

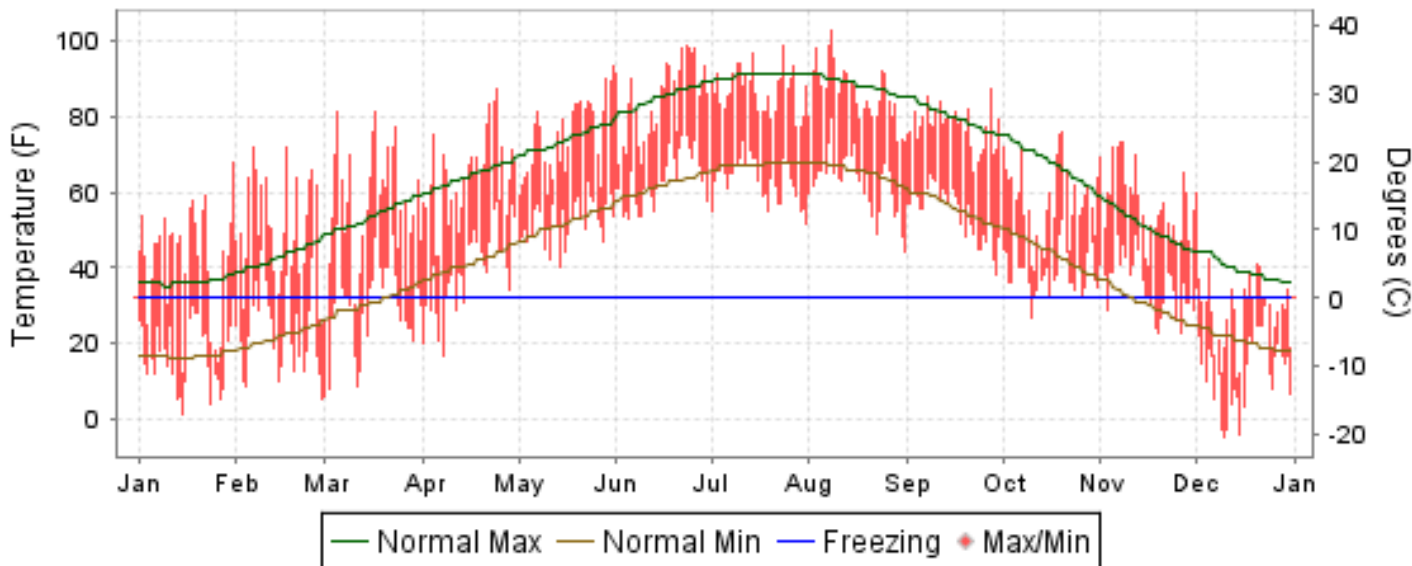


# 2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

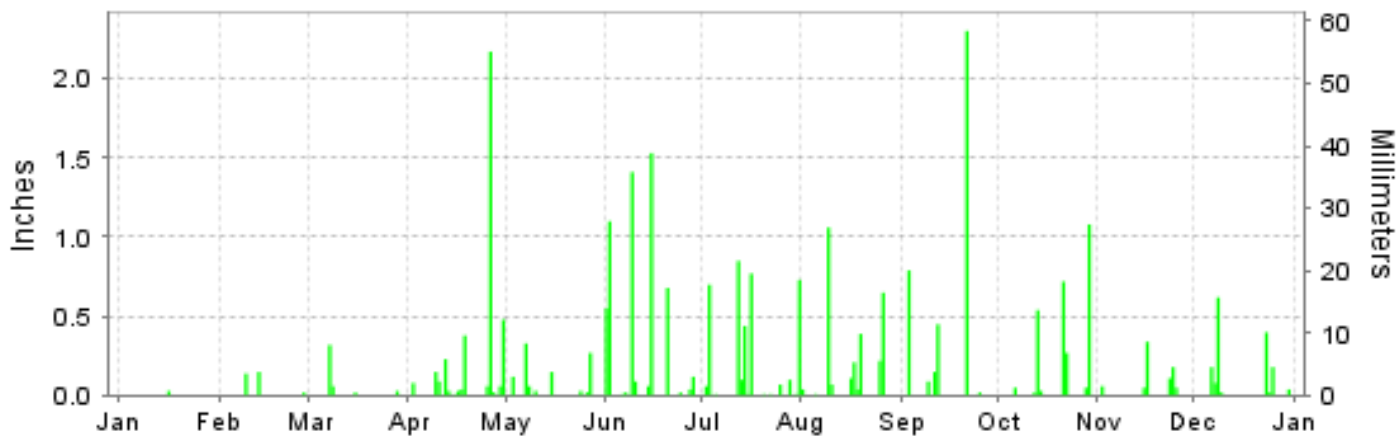
ISSN 0198-2133

## CONCORDIA, KANSAS (KCNK)

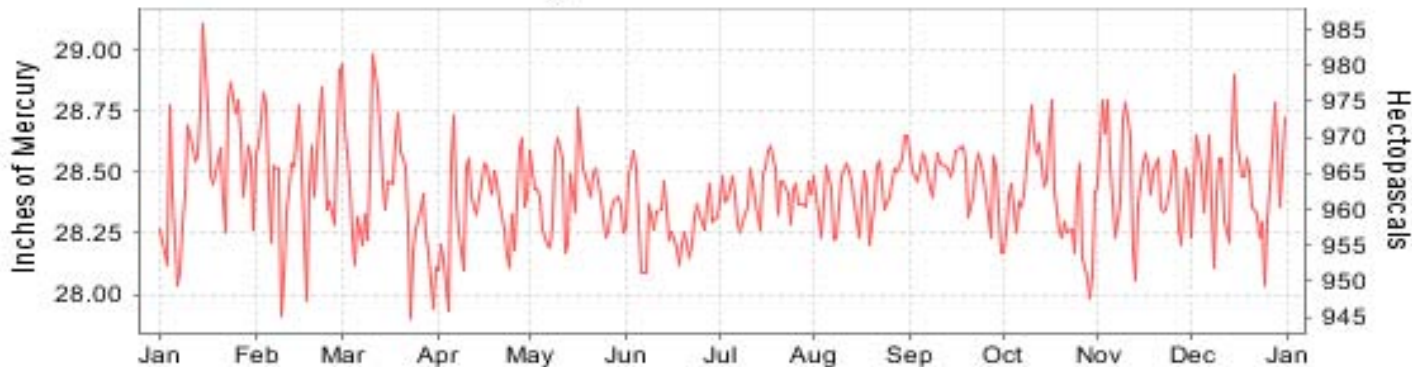
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2009

## CONCORDIA (KCNK)

LATITUDE: 39 ° 32'N      LONGITUDE: -97 ° 39'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	42.2	50.1	56.2	64.4	74.7	84.6	86.8	86.2	77.0	57.7	57.1	29.2	63.9	
	HIGHEST DAILY MAXIMUM	68	72	81	87	93	99	99	103	87	76	73	60	103	
	DATE OF OCCURRENCE	31	17+	17+	24	31	23	24	08	27	20	08+	01	AUG 08	
	MEAN DAILY MINIMUM	17.2	22.9	29.7	39.3	52.2	63.3	63.1	62.5	54.5	38.9	35.4	13.5	41.0	
	LOWEST DAILY MINIMUM	1	5	6	17	40	53	52	44	38	27	23	-5	-5	
	DATE OF OCCURRENCE	15	28	01	07	14	05	31	31	29	10	26+	10	DEC 10	
	AVERAGE DRY BULB	29.7	36.5	43.0	51.9	63.5	74.0	75.0	74.4	65.8	48.3	46.3	21.4	52.5	
	MEAN WET BULB	24.6		36.3	45.0	55.9	66.4	67.0	66.2	59.7	44.3	41.9	20.8		
	MEAN DEW POINT	15.8		27.7	37.4	50.0	62.6	62.6	62.0	55.7	40.2	37.3	16.9		
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	2	11	10	10	0	0	0	0	0	33
MAXIMUM <= 32°	7	2	3	0	0	0	0	0	0	0	0	22	34		
MINIMUM <= 32°	30	23	19	9	0	0	0	0	0	3	12	30	126		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	4	4		
