

2004

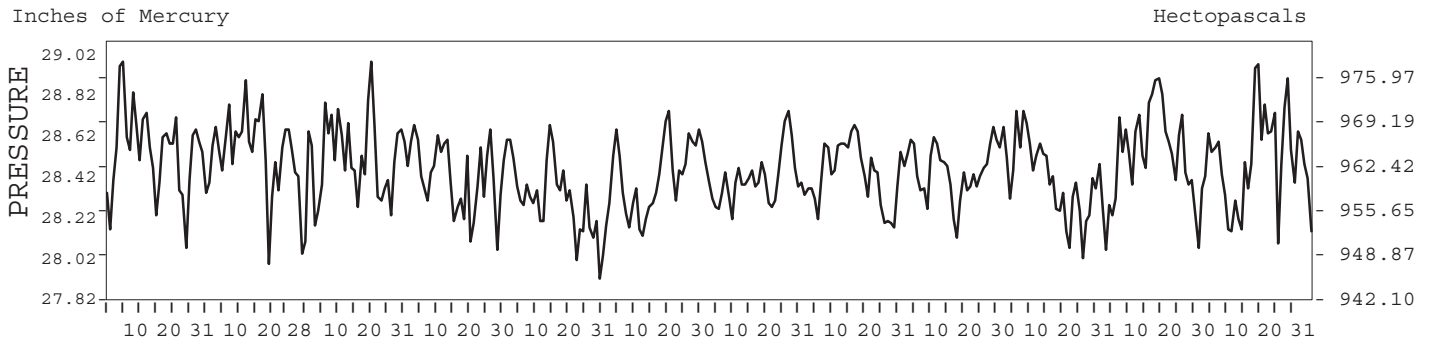
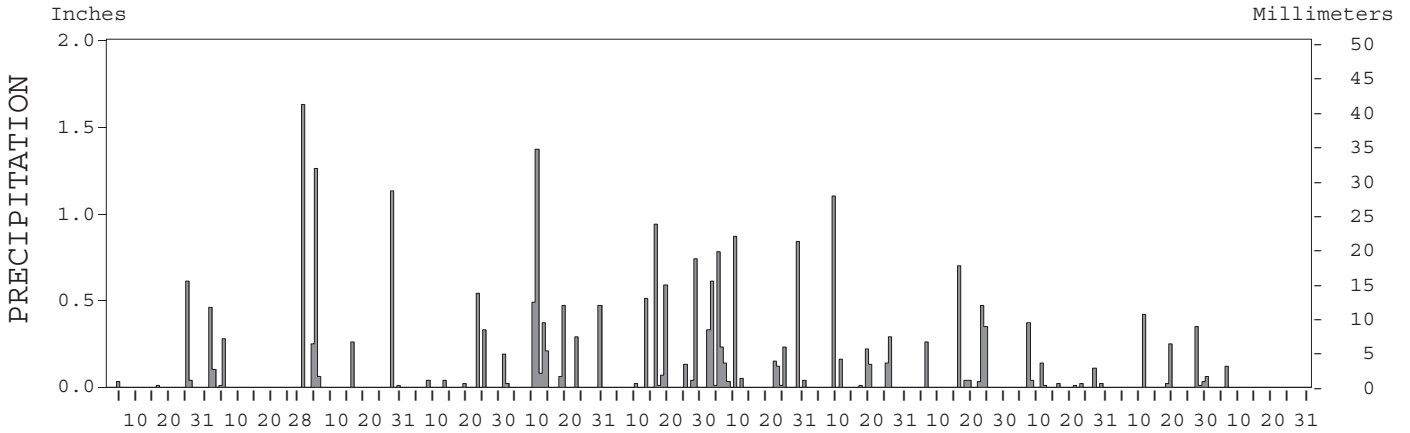
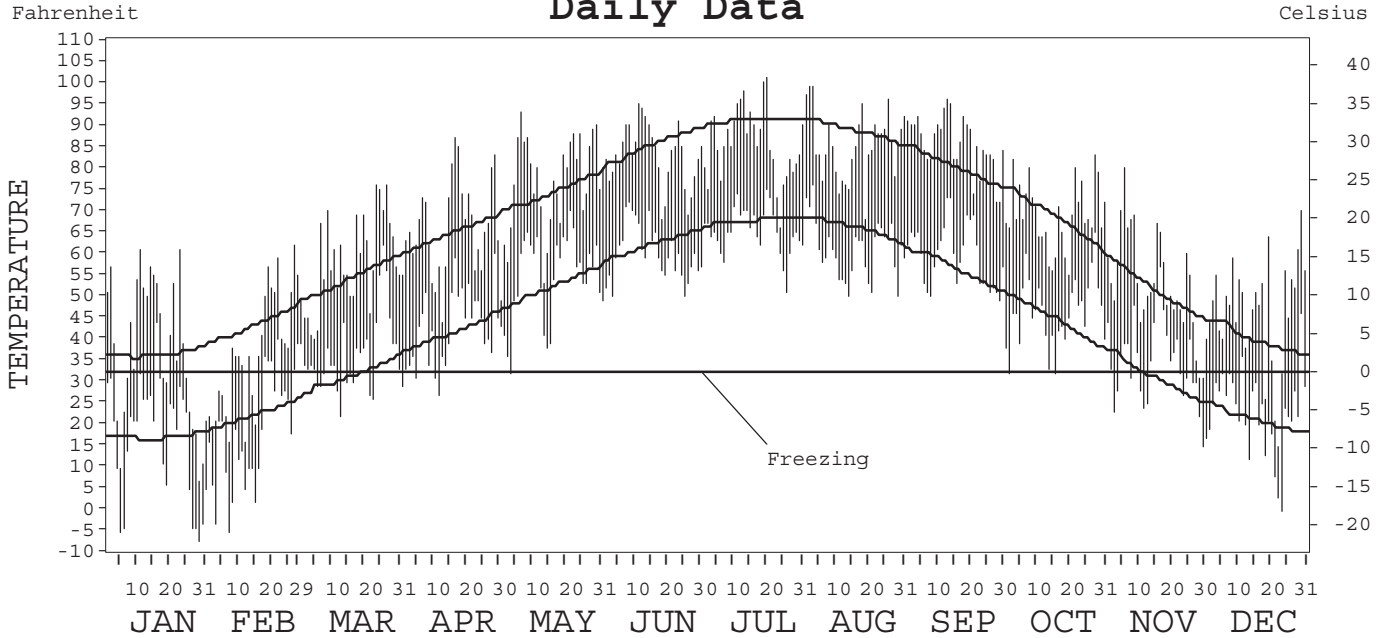
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2133

