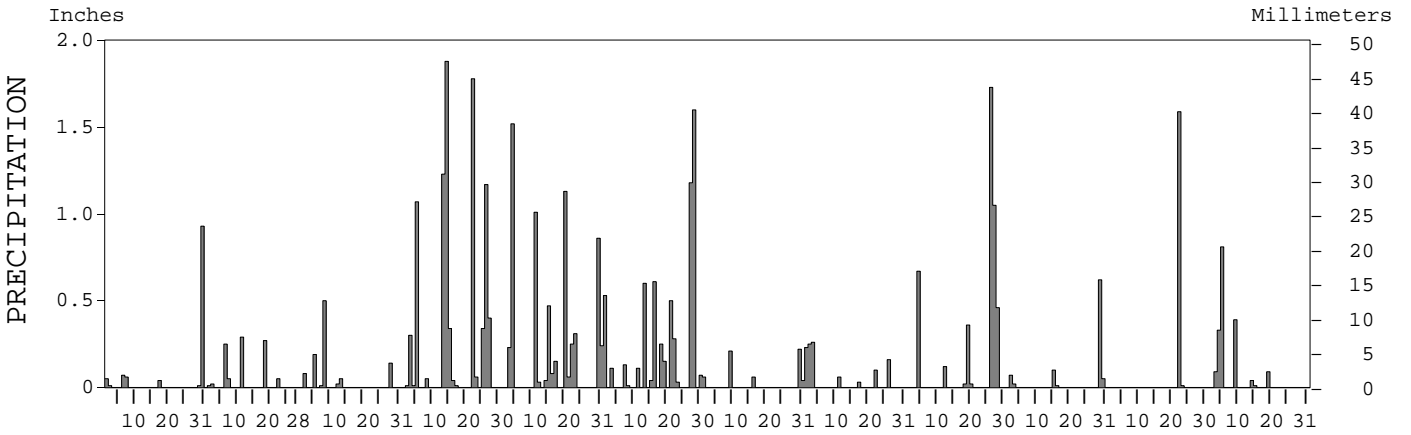
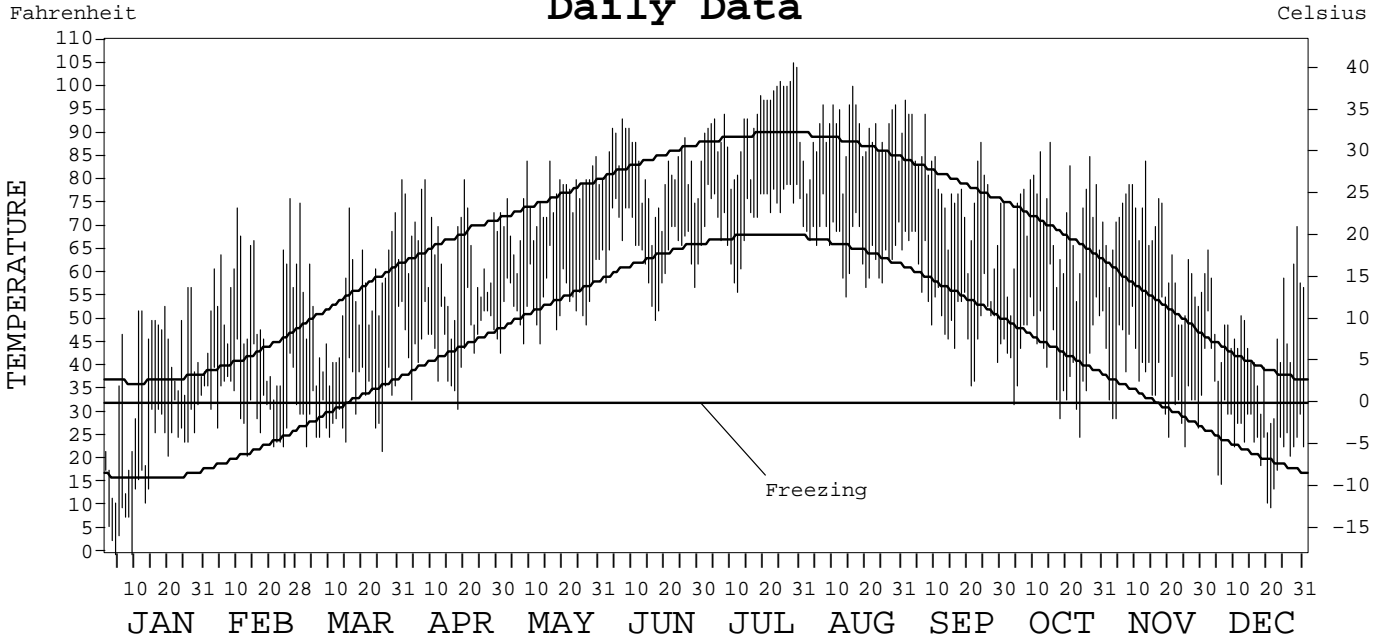
LOCAL CLIMATOLOGICAL DATA  
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2192

TOPEKA,  
KANSAS (TOP)

Daily Data



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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# METEOROLOGICAL DATA FOR 1999

## TOPEKA, KS (TOP)

LATITUDE: 39° 04' 21" N      LONGITUDE: 95° 37' 33" W      ELEVATION (FT): GRND: 881      BARO: 881      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13996

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	37.4	53.4	54.4	65.0	75.3	81.9	92.5	89.4	78.1	71.1	65.5	46.3	67.5	
	HIGHEST DAILY MAXIMUM	57	76	75	80	85	93	105	100	97	88	84	70	105	
	DATE OF OCCURRENCE	27+	26	01	20+	30	07	29	16	01	15	13	29	JUL 29	
	MEAN DAILY MINIMUM	19.8	32.4	32.1	45.2	54.2	64.8	72.2	65.7	53.1	42.7	37.0	26.0	45.4	
	LOWEST DAILY MINIMUM	0	21	22	31	43	50	56	55	36	25	23	10	0	
	DATE OF OCCURRENCE	9 +	13	26	18	01	17	12	14	21	24	25	21	JAN 9 +	
	AVERAGE DRY BULB	28.6	42.9	43.3	55.1	64.8	73.4	82.4	77.6	65.6	56.9	51.3	36.2	56.5	
	MEAN WET BULB	26.3	37.8	37.4	50.3	58.5	67.6	73.1	69.2	58.6	49.3	44.6	33.0	50.5	
	MEAN DEW POINT	21.5	31.5	28.8	45.7	53.5	64.4	68.8	64.9	53.3	42.0	37.7	28.0	45.0	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	5	21	16	4	0	0	0	0	46
	MAXIMUM ≤ 32°	9	0	0	0	0	0	0	0	0	0	0	4	13	
	MINIMUM ≤ 32°	28	15	17	1	0	0	0	0	0	4	8	26	99	
	MINIMUM ≤ 0°	2	0	0	0	0	0	0	0	0	0	0	0	2	
H/C	HEATING DEGREE DAYS	1122	613	667	295	58	12	0	0	92	261	408	886	4414	
	COOLING DEGREE DAYS	0	0	0	5	57	269	545	396	120	20	1	0	1413	
RH	MEAN (PERCENT)	76	69	61	74	68	76	66	69	68	62	65	74	69	
	HOUR 00 LST	80	77	67	82	81	85	76	80	81	74	74	81	78	
	HOUR 06 LST	82	79	80	87	83	87	83	85	87	83	82	83	83	
	HOUR 12 LST	69	61	49	65	57	65	54	53	52	45	48	64	57	
	HOUR 18 LST	72	59	46	63	54	65	53	55	54	49	53	68	58	
S	PERCENT POSSIBLE SUNSHINE	47	55	68	49	76	70	85	73	65	80	85	54	67	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	2	1	2	1	3	0	3	1	1	5	2	22	
	THUNDERSTORMS	0	1	1	7	13	6	6	7	8	3	1	2	55	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.12	29.07	29.16	28.96	28.97	29.03	29.04	29.06	29.09	29.16	29.18	29.15	29.08	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	30.02	30.11	29.89		29.95	29.96	29.98	30.02		30.13	30.11		
WINDS	RESULTANT SPEED (MPH)	2.9	1.0	2.5	1.5	1.2	3.6	2.8	2.1	0.5	0.1	1.6	0.8	0.5	
	RES. DIR. (TENS OF DEGS.)	35	21	06	34	22	13	16	10	15	17	21	30	13	
	MEAN SPEED (MPH)	8.3	9.3	9.2	10.8	8.8	7.7	7.8	6.3	6.2	6.7	6.9	7.3	7.9	
	PREVAIL. DIR. (TENS OF DEGS.)	05	17	01	29	14	16	18	09	18	36	18	36	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	30	33	29	37	47	32	25	28	36	32	33	30	47	
	DIR. (TENS OF DEGS.)	32	30	31	34	34	01	15	33	35	18	18	35	34	
	DATE OF OCCURRENCE	02	12	02	15	30	28	15+	11	26	29	18	27	MAY 30	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	37	40	36	51	59	38	32	33	47	39	46	39	59	
DIR. (TENS OF DEGS.)	32	30	33	35	34	01	20	32	34	16	18	35	34		
DATE OF OCCURRENCE	02	11	02	15	30	28	30	11	26	29	18	27	MAY 30		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.17	0.94	0.99	8.69	6.38	6.20	0.59	1.09	4.43	0.87	1.60	1.76	34.71	
	GREATEST 24-HOUR (IN.)	0.93	0.30	0.51	2.15	1.52	2.65	0.22	0.51	2.68	0.62	1.60	1.14	2.68	
	DATE OF OCCURRENCE	30	06-07	07-08	14-15	04	27-28	30	02-03	26-27	29	22-23	04-05	SEP 26-27	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	7	7	7	15	14	16	5	7	8	6	2	7	101	
PRECIPITATION ≥ 0.10	1	3	3	9	10	12	2	5	6	2	1	3	57		
PRECIPITATION ≥ 1.00	0	0	0	5	3	2	0	0	2	0	1	0	13		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	4.0	2.0	1.8	T	T	0.0	0.0	0.0	0.0	0.0	0.0	7.6	15.4	
	GREATEST 24-HOUR (IN.)	2.2	2.0	1.0	T	T	0.0	0.0	0.0	0.0	0.0	0.0	6.0	6.0	
	DATE OF OCCURRENCE	06	22	12	16	11							05	DEC 05	
	MAXIMUM SNOW DEPTH (IN.)	2	2	1	0	0	0	0	0	0	0	0	4	4	
	DATE OF OCCURRENCE	07	22	13+									06+	DEC 06+	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	1	1	1	0	0	0	0	0	0	0	0	1	4		