CONCORDIA,  
KANSAS (CNK)

## Daily Data



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# METEOROLOGICAL DATA FOR 2004

## CONCORDIA, KS (CNK)

LATITUDE: 39° 32' 57" N      LONGITUDE: 97° 39' 07" W      ELEVATION (FT): GRND: 1469      BARO: 1472      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13984

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	37.3	37.2	58.2	65.9	77.1	82.8	85.7	85.4	85.6	69.0	53.4	46.5	65.3	
	HIGHEST DAILY MAXIMUM	61	62	76	87	93	95	101	99	96	83	80	70	101	
	DATE OF OCCURRENCE	23+	27	26+	16	06	11	20	03+	13	28	06	30	JUL 20	
	MEAN DAILY MINIMUM	16.9	19.0	36.3	42.6	54.5	60.1	65.2	60.9	59.4	46.3	35.0	23.0	43.3	
	LOWEST DAILY MINIMUM	-7	-5	22	27	32	50	51	50	49	32	15	0	-7	
	DATE OF OCCURRENCE	29	07	12	11	03	25+	26	29+	29	16+	30	24	JAN 29	
	AVERAGE DRY BULB	27.1	28.1	47.3	54.3	65.8	71.5	75.5	73.2	72.5	57.7	44.2	34.8	54.3	
	MEAN WET BULB	22.9			48.0	59.5	63.0	68.0	64.3	61.3	50.8	39.6	30.0		
	MEAN DEW POINT	16.3			40.7	54.8	57.7	64.0	59.1	53.8	44.3	33.8	22.9		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	2	7	11	9	10	0	0	0	0	39
	MAXIMUM ≤ 32°	13	10	0	0	0	0	0	0	0	0	2	4	29	
MINIMUM ≤ 32°	30	22	11	3	1	0	0	0	0	2	13	29	111		
MINIMUM ≤ 0°	6	2	0	0	0	0	0	0	0	0	0	1	9		
H/C	HEATING DEGREE DAYS	1169	1063	547	333	105	11	2	5	7	240	616	930	5028	
	COOLING DEGREE DAYS	0	0	2	19	138	212	335	264	241	16	0	0	1227	
RH	MEAN (PERCENT)	68	74	64	62	70	66	71	65	56	65	70	65	66	
	HOUR 00 LST	73	76	70	65	78	76	80	77	63	74	75	71	73	
	HOUR 06 LST	76	79	78	76	88	85	86	86	76	79	80	77	80	
	HOUR 12 LST	62	69	55	54	60	51	60	49	43	51	60	54	56	
	HOUR 18 LST	63	70	53	52	57	50	56	50	41	58	66	59	56	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	3	1	0	1	0	0	0	0	3	2	2	14	
	THUNDERSTORMS	1	1	4	5	15	11	13	8	4	4	0	0	66	
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.)	28.54	28.54	28.51	28.42	28.31	28.43	28.40	28.44	28.45	28.38	28.55	28.50	28.46	
	MEAN SEA-LEVEL PRESS. (IN.)				29.98		29.97	29.93		29.98	29.94	30.15	30.11		
WINDS	RESULTANT SPEED (MPH)	1.2			1.8	4.7	2.5	2.4	2.2	6.1	2.1	0.8	3.1		
	RES. DIR. (TENS OF DEGS.)	34			19	16	14	16	16	15	18	33	25		
	MEAN SPEED (MPH)	9.9	11.4	12.0	11.3	12.6	10.0	9.0	9.0	12.3	9.9	10.0	9.9	10.6	
	PREVAIL. DIR. (TENS OF DEGS.)	01	32	18	18	17	15	18	18	16	18	01	27	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	38	36	39	44	35	44	32	49	36	30	32	49	
	DIR. (TENS OF DEGS.)	33	18	18	20	18	33	25	24	31	27	01	19	31	
	DATE OF OCCURRENCE	08	08	27	28	17	15+	04	08	15	29	10	30+	SEP 15	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	32	49	53	48	53	44	52	38	64	45	37	41	64	
DIR. (TENS OF DEGS.)	01	17	19	19	19	02	26	25	29	28	01	34	29		
DATE OF OCCURRENCE	17	08	27	28+	17	12	04	08	15	29	10	12	SEP 15		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.69	2.48	2.97	1.16	3.83	3.05	4.44	2.05	1.89	0.74	1.14	0.12	24.56	
	GREATEST 24-HOUR (IN.)	0.65	1.63	1.32	0.54	1.60	0.94	0.92	1.10	0.82	0.41	0.42	0.12	1.63	
	DATE OF OCCURRENCE	25-26	29	04-05	22	09-10	15	01-02	08	22-23	06-07	10	05	FEB 29	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	4	5	6	6	10	9	15	7	7	9	7	1	86	
PRECIPITATION ≥ 0.10	1	4	4	3	7	5	10	6	4	3	3	1	51		
PRECIPITATION ≥ 1.00	0	1	2	0	1	0	0	1	0	0	0	0	5		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