# NORMALS, MEANS, AND EXTREMES

## TOPEKA, KS (TOP)

LATITUDE: 39° 04' 21" N      LONGITUDE: 95° 37' 33" W      ELEVATION (FT): GRND: 881      BARO: 881      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13996

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	37.0	42.6	55.0	66.9	75.8	84.2	89.3	87.5	79.7	69.0	54.0	40.5	65.1
	MEAN DAILY MAXIMUM	52	37.4	43.3	53.9	66.4	75.9	84.5	89.2	88.1	80.6	69.7	53.7	42.0	65.4
	HIGHEST DAILY MAXIMUM	52	73	84	89	95	97	107	110	110	109	96	85	73	110
	YEAR OF OCCURRENCE		1967	1972	1986	1987	1998	1953	1980	1984	1947	1963	1980	1998	AUG 1984
	MEAN OF EXTREME MAXS.	51	61.4	67.0	78.2	86.3	89.7	95.6	99.2	99.3	94.5	87.1	74.1	63.8	83.0
	NORMAL DAILY MINIMUM	30	16.3	21.7	32.1	42.8	53.3	62.9	67.6	64.9	55.7	43.6	32.0	21.0	42.8
	MEAN DAILY MINIMUM	52	17.1	22.4	31.1	42.6	53.4	63.1	67.5	65.4	55.9	44.6	32.0	22.2	43.1
	LOWEST DAILY MINIMUM	52	-20	-23	-7	10	26	43	43	41	29	19	2	-26	-26
	YEAR OF OCCURRENCE		1974	1979	1978	1975	1963	1993	1972	1988	1984	1993	1976	1989	DEC 1989
	MEAN OF EXTREME MINS.	51	-3.6	1.6	12.3	26.2	37.0	49.2	55.1	52.3	38.4	27.0	15.3	2.1	26.1
	NORMAL DRY BULB	30	26.7	32.2	43.6	54.9	64.6	73.6	78.5	76.2	67.8	56.3	43.0	30.8	54.0
	MEAN DRY BULB	52	27.2	32.9	42.5	54.5	64.6	73.9	78.4	76.8	68.2	57.1	43.0	32.1	54.3
	MEAN WET BULB	54	24.6	29.7	37.5	48.0	58.0	66.9	70.5	68.7	60.9	50.4	38.2	29.0	48.5
	MEAN DEW POINT	54	18.8	23.5	30.8	41.6	53.5	63.1	66.9	64.9	56.6	44.7	32.6	23.6	43.4
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.4	1.1	6.7	15.5	12.8	4.7	0.6	0.0	0.0	41.8	
MAXIMUM ≤ 32°	30	10.9	6.8	1.4	*	0.0	0.0	0.0	0.0	0.0	0.0	1.1	7.7	27.9	
MINIMUM ≤ 32°	30	29.0	23.1	16.7	4.3	0.3	0.0	0.0	0.0	0.2	4.0	16.1	27.1	120.8	
MINIMUM ≤ 0°	30	4.1	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	8.1	
H/C	NORMAL HEATING DEG. DAYS	30	1187	918	663	312	121	5	0	0	56	283	660	1060	5265
	NORMAL COOLING DEG. DAYS	30	0	0	0	9	109	263	419	351	140	13	0	0	1304
RH	NORMAL (PERCENT)	30	70	69	66	64	68	71	70	71	72	68	71	72	69
	HOUR 00 LST	30	75	75	73	72	78	81	78	80	82	77	78	77	77
	HOUR 06 LST	30	77	78	79	80	84	87	86	87	88	83	81	80	82
	HOUR 12 LST	30	63	62	57	54	57	60	59	58	58	54	60	65	59
	HOUR 18 LST	30	64	60	53	51	55	58	56	57	60	57	64	68	59
S	PERCENT POSSIBLE SUNSHINE	48	57	55	57	58	61	67	71	71	66	64	56	51	61
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	52	2.2	1.8	1.0	0.9	0.9	0.6	0.5	1.2	1.0	1.6	1.2	2.2	15.1
	THUNDERSTORMS	52	0.4	0.7	2.5	5.5	9.0	10.0	8.6	8.0	5.9	3.3	1.2	0.4	55.5
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1	7.2	5.6	4.0	6.4	4.8	4.0	5.2	3.2	2.8	4.4	4.4	3.6	4.6
	MIDNIGHT-MIDNIGHT (OKTAS)	1	7.2	5.6	4.0	6.4	4.8	4.0	5.2	3.2	2.8	4.8	4.4	2.4	4.6
	MEAN NO. DAYS WITH:														
CLEAR	3	4.3	8.7	7.0	8.0	11.0	11.0	6.5	12.0	7.0	10.0	6.5	10.5	102.5	
PARTLY CLOUDY	3	4.0	3.3	5.0	4.0	4.3	6.0	9.0	7.0	1.0	2.0	2.5	3.0	51.1	
CLOUDY	3	9.7	7.3	6.0	9.5	6.3	5.3	5.5	4.5	4.5	7.5	8.5	8.0	82.6	
PR	MEAN STATION PRESSURE (IN)	26	29.19	29.14	29.03	29.00	28.99	29.00	29.04	29.06	29.09	29.11	29.10	29.17	29.08
	MEAN SEA-LEVEL PRES. (IN)	54	30.16	30.12	30.00	29.95	29.93	29.91	29.96	29.98	30.02	30.05	30.07	30.13	30.02
WINDS	MEAN SPEED (MPH)	44	9.8	10.1	11.7	11.9	10.3	9.6	8.5	8.2	8.5	9.1	9.9	9.5	9.8
	PREVAIL. DIR (TENS OF DEGS)	27	36	36	36	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	6	39	36	33	40	47	48	44	38	36	37	45	37	48
	DIR. (TENS OF DEGS)		31	17	29	22	34	34	34	27	35	22	31	30	34
	YEAR OF OCCURRENCE		1996	1996	1996	1996	1999	1996	1996	1996	1999	1996	1997	1997	JUN 1996
	MAXIMUM 5-SECOND:														
SPEED (MPH)	6	49	47	43	51	59	66	62	65	47	52	54	47	66	
DIR. (TENS OF DEGS)		31	16	29	35	34	35	33	26	34	23	30	31	35	
YEAR OF OCCURRENCE		1996	1994	1996	1999	1999	1994	1994	1994	1999	1996	1997	1997	JUN 1994	
PRECIPITATION	NORMAL (IN)	30	0.95	1.04	2.46	3.08	4.45	5.54	3.59	3.89	3.81	3.06	1.93	1.43	35.23
	MAXIMUM MONTHLY (IN)	52	5.24	3.49	8.44	8.69	9.39	15.20	12.02	11.18	12.71	7.24	6.27	4.30	15.20
	YEAR OF OCCURRENCE		1949	1971	1973	1999	1982	1967	1950	1977	1973	1980	1964	1973	JUN 1967
	MINIMUM MONTHLY (IN)	52	T	0.02	0.10	0.62	0.41	0.56	0.59	0.26	0.66	0.04	T	0.04	T
	YEAR OF OCCURRENCE		1986	1991	1966	1989	1966	1980	1983	1971	1952	1952	1989	1996	NOV 1989
	MAXIMUM IN 24 HOURS (IN)	52	1.55	2.33	3.76	3.59	3.62	5.52	4.19	4.48	4.80	4.10	4.66	2.65	5.52
	YEAR OF OCCURRENCE		1988	1971	1987	1967	1978	1967	1951	1962	1989	1985	1964	1980	JUN 1967
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	5.9	5.9	8.7	9.8	11.0	10.3	7.9	8.3	8.3	6.8	6.5	6.6	96.0	
PRECIPITATION ≥ 1.00	30	0.1	0.1	0.5	0.7	1.3	1.8	1.2	1.3	1.2	1.1	0.3	0.2	9.8	
SNOWFALL	NORMAL (IN)	30	5.8	4.7	2.8	0.6	0.0	0.0	0.0	0.0	0.0	0.*	1.2	5.6	20.7
	MAXIMUM MONTHLY (IN)	52	23.0	22.4	22.1	6.8	T	T	T	T	0.0	8.0	9.4	18.8	23.0
	YEAR OF OCCURRENCE		1993	1971	1960	1970	1991	1992	1992	1994	1996	1972	1983	1983	JAN 1993
	MAXIMUM IN 24 HOURS (IN)	52	15.2	15.2	8.4	7.6	T	T	T	T	0.0	8.0	7.4	9.0	15.2
	YEAR OF OCCURRENCE		1993	1971	1960	1970	1991	1992	1992	1994	1994	1996	1975	1973	JAN 1993
	MAXIMUM SNOW DEPTH (IN)	54	12	12	18	4	0	T	0	T	0	6	8	9	18
	YEAR OF OCCURRENCE		1979	1971	1960	1970		1993		1949		1996	1975	1983	MAR 1960
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.9	1.5	1.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.8	6.8	

PRECIPITATION (inches) 1999 TOPEKA, KS (TOP)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0.19	0.34	1.03	3.49	5.46	5.82	1.39	0.83	7.70	2.49	1.23	1.65	31.62
1971	1.20	3.49	0.64	1.08	4.83	3.10	4.07	0.26	1.35	3.87	3.03	1.83	28.75
1972	0.47	0.56	1.37	3.93	2.90	1.14	4.81	3.26	4.89	2.11	3.99	1.78	31.21
1973	2.67	1.71	8.44	4.03	4.37	2.96	10.16	2.83	12.71	4.57	2.14	4.30	60.89
1974	0.99	1.20	1.22	2.78	3.59	3.72	2.90	4.89	1.40	5.16	2.19	1.18	31.22
1975	1.50	1.67	1.66	3.26	3.88	4.85	0.68	1.69	4.35	0.05	4.44	1.12	29.15
1976	0.41	0.51	1.38	4.85	4.63	1.69	2.04	0.86	1.12	3.01	0.04	0.21	20.75
1977	0.90	0.22	2.06	2.46	7.83	10.91	1.37	11.18	3.22	4.92	3.38	0.26	48.71
1978	0.19	0.84	1.63	2.35	5.75	4.57	2.26	2.89	6.65	0.36	3.22	0.55	31.26
1979	1.81	0.63	3.95	2.37	2.25	5.63	5.84	4.05	2.17	4.15	1.80	0.05	34.70
1980	1.34	0.91	4.15	1.03	4.85	0.56	0.87	5.86	1.19	7.24	0.25	3.86	32.11
1981	0.32	0.21	1.61	1.98	5.93	9.40	7.63	3.92	2.03	3.72	3.63	0.22	40.60
1982	1.67	0.59	1.14	1.58	9.39	5.99	5.08	4.53	1.17	1.25	2.26	3.61	38.26
1983	0.69	0.63	4.39	6.29	4.93	6.08	0.59	0.62	2.25	5.19	3.61	1.34	36.61
1984	0.11	1.35	4.57	4.26	3.45	10.17	1.66	1.04	4.24	4.10	0.72	2.36	38.03
1985	0.70	2.02	2.38	3.60	3.79	5.15	2.90	7.97	8.16	5.20	2.02	0.71	44.60
1986	T	1.55	1.35	3.15	7.53	2.51	4.21	5.50	6.21	3.30	0.87	1.20	37.38
1987	1.09	2.71	5.92	2.33	3.89	4.86	2.78	5.90	1.81	1.86	1.94	1.87	36.96
1988	2.04	0.48	0.73	2.93	3.08	3.13	1.74	1.34	1.94	0.26	0.86	0.86	19.39
1989	1.24	0.86	3.11	0.62	4.05	4.76	5.21	6.22	8.65	3.44	T	0.61	38.77
1990	1.22	2.31	3.75	1.01	4.45	5.57	3.01	5.69	0.83	2.71	2.91	0.97	34.43
1991	0.76		2.98	3.63	7.09	1.49	1.47	1.76	2.15	3.20	2.20	2.44	
1992	0.89	1.18	5.29	3.25	1.75	3.35	6.37	1.24	3.92	1.41	5.27	2.01	35.93
1993	1.11	1.61	2.56	5.43	6.95	2.18	10.98	5.32	7.03	1.37	1.12	0.90	46.56
1994	0.42	0.82	0.19	4.31	0.95	4.63	3.16	7.87	1.46	1.30	2.87	1.52	29.50
1995	1.50	0.71	2.11	3.32	11.82	3.43	5.10	4.29	2.90	0.21	0.66	0.57	36.62
1996	0.76	0.19	1.48	1.57	7.72	7.97	2.65	6.09	3.60	2.79	2.66	0.04	37.52
1997	0.24	2.67	0.26	4.99	3.54	1.36	2.59	4.65	2.15	3.58	2.14	2.41	30.58
1998	0.79	0.77	2.88	2.16	2.08	7.22	9.32	0.88	4.19	5.01	5.64	1.22	42.16
1999	1.17	0.94	0.99	8.69	6.38	6.20	0.59	1.09	4.43	0.87	1.60	1.76	34.71
POR= 53 YRS	0.95	1.09	2.33	3.26	4.47	4.97	4.22	3.91	3.38	2.72	1.86	1.38	34.54