# NORMALS, MEANS, AND EXTREMES

## CONCORDIA, KS (CNK)

LATITUDE: 39° 32' 57" N      LONGITUDE: 97° 39' 07" W      ELEVATION (FT): GRND: 1469      BARO: 1472      TIME ZONE: CENTRAL (UTC + 6)      WBAN: 13984

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	36.3	42.9	53.9	64.4	74.0	85.0	90.7	88.4	79.9	67.9	51.0	39.6	64.5
	MEAN DAILY MAXIMUM	41	36.7	42.2	53.7	65.0	74.7	85.0	91.0	88.5	79.6	67.9	51.6	40.4	64.7
	HIGHEST DAILY MAXIMUM	42	74	86	88	98	102	109	109	108	109	96	84	82	109
	YEAR OF OCCURRENCE		1990	1972	1986	1989	1998	1980	2002	1983	2000	1963	1980	1964	JUL 2002
	MEAN OF EXTREME MAXS.	42	59.7	65.9	78.1	85.1	90.3	98.0	102.8	101.1	95.2	86.9	72.4	62.5	83.2
	NORMAL DAILY MINIMUM	30	16.9	21.9	31.1	41.2	51.9	61.8	67.4	65.6	56.1	44.0	30.5	20.8	42.4
	MEAN DAILY MINIMUM	41	16.7	21.1	30.2	41.5	51.9	61.6	67.5	65.2	55.8	44.2	31.1	21.0	42.3
	LOWEST DAILY MINIMUM	42	-17	-15	-7	14	26	41	48	45	29	14	-4	-26	-26
	YEAR OF OCCURRENCE		1985	1979	1978	1975	1967	1964	1972	1964	1984	1993	1976	1989	DEC 1989
	MEAN OF EXTREME MINS.	42	-4.4	0.3	10.9	25.1	37.2	48.9	56.2	53.6	39.5	27.1	13.9	1.1	25.8
	NORMAL DRY BULB	30	26.6	32.4	42.5	52.8	63.0	73.4	79.1	77.0	68.0	56.0	40.8	30.2	53.5
	MEAN DRY BULB	41	26.7	31.8	42.0	53.3	63.2	73.3	79.2	76.9	67.8	56.0	41.4	30.6	53.5
	MEAN WET BULB	44	23.7	28.1	36.6	46.7	56.6	65.0	68.8	66.9	59.4	48.8	36.9	27.4	47.1
	MEAN DEW POINT	44	17.8	21.9	29.7	40.3	51.7	60.4	63.9	62.4	54.3	42.3	31.4	21.8	41.5
NORMAL NO. DAYS WITH:															
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.4	0.8	9.0	17.7	14.1	6.0	0.6	0.0	0.0	48.6	
MAXIMUM ≤ 32°	30	11.8	7.7	2.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	2.2	8.4	32.3	
MINIMUM ≤ 32°	30	28.6	22.9	17.4	5.1	0.2	0.0	0.0	0.0	0.1	2.9	17.3	28.0	122.5	
MINIMUM ≤ 0°	30	3.5	2.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.7	7.8	
H/C	NORMAL HEATING DEG. DAYS	30	1195	927	702	380	131	13	1	2	76	307	722	1068	5524
	NORMAL COOLING DEG. DAYS	30	0	0	2	15	63	265	436	366	163	22	1	0	1333
RH	NORMAL (PERCENT)	30	71	69	66	65	70	68	64	67	65	64	70	73	68
	HOUR 00 LST	30	75	75	72	72	78	76	72	74	73	70	75	76	74
	HOUR 06 LST	30	79	79	79	81	85	85	82	84	82	79	81	80	81
	HOUR 12 LST	30	64	62	57	55	58	55	52	55	53	53	61	65	58
	HOUR 18 LST	30	66	61	54	51	57	51	48	51	52	54	65	69	57
S	PERCENT POSSIBLE SUNSHINE	33	63	63	65	67	69	76	80	78	71	69	60	59	68
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	41	2.4	2.6	1.7	1.3	1.1	0.5	0.6	1.1	1.4	1.4	1.8	2.4	18.3
	THUNDERSTORMS	41	0.2	0.6	2.0	5.4	9.3	10.6	10.7	9.4	6.1	2.7	1.0	0.2	58.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	2	6.4	5.6	5.6	6.0	4.4	2.8	3.6	2.8	4.0	3.7	4.0	6.0	4.6