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AVERAGE TEMPERATURE (°F) 1999 TOPEKA, KS (TOP)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	23.3	35.9	39.5	53.5	68.1	71.8	77.8	80.6	69.1	54.2	41.2	34.3	54.1
1971	24.1	26.8	41.1	56.3	61.4	77.5	74.5	75.9	71.6	61.6	45.4	34.8	54.3
1972	25.6	31.8	46.7	54.7	63.6	74.3	74.4	74.7	68.5	54.6	39.4	27.7	53.0
1973	27.5	33.9	47.5	52.6	61.3	74.9	77.4	77.1	66.6	60.4	44.8	29.9	54.5
1974	22.3	35.9	46.9	56.8	67.2	70.0	80.6	74.1	61.9	58.4	43.1	32.7	54.2
1975	30.7	28.8	37.8	54.4	67.3	74.2	77.3	79.3	64.0	59.3	45.5	34.5	54.4
1976	27.8	42.7	45.4	57.0	60.4	72.7	78.0	76.9	69.0	50.3	35.4	28.5	53.7
1977	15.2	37.4	49.6	60.2	70.1	75.2	79.4	76.4	71.6	56.7	42.7	30.1	55.4
1978	17.3	20.4	38.4	55.9	63.0	74.6	77.3	75.7	72.9	54.6	43.0	30.0	51.9
1979	11.8	19.2	42.6	51.6	63.1	72.4	77.8	76.9	68.0	57.0	40.0	35.5	51.3
1980	28.6	26.0	40.8	53.7	62.8	76.5	86.4	80.7	70.0	53.9	45.0	32.6	54.8
1981	31.4	35.5	46.1	60.6	60.9	75.5	79.5	73.1	68.0	56.1	47.2	30.1	55.3
1982	21.9	28.5	43.2	50.2	63.7	69.0	78.7	75.5	66.5	55.9	42.0	35.8	52.6
1983	32.5	36.1	44.9	49.4	62.5	73.5	81.1	83.0	72.2	58.7	45.8	14.4	54.5
1984	26.0	40.2	38.1	51.7	62.4	73.9	77.0	78.0	66.5	56.6	45.5	36.8	54.4
1985	19.9	25.6	48.6	58.7	66.5	72.0	79.7	72.8	66.8	56.6	36.7	25.1	52.4
1986	35.8	32.5	49.8	57.7	65.9	77.0	80.4	72.3	71.6	56.6	38.3	34.6	56.0
1987	29.7	40.3	46.7	57.1	70.4	76.2	78.1	75.5	68.2	52.6	47.4	35.9	56.5
1988	28.1	30.8	43.4	53.9	68.8	75.1	76.7	79.5	70.3	52.8	45.2	35.3	55.0
1989	38.0	22.9	44.4	57.9	64.2	71.4	77.6	74.8	62.3	57.1	42.3	21.0	52.8
1990	37.3	36.2	45.5	51.9	60.3	77.2	77.7	76.5	71.6	57.0	49.1	29.6	55.8
1991	25.2		48.2	57.7	69.4	77.1	80.2	77.3	69.3	58.6	37.9	37.4	
1992	37.2	41.5	47.8	54.7	62.5	69.1	75.9	71.7	67.9	56.5	39.1	32.6	54.7
1993	26.4	29.9	40.8	50.2	63.1	72.9	78.2	77.8	63.4	54.0	39.3	34.8	52.6
1994	26.1	29.9	47.0	54.1	64.5	76.4	76.1	75.9	67.4	58.3	45.8	36.0	54.8
1995	29.3	37.0	45.1	52.0	59.3	72.5	80.2	80.9	65.8	57.2	40.1	30.6	54.2
1996	24.5	35.0	38.5	54.0	65.7	75.3	76.4	74.6	64.6	56.2	37.6	30.1	52.7
1997	26.2	35.0	46.2	49.9	60.5	73.5	78.5	75.5	69.7	58.1	40.3	32.8	53.9
1998	32.4	39.8	38.3	53.0	70.3	74.0	79.2	78.9	74.0	59.1	48.7	36.0	57.0
1999	28.6	42.9	43.3	55.1	64.8	73.4	82.4	77.6	65.6	56.9	51.3	36.2	56.5
POR= 53 YRS	27.3	33.0	42.6	54.4	64.6	74.0	78.4	76.9	68.3	57.1	42.9	32.2	54.3