	MIDNIGHT-MIDNIGHT (OKTAS)	1	6.4	6.0	5.2	6.0	4.4	3.2	3.6	2.8	4.0	3.6	4.0	4.0	4.4
	MEAN NO. DAYS WITH:														
CLEAR	3	6.0	8.3	10.0	7.0	10.7	13.0	11.0	16.0	7.5	10.5	7.0	9.0	116.0	
PARTLY CLOUDY	3	2.0	4.0	2.7	4.5	4.0	5.7	7.5	3.0	2.0	3.5	4.5	4.5	47.9	
CLOUDY	3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2.4	
PR	MEAN STATION PRESSURE (IN)	31	28.52	28.49	28.38	28.36	28.35	28.36	28.41	28.43	28.45	28.47	28.46	28.52	28.43
	MEAN SEA-LEVEL PRES. (IN)	42	30.14	30.11	29.98	29.93	29.91	29.89	29.93	29.96	29.99	30.03	30.05	30.12	30.00
WINDS	MEAN SPEED (MPH)	25	11.5	11.8	13.2	13.4	11.9	11.3	11.0	10.4	11.3	11.3	11.6	11.2	11.7
	PREVAIL. DIR (TENS OF DEGS)	24	36	36	18	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	12	46	44	46	55	44	54	52	41	49	46	41	40	55
	DIR. (TENS OF DEGS)		32	18	18	24	18	24	34	20	31	26	32	17	24
	YEAR OF OCCURRENCE		1996	1994	2000	2001	2004	1997	1996	1998	2004	1996	1997	2003	APR 2001
MAXIMUM 5-SECOND:															
SPEED (MPH)	12	60	52	59	87	53	62	67	47	64	57	51	49	87	
DIR. (TENS OF DEGS)		33	21	17	23	19	22	32	19	29	26	31	17	23	
YEAR OF OCCURRENCE		1996	2000	2000	2001	2004	1993	1996	2002	2004	1996	2001	2003	APR 2001	
PRECIPITATION	NORMAL (IN)	30	0.66	0.73	2.35	2.45	4.20	3.95	4.20	3.24	2.50	1.84	1.45	0.86	28.43
	MAXIMUM MONTHLY (IN)	42	1.84	2.50	8.32	5.98	9.74	14.14	16.75	10.72	8.49	4.89	4.88	3.60	16.75
	YEAR OF OCCURRENCE		1983	1971	1987	1984	1970	1967	1993	1977	1973	1992	1971	1984	JUL 1993
	MINIMUM MONTHLY (IN)	42	0.00	0.01	0.02	0.37	0.26	0.77	0.11	0.34	0.21	0.02	T	T	0.00
	YEAR OF OCCURRENCE		1986	1996	1968	1989	1966	1996	1984	2000	1991	1999	1989	1976	JAN 1986
	MAXIMUM IN 24 HOURS (IN)	42	0.93	1.63	3.49	2.64	5.15	5.46	3.94	4.56	4.86	4.15	3.20	2.61	5.46
	YEAR OF OCCURRENCE		1998	2004	1987	1987	1970	1967	1971	1968	2003	1979	1971	1984	JUN 1967
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	5.1	5.0	8.2	9.3	11.4	9.7	8.4	8.6	7.3	6.3	5.7	4.9	89.9	
PRECIPITATION ≥ 1.00	30	0.0	0.0	0.6	0.5	1.2	1.2	1.3	0.8	0.7	0.3	0.3	0.1	7.0	
SNOWFALL	NORMAL (IN)	30	6.2	5.3	3.4	0.7	0.*	0.0	0.0	0.0	0.*	0.2	2.7	4.3	22.8
	MAXIMUM MONTHLY (IN)	34	15.8	20.6	10.7	6.1	0.2	T	T	0.0	T	4.6	10.1	16.7	20.6
	YEAR OF OCCURRENCE		1993	1971	1987	1983	1994	1989	1992	1985	1970	1972	1983	1983	FEB 1971
	MAXIMUM IN 24 HOURS (IN)	34	9.3	13.2	9.1	3.8	0.2	T	T	0.0	T	4.6	7.3	12.5	13.2
	YEAR OF OCCURRENCE		1985	1965	1987	1970	1994	1989	1992	1994	1985	1970	1983	1966	FEB 1965
	MAXIMUM SNOW DEPTH (IN)	37	13	15	9	3	0	0	0	0	0	3	7	14	15
	YEAR OF OCCURRENCE		1979	1983	1987	1970						1970	1983	1983	FEB 1983
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	2.0	1.6	1.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.4	7.1	