HEATING DEGREE DAYS (base 65°F) 1999 TOPEKA, KS (TOP)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	57	344	706	945	1262	1065	735	274	144	0	5532
1971-72	4	0	69	143	580	927	1216	958	567	324	109	10	4907
1972-73	10	0	59	337	764	1152	1158	864	537	378	129	0	5388
1973-74	0	0	58	191	603	1082	1317	807	558	258	64	7	4945
1974-75	0	3	134	213	649	991	1056	1008	839	352	46	7	5298
1975-76	2	0	137	230	581	941	1148	639	599	269	178	5	4729
1976-77	0	0	45	471	881	1126	1537	767	469	180	11	0	5487
1977-78	0	0	6	263	662	1075	1473	1240	824	280	156	6	5985
1978-79	0	0	34	319	655	1078	1643	1277	693	401	129	9	6238
1979-80	0	4	45	267	741	908	1123	1123	744	344	129	3	5431
1980-81	0	0	65	344	591	1001	1035	822	579	175	176	0	4788
1981-82	0	2	46	283	529	1076	1329	1014	664	449	76	32	5500
1982-83	0	0	93	303	683	896	1002	804	615	466	120	13	4995
1983-84	0	0	56	223	570	1565	1204	713	830	405	137	0	5703
1984-85	0	0	145	276	578	871	1389	1098	501	228	35	8	5129
1985-86	0	0	127	259	844	1228	899	906	491	252	49	0	5055
1986-87	0	9	27	263	792	934	1084	688	560	292	16	0	4665
1987-88	0	3	24	376	531	893	1136	988	662	331	16	5	4965
1988-89	2	4	24	383	587	912	832	1174	641	296	125	5	4985
1989-90	0	2	155	276	672	1360	851	801	600	413	176	4	5310
1990-91	1	1	39	276	477	1093	1227		523	233	48	0	
1991-92	0	0	95	262	808	849	855	673	528	326	132	7	4535
1992-93	0	2	68	278	770	995	1189	979	744	440	101	22	5588
1993-94	0	1	108	356	763	930	1202	974	553	347	94	0	5328
1994-95	0	1	64	237	568	892	1097	774	613	382	193	1	4822
1995-96	0	0	107	246	740	1059	1250	867	814	347	93	6	5529
1996-97	0	0	98	294	813	1076	1193	833	577	450	173	0	5507
1997-98	1	0	21	286	737	994	1000	699	830	361	27	27	4983
1998-99	0	0	9	203	485	893	1122	613	667	295	58	12	4357
1999-	0	0	92	261	408	886							