PRECIPITATION (inches) 2004 CONCORDIA, KS (CNK)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0.71	1.51	1.46	1.99	2.63	6.96	1.64	2.80	1.72	0.49	2.66	0.55	25.12
1976	0.17	0.31	2.58	4.41	1.61	1.61	1.16	0.77	2.84	1.89	0.08	T	17.43
1977	0.64	0.03	2.06	2.37	6.01	5.03	2.33	10.72	2.05	2.22	1.73	0.04	35.23
1978	0.20	0.71	0.96	2.70	6.33	2.13	5.94	3.54	5.08	0.52	2.04	0.21	30.36
1979	1.12	0.11	5.05	1.54	2.10	3.54	4.16	2.10	0.75	4.82	0.92	0.36	26.57
1980	1.24	1.10	3.20	1.77	2.82	1.27	0.73	3.04	1.25	1.98	0.07	0.97	19.44
1981	0.14	0.07	1.30	1.85	6.98	4.68	8.02	3.61	2.75	0.84	3.22	0.21	33.67
1982	0.82	0.45	2.81	2.06	7.53	8.38	7.04	3.17	1.79	0.85	0.57	1.52	36.99
1983	1.84	1.09	3.42	1.92	2.98	3.59	0.16	2.58	1.72	3.60	1.84	0.85	25.59
1984	0.27	0.55	3.09	5.98	3.98	4.36	0.11	1.85	2.50	2.20	0.24	3.60	28.73
1985	1.14	0.86	1.04	2.85	3.78	3.19	2.06	4.46	2.46	2.96	0.55	0.42	25.77
1986	0.00	1.29	2.21	3.11	3.63	5.67	4.69	7.59	6.81	3.04	0.72	1.42	40.18
1987	0.55	0.93	8.32	2.90	6.06	3.51	3.45	3.42	1.55	1.94	0.72	0.79	34.14
1988	0.72	0.62	0.55	0.99	2.91	3.16	1.65	1.67	1.06	0.04	0.54	0.63	14.54
1989	0.56	0.56	0.55	0.37	4.06	5.80	1.40	5.77	4.22	1.11	T	0.42	24.82
1990	0.26	0.43	4.05	1.15	6.37	3.78	3.96	1.48	1.23	1.06	1.45	0.45	25.67
1991	0.58	0.15	2.14	1.98	3.02	3.77	0.86	2.60	0.21	1.49	1.50	1.65	19.95
1992	0.73	0.88	2.06	2.58	3.49	6.31	11.43	2.63	2.69	4.89	2.17	1.66	41.52
1993	1.52	1.33	2.63	2.06	3.41	6.66	16.75	4.78	3.12	0.86	0.57	1.10	44.79
1994	0.62	0.53	0.06	1.71	1.58	5.02	3.43	1.02	0.98	1.67	1.20	1.33	19.15
1995	1.03	0.06	2.42	2.19	7.87	4.36	1.56	3.80	0.35	0.87	0.52	0.26	25.29
1996	0.64	T	0.98	1.68	6.92	0.77	4.25	3.68	5.77	0.48	3.16	0.07	28.40
1997	T	1.58	0.17	3.25	2.27	4.18	2.94	3.32	3.70	2.77	0.72	1.75	26.65
1998	1.27	1.10	3.46	3.18	0.78	3.86	6.56	1.95	4.16	2.18	4.24	0.10	32.84
1999	0.66	0.22	0.88	5.54	8.29	3.30	1.41	2.74	1.14	0.02	0.84	0.43	25.47
2000	0.06	2.02	3.32	1.22	1.86	2.23	2.56	0.34	0.65	2.79	0.60	0.48	18.13
2001	0.86	1.78	0.62	2.12	4.79	3.90	3.56	3.04	4.61	1.34	0.52	0.07	27.21
2002	0.63	0.78	0.32	1.67	3.44	0.98	0.50	3.12	1.94	4.49	0.03	0.11	18.01
2003	0.29	0.93	1.95	3.27	3.16	2.84	0.57	2.55	5.73	0.45	1.64	0.78	24.16
2004	0.69	2.48	2.97	1.16	3.83	3.05	4.44	2.05	1.89	0.74	1.14	0.12	24.56
POR= 42 YRS	0.64	0.84	2.04	2.41	4.08	4.21	3.93	3.29	2.79	1.90	1.22	0.82	28.17

WBAN : 13984

AVERAGE TEMPERATURE (°F) 2004 CONCORDIA, KS (CNK)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	29.1	26.1	34.8	51.5	64.3	71.7	79.3	80.2	64.1	59.6	41.3	33.6	53.0
1976	28.8	42.2	41.9	54.8	60.0	72.9	79.6	79.2	69.0	50.8	35.8	31.1	53.8
1977	18.8	37.3	46.5	57.2	67.9	74.9	81.5	73.8	68.8	55.6	41.3	29.8	54.5
1978	16.1	18.4	39.1	54.3	61.6	74.6	78.7	77.1	71.3	55.9	40.8	28.2	51.3
1979	12.7	18.7	41.7	51.2	60.8	72.9	76.8	76.3	70.7	58.1	38.5	35.5	51.2
1980	26.6	25.1	37.5	52.8	62.2	75.6	85.2	80.5	70.1	55.6	45.5	32.5	54.1
1981	31.8	35.5	45.3	60.7	59.9	74.5	78.1	73.8	68.3	53.7	45.0	30.7	54.8
1982	19.2	27.3	40.8	50.1	64.0	69.4	80.9	78.6	67.2	54.9	37.6	31.8	51.8
1983	28.6	32.9	40.7	44.9	57.9	69.4	82.1	84.5	70.2	55.6	40.3	12.1	51.6
1984	27.0	40.0	36.7	47.9	61.7	75.0	80.1	79.0	64.8	55.3	42.9	32.4	53.6
1985	20.3	24.7	44.9	55.7	64.8	69.6	79.5	73.3	66.1	55.6	32.8	24.6	51.0
1986	36.5	32.7	49.7	55.9	62.6	74.9	80.0	72.9	70.0	55.4	38.6	33.6	55.2
1987	31.6	40.1	44.4	56.3	67.8	75.5	81.1	76.3	69.4	52.6	45.4	33.7	56.2
1988	25.0	29.8	43.4	53.0	68.2	79.1	78.7	80.6	69.5	53.8	44.0	36.8	55.2
1989	37.2	21.9	43.2	57.8	64.2	70.5	78.8	76.5	65.0	57.8	42.7	23.2	53.2
1990	36.9	35.7	45.3	51.9	60.3	76.4	79.3	78.7	73.0	57.2	47.4	26.4	55.7
1991	24.5	41.1	46.5	56.2	67.2	77.5	82.4	77.5	70.3	56.3	34.5	36.5	55.9
1992	37.1	41.0	46.6	53.5	62.2	69.1	74.5	71.0	67.4	54.4	35.8	29.3	53.5
1993	22.0	23.8	38.8	49.4	61.8	71.5	77.3	76.4	62.6	53.6	38.2	35.2	50.9
1994	25.2	27.2	46.1	52.7	65.4	75.7	74.2	75.3	68.5	56.5	43.8	33.5	53.7
1995	28.2	37.3	42.6	49.0	57.0	70.6	78.8	80.3	65.1	55.3	39.6	30.3	52.8
1996	23.4	34.8	36.0	52.5	63.3	75.2	76.4	73.9	64.8	55.5	36.3	27.9	51.7
1997	26.4	31.8	45.9	47.7	59.6	72.9	78.3	75.4	69.7	57.1	38.7	30.3	52.8
1998	30.1	38.1	36.1	51.8	67.8	73.5	78.6	77.2	73.1	58.1	46.3	34.2	55.4
1999	28.6	42.1	41.9	52.2	62.9	70.6	80.4	75.7	65.1	56.6	50.1	35.6	55.2
2000	31.7	39.3	45.7	52.8	66.9	72.9	79.7	84.0	72.0	59.9	35.3	20.1	55.0
2001	30.6	24.2	39.6	57.6	64.5	73.0	83.6	79.0	67.0	56.2	49.5	36.0	55.1
2002	33.7	34.1	36.5	54.7	61.3	78.7	83.1	79.6	70.7	49.3	42.2	35.5	55.0
2003	29.2	29.9	44.3	55.3	60.9	71.3	82.9	80.5	65.0	57.6	40.8	32.8	54.2
2004	27.1	28.1	47.3	54.3	65.8	71.5	75.5	73.2	72.5	57.7	44.2	34.8	54.3
POR= 42 YRS	26.8	32.0	42.0	53.3	63.2	73.3	79.1	77.1	67.6	55.9	41.4	30.6	53.5