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COOLING DEGREE DAYS (base 65°F) 1999 TOPEKA, KS (TOP)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	35	149	239	407	490	188	16	0	0	1524
1971	0	0	3	21	42	381	309	345	273	42	0	0	1416
1972	0	0	5	22	74	297	308	309	169	20	0	0	1204
1973	0	0	0	13	21	304	394	384	115	52	0	0	1283
1974	0	0	6	21	140	165	490	292	47	12	0	0	1173
1975	0	0	0	38	129	289	390	448	116	61	3	0	1474
1976	0	0	1	34	40	242	410	376	171	20	0	0	1294
1977	0	0	0	40	176	311	453	360	209	14	0	0	1563
1978	0	0	6	15	101	298	390	339	277	5	3	0	1434
1979	0	0	4	7	76	237	401	379	144	27	0	0	1275
1980	0	0	0	9	69	356	670	496	220	9	0	0	1829
1981	0	0	0	53	58	321	457	260	143	17	0	0	1309
1982	0	0	0	11	43	157	432	334	147	28	0	0	1152
1983	0	0	0	7	50	274	509	564	278	33	2	0	1717
1984	0	0	0	14	67	274	379	407	196	20	0	3	1360
1985	0	0	0	46	88	225	461	249	188	6	0	0	1263
1986	0	0	26	42	85	363	488	243	233	9	0	0	1489
1987	0	0	0	61	192	344	410	335	126	0	9	0	1477
1988	0	0	0	4	140	314	375	458	191	11	0	0	1493
1989	0	0	11	90	107	206	399	311	81	41	0	0	1246
1990	0	0	1	26	39	377	403	366	241	37	7	0	1497
1991	0	0	11	22	192	371	478	387	229	69	0	0	1759
1992	0	0	0	25	61	134	344	217	162	20	0	0	963
1993	0	0	0	0	48	269	417	405	64	22	0	0	1225
1994	0	0	0	26	86	348	351	345	140	36	0	0	1332
1995	0	0	4	1	22	237	481	502	140	16	0	0	1403
1996	0	0	0	25	125	321	358	302	92	28	0	0	1251
1997	0	0	0	1	38	262	424	330	166	81	0	0	1302
1998	0	0	10	9	196	304	445	440	287	26	1	0	1718
1999	0	0	0	5	57	269	545	396	120	20	1	0	1413

SNOWFALL (inches) 1999 TOPEKA, KS (TOP)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.8	T	7.9	2.1	22.4	7.5	T	0.0	0.0	40.7
1971-72	0.0	0.0	0.0	0.0	2.4	1.2	3.0	6.7	3.0	T	0.0	0.0	16.3
1972-73	0.0	0.0	0.0	0.0	9.4	4.0	13.5	1.7	0.0	0.1	0.0	0.0	28.7
1973-74	0.0	0.0	0.0	0.0	T	15.2	7.8	2.1	1.5	1.3	0.0	0.0	27.9
1974-75	0.0	0.0	0.0	0.0	1.3	1.4	5.0	6.7	7.8	3.6	0.0	0.0	25.8
1975-76	0.0	0.0	0.0	0.0	8.3	2.7	6.4	0.7	2.9	0.0	0.0	0.0	21.0
1976-77	0.0	0.0	0.0	T	0.3	T	13.6	0.1	T	0.2	0.0	0.0	14.2
1977-78	0.0	0.0	0.0	0.0	0.1	0.2	3.9	12.4	6.2	0.0	0.0	0.0	22.8
1978-79	0.0	0.0	0.0	0.0	T	11.1	20.1	3.1	7.5	1.1	0.0	0.0	42.9
1979-80	0.0	0.0	0.0	0.0	T	T	3.5	11.4	3.4	0.0	0.0	0.0	18.3
1980-81	0.0	0.0	0.0	T	0.0	3.8	2.6	2.5	0.0	0.0	0.0	0.0	8.9
1981-82	0.0	0.0	0.0	0.0	T	1.4	3.2	8.0	0.3	0.5	0.0	0.0	13.4
1982-83	0.0	0.0	0.0	0.0	1.1	5.0	6.1	10.1	0.6	4.5	0.0	0.0	27.4
1983-84	0.0	0.0	0.0	0.0	4.1	18.8	2.6	T	4.2	0.0	0.0	0.0	29.7
1984-85	0.0	0.0	0.0	0.0	T	9.8	18.2	7.9	0.5	0.0	0.0	0.0	36.4
1985-86	0.0	0.0	0.0	0.0	3.3	5.8	T	1.5	T	0.0	0.0	0.0	10.6
1986-87	0.0	0.0	0.0	T	0.7	1.7	15.1	2.3	0.5	0.0	0.0	0.0	20.3
1987-88	0.0	0.0	0.0	0.0	0.9	9.6	0.6	6.0	4.7	0.0	0.0	0.0	21.8
1988-89	0.0	0.0	0.0	0.0	0.7	0.8	T	9.0	1.6	0.0	T	T	12.1
1989-90	0.0	0.0	0.0	0.0	T	9.5	1.0	0.1	7.6	0.0	0.0	0.0	18.2
1990-91	0.0	0.0	0.0	0.0	0.0	2.9	9.6	T	T	T	T	0.0	
1991-92	0.0	0.0	0.0	T	6.2	0.1	T	T	0.9	T	0.0	T	7.2
1992-93	T	0.0	0.0	T	4.5	0.9	23.0	14.2	0.6	T	T	T	
1993-94	0.0	0.0	0.0	T	T	3.3	2.0	6.0	1.9	1.4	0.0	0.0	14.6
1994-95	0.0	T	0.0	0.0	T	0.8	2.0	0.1	5.0			0.0	
1995-96	0.0	0.0	0.0	0.0	0.7	5.5	8.3	T	T	T	0.0	T	14.5
1996-97	0.0	0.0	0.0	8.0	1.1	0.8	3.9	5.8	T	1.6	T	0.0	21.2
1997-98	0.0	0.0	0.0	T	T	8.2	2.0	T	4.4	T	0.0	T	14.6
1998-99	0.0	0.0	0.0	0.0	0.0	0.5	4.0	2.0	1.8	T	T	0.0	8.3
1999-	0.0	0.0	0.0	0.0	0.0	7.6							
POR= 53 YRS	T	T	0.0	0.2	1.2	4.7	5.8	0.2	0.2	T	T	T	12.3