HEATING DEGREE DAYS (base 65°F) 2004 CONCORDIA, KS (CNK)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0	0	135	208	701	968	1115	657	707	310	175	2	4978
1976-77	0	0	57	461	868	1043	1424	769	567	240	15	0	5444
1977-78	0	0	23	291	703	1085	1512	1299	803	326	162	9	6213
1978-79	0	0	41	288	719	1132	1615	1294	720	411	164	19	6403
1979-80	6	10	22	233	788	909	1184	1154	846	381	143	6	5682
1980-81	0	0	50	311	578	998	1026	822	605	177	196	2	4765
1981-82	1	0	33	343	594	1055	1417	1050	743	453	71	27	5787
1982-83	0	1	78	313	815	1022	1121	889	748	596	236	38	5857
1983-84	0	0	77	317	734	1634	1171	718	871	503	146	2	6173
1984-85	0	0	157	311	656	1001	1379	1123	617	287	66	33	5630
1985-86	0	2	162	288	957	1244	875	898	484	284	94	0	5288
1986-87	0	5	37	294	784	967	1027	692	633	301	37	0	4777
1987-88	0	6	22	389	586	963	1230	1014	663	355	40	0	5268
1988-89	4	1	29	347	624	869	857	1202	676	310	108	19	5046
1989-90	0	1	113	255	660	1293	865	813	606	404	162	4	5176
1990-91	0	0	42	265	527	1191	1247	661	571	275	79	0	4858
1991-92	0	0	62	330	909	877	859	688	565	351	137	14	4792
1992-93	0	11	67	338	867	1102	1324	1145	808	459	133	31	6285
1993-94	0	3	123	376	799	919	1227	1051	583	398	96	5	5580
1994-95	0	5	70	262	628	967	1132	767	687	470	247	20	5255
1995-96	1	0	125	306	754	1068	1282	867	888	380	154	11	5836
1996-97	0	0	109	312	854	1141	1189	923	587	512	192	5	5824
1997-98	1	3	26	312	783	1070	1074	745	896	395	48	38	5391
1998-99	0	0	20	232	555	947	1120	636	707	375	96	20	4708
1999-00	0	0	96	277	442	909	1022	739	593	367	62	5	4512
2000-01	0	0	67	189	885	1385	1057	1138	780	239	94	22	5856
2001-02	0	0	58	281	461	893	963	857	875	337	176	2	4903
2002-03	0	0	34	495	677	905	1102	976	641	309	156	23	5318
2003-04	0	1	88	242	720	989	1169	1063	547	333	105	11	5268
2004-	2	5	7	240	616	930							

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COOLING DEGREE DAYS (base 65°F) 2004 CONCORDIA, KS (CNK)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	0	0	0	14	74	221	447	480	115	49	0	0	1400
1976	0	0	0	10	29	246	458	443	182	32	0	0	1400
1977	0	0	0	14	113	304	518	280	143	4	0	0	1376
1978	0	0	6	10	64	303	431	383	235	12	2	0	1446
1979	0	0	1	5	39	261	381	365	201	27	0	0	1280
1980	0	0	0	18	58	334	634	485	212	26	4	0	1771
1981	0	0	0	51	42	294	414	279	141	0	0	0	1221
1982	0	0	0	11	46	166	501	431	150	9	0	0	1314
1983	0	0	0	0	23	177	534	610	240	32	0	0	1616
1984	0	0	0	0	51	309	475	441	156	16	0	0	1448
1985	0	0	0	16	65	175	457	267	201	3	0	0	1184
1986	0	0	17	19	26	306	474	256	192	1	0	0	1291
1987	0	0	0	51	132	319	507	364	161	12	5	0	1551
1988	0	0	0	4	150	430	437	492	168	5	0	0	1686
1989	0	0	8	99	93	190	435	364	120	39	0	0	1348
1990	0	0	0	15	23	354	448	433	290	28	7	0	1598
1991	0	0	5	19	154	384	546	396	227	68	0	0	1799
1992	0	0	2	15	59	145	303	200	147	19	0	0	890
1993	0	0	0	0	40	235	388	365	56	27	0	0	1111
1994	0	0	2	36	116	333	291	330	181	6	0	0	1295
1995	0	0	3	0	7	198	441	485	137	14	0	0	1285
1996	0	0	0	14	109	322	362	284	109	24	0	0	1224
1997	0	0	0	1	29	252	419	333	174	74	0	0	1282
1998	0	0	6	4	139	303	430	383	271	24	0	0	1560
1999	0	0	0	0	36	194	487	340	109	24	2	0	1192
2000	0	0	0	6	130	247	464	596	283	36	0	0	1762
2001	0	0	0	23	87	270	583	441	124	16	1	0	1545
2002	0	0	0	34	69	418	566	458	211	12	0	0	1768
2003	0	0	3	25	35	219	560	487	96	20	0	0	1445
2004	0	0	2	19	138	212	335	264	241	16	0	0	1227

SNOWFALL (inches) 2004 CONCORDIA, KS (CNK)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	0.0	7.9	T	3.0	4.0	6.6	0.0	0.0	0.0	21.5
1976-77	0.0	0.0	0.0	0.5	1.5	T	9.1	0.2	T	1.2	0.0	0.0	12.5
1977-78	0.0	0.0	0.0	0.0	1.4	0.2	4.1	11.7	5.4	0.0	0.0	0.0	22.8
1978-79	0.0	0.0	0.0	0.0	0.8	6.1	13.7	2.2	3.1	2.5	0.0	0.0	28.4
1979-80	0.0	0.0	0.0	0.6	T	4.5	4.5	12.7	6.0	T	0.0	0.0	28.3
1980-81	0.0	0.0	0.0	T	T	0.4	3.8	2.2	T	0.0	0.0	0.0	6.4
1981-82	0.0	0.0	0.0	0.0	0.1	3.6	5.8	6.8	2.8	1.5	0.0	0.0	20.6
1982-83	0.0	0.0	0.0	0.0	1.0	1.3	12.2	8.7	5.3	6.1	0.0	0.0	34.6
1983-84	0.0	0.0	0.0	0.0	7.3	16.7	3.3	T	6.2	T	0.0	0.0	33.5
1984-85	0.0	0.0	0.0	0.0	0.7	2.5	12.4	4.3	6.2	0.0	0.0	0.0	26.1
1985-86	0.0	0.0	T	0.0	6.4	6.0	0.0	2.9	T	0.0	0.0	0.0	15.3
1986-87	0.0	0.0	0.0	0.0	0.4	7.1	5.9	0.2	10.7	0.0	0.0	0.0	24.3
1987-88	0.0	0.0	0.0	0.0	5.3	5.4	3.7	8.7	2.7	0.0	0.0	0.0	25.8
1988-89	0.0	0.0	0.0	0.0	1.9	0.9	T	5.1	0.2	0.0	T	T	8.1
1989-90	0.0	0.0	0.0	T	T	6.9	3.0	2.8	4.2	0.0	0.0	0.0	16.9
1990-91	0.0	0.0	0.0	0.0	0.1	5.5	7.8	T	1.4	T	T	0.0	14.8
1991-92	0.0	0.0	0.0	3.6	7.1	0.4	1.0	5.4	1.3	0.5	0.0	0.0	19.3
1992-93	T	0.0			4.4	2.3	15.8	7.6	0.9	0.4	0.0	0.0	
1993-94	0.0	0.0	0.0	T	0.2	1.4	2.9	7.7	T	0.3	0.2	T	12.7
1994-95	T	0.0	0.0	0.0						0.0	0.0	0.0	
1995-96	T	0.0	0.0	0.0	2.7	1.4	13.0						
1996-97						1.7							
1997-98													
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-													
POR= 35 YRS	T	0.0	T	0.3	2.1	4.3	5.6	0.2	3.4	0.7	T	T	16.6

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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 (1971 - 2000). 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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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## 2004 CONCORDIA, KANSAS (CNK)

A wide variety of weather occurs in the Concordia area which makes possible a great range in crop production. Wheat is ideally suited to the climate of north-central Kansas where a complete crop failure is unknown. Equally well suited to the climate are alfalfa, sweet clover, and sorghum. Corn is generally a successful crop although dry summers and hot winds occasionally prove disastrous. Adequate moisture throughout the year under normal conditions provides fine grazing conditions for a flourishing livestock industry.

Precipitation is light during the winter months, increasing in the spring until June and dropping off during the autumn months. Summer months with less than 1 inch of precipitation are common, even though monthly summer rainfall has exceeded 13 inches. Thunderstorms are frequent in May, June, July and August. Although heavy winter snowfalls are not uncommon, severe storms that paralyze industry and agriculture are very rare. Some periods have been distinguished by very dry

or very wet cycles. Sustained periods of hot, dry, and windy weather frequently occur in July and August with temperatures of 100 degrees or more recorded for a week or more at a time. The average last occurrence of temperatures as low as 32 degrees in the spring is mid April. The average first occurrence of 32 degrees in the autumn is late October.

Winds are southerly most of the year except for a short period of northerly winds during the winter. Velocities are nearly constant throughout the year except for a slight increase in the spring months.

The variety of weather in north-central Kansas is invigorating and healthful. Winters are usually mild, and summers are seldom oppressively hot. Spring and autumn, although very different in most respects, are very pleasant. A period of mild, dry Indian Summer weather usually occurs in October and early November before the winter snow and cold begin.

# STATION LOCATION

CONCORDIA, KANSAS

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING * EQUIPMENT	* TYPE  M = AMOS T = AUTOB S = ASOS W = AWOS  REMARKS	
						SEA LEVEL GROUND	GROUND											HYGRO THERMOMETER
							WIND INSTRUMENT	EXTREME THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET	RAIN GAUGE	8 INCH RAIN GAUGE	WINDHOLE RAIN GAUGE				
*NOTE: <u>AIRPORT</u> Carlson Building Blosser Municipal AP (1.2 mi. SSE of P.O.)	5/16/62	9/1/92	NA	39°33'	97°39'	1470	21 e33 g23	4	4	5	3	4	4	f5 h5	e. Raised 7/30/80. f. Installed on instrument plot 10/20/81. g. Minor adjustment 6/6/84. h. Type change 6/6/85.			
Blosser Municipal AP	09/01/92	Present	NA	39°33'	97°39'	11469								S	ASOS Commissioned 09/01/92 i. Ground elevation.			

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\* NOTES: For earlier station history see previous editions.