WBAN : 13996

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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# 1999 TOPEKA, KANSAS (TOP)

Topeka, is located near the geographical center of the United States, and the middle of the temperate zone. The city straddles the Kansas River about 60 miles above its junction with the Missouri River. The Kansas River flows in an easterly direction through northeastern Kansas. Near Topeka, the river valley ranges from 2 to 4 miles wide, and is bordered on both sides by rolling prairie uplands of some 200 to 300 feet. The city is built on both banks of the Kansas River and along two tributaries, Soldier Creek in north Topeka and Shunganunga Creek in the south and east part of town. Flooding is always a threat following periods of heavy rains but protective construction has reduced the problem.

Seventy percent of the annual precipitation normally falls during the six crop-growing months, April through September. The rains of this period are usually of short duration, predominantly of the thunderstorm type. They occur more frequently during the nighttime and early morning hours than at other times of the day. Excessive precipitation rates may occur with warm-season thunderstorms. Rainfall accumulations over 8 inches in 24 hours have occurred in Topeka. Tornadoes have occurred in the area on several occasions and caused severe damage and numerous injuries.

Individual summers show wide departures from average conditions. Hottest summers may produce temperatures of 100 degrees or higher on more than 50 days. On the other hand, 25 percent of the summers pass with two or fewer 100 degree days. Similarly, precipitation has shown a wide range for June, July, and August, varying from under 3 inches to more than 27 inches during the 3 months. Summers are hot with low relative humidity and persistent southerly winds. Oppressively warm periods with high relative humidity are usually of short duration.

Winter temperatures average about 45 degrees cooler than summer. Cold spells are seldom prolonged. Only on rare occasions do daytime temperatures fail to rise above freezing. Winter precipitation is often in the form of snow, sleet, or glaze, but storms of such severity to prevent normal movement of traffic or to interfere with scheduled activity are not common.

In the transitional spring and fall seasons, the numerous days of fair weather are interspersed with short intervals of stormy weather. Strong, blustery winds are quite common in late winter and spring. Autumn is characteristically a season of warm days, cool nights, and infrequent precipitation, with cold air invasions gradually increasing in intensity as the season progresses.

Nearly all crops of the temperate zone can be produced in the vicinity of Topeka. Wheat and other small grains, clover, soybeans, fruit, and berries do well, and the area supports an extensive dairy industry.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 14 and the average last occurrence in the spring is April 21.

# STATION LOCATION

TOPEKA, KANSAS

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUCI M T S W	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS	
						SEA LEVEL	GROUND												
							G	W	E	P	S	T	R	W	8				H
<u>CITY</u>																			
Washburn College Rice Hall	6/01/87	4/09/92		39°02'	95°42'	971	74	4											
Columbian Building 112-114 West 6th	4/09/92	7/01/08	2 mi. NE	39°03'	95°40'	924	89	85									Extreme thermometers 81 feet prior to 11/13/03.		
Mulvane Building 6th & Kansas Avenue	7/01/08	7/27/18	1/2 blk. E	39°03'	95°40'	935	101	85			76						Tipping Bucket installed 7/1/08. Discontinued 11/17/49.		
New England Building 5th & Kansas, SW corner	7/27/18	4/03/33	1 blk. N	39°03'	95°40'	934	107	92			83								
Federal Building 5th & Kansas, NE corner	4/03/33	4/13/59	450 ft. ENE	39°03'	95°40'	926	87	65	65		61	62	61				6-hourly observations 10/1/36 to 8/15/46. Psychrometer 7/13/36 to 8/15/46. Weighing rain gage installed 10/1/40. Anemometer removed 11/17/49.		
<u>AIRPORT</u>																			
Tower atop Hangar #1 Municipal Airport	2/18/44	1/30/47		39°04'	95°38'	879	52	43	43					a3			6-hourly observations begun 8/15/46. a - Added 7/1/46.		
Ground Floor Hangar #1 Municipal Airport	1/30/47	8/03/56		39°04'	95°38'	879	*72	4	4			4		3			*Wind instrument elevations: 58 feet 1/30/47-11/20/50. 73 feet 11/20/50-11/16/51. 58 feet 11/16/51-6/25/54.		
Weather Bureau Building Municipal Airport Philip Billard Field	8/03/56	4/16/76	1200 ft. SW	39°04'	95°38'	c877	d20	5	5		4	4	4	b4			b - Commissioned 2600 feet E of thermometer site 8/20/64. c - 877 feet to 8/20/64. Published as 876 feet from 8/20/64 until new survey in 1969. d - 72 feet to 8/10/64.		
Weather Service Fore-cast Office Municipal Airport Philip Billard Field	4/16/76	12/1/92	2200 ft. N	39°04'	95°38'	877 g884	e20	5	5	9	4	4	4	e4 f4	NA		e - Same site as prior to 4/16/76. f - Type change 7/22/85. g - Changed 03/29/95		
Municipal (Philip Billard) AP	12/01/92	Present	NA	39°04'	95°38'	881								S			ASOS Commissioned 12/01/92		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.  
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