H/C	HEATING DEGREE DAYS	1088	792	676	402	118	11	0	11	57	510	554	1345	5564	
	COOLING DEGREE DAYS	0	0	2	13	77	284	315	308	88	0	0	0	1087	
RH	MEAN (PERCENT)	61	57	59	63	65	72	69	70	76	77	75	79	69	
	HOUR 00 LST	66	65	67	70	71	81	81	81	87	84	82	81	76	
	HOUR 06 LST	72	71	76	79	83	88	89	90	93	90	88	83	84	
	HOUR 12 LST	52	49	47	53	56	59	53	55	59	66	63	74	57	
	HOUR 18 LST	52	41	45	49	51	57	51	53	61	68	68	78	56	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	1	0	1	1	1	1	0	2	3	0	3	3	16	
	THUNDERSTORMS	0	0	2	3	1	9	7	3	5	1	0	0	31	
CLOUDNESS	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.)	28.51	28.50	28.40	28.36	28.41	28.30	28.41	28.43	28.49	28.38	28.47	28.46	28.43	
	MEAN SEA-LEVEL PRESS. (IN.)	30.14	30.10	30.00	29.94	29.96	29.84	29.96	29.96	30.05	29.96	30.06	30.09	30.01	
WINDS	RESULTANT SPEED (MPH)	3.7	0.7	2.2	3.2	2.5	2.0	1.9	3.7	3.0	0.8	1.5	4.7	0.4	
	RES. DIR. (TENS OF DEGS.)	31	01	16	06	19	13	12	18	13	29	24	31	18	
	MEAN SPEED (MPH)	11.0	11.1	13.0	12.2	9.8	8.1	7.7	9.6	7.2	10.8	9.4	10.9	10.1	
	PREVAIL.DIR.(TENS OF DEGS.)	32	18	17	12	18	17	16	17	14	19	18	33	17	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	38	47	52	43	30	33	43	38	30	39	37	36	52	
	DIR. (TENS OF DEGS.)	33	22	17	18	19	21	32	29	33	30	18	32	17	
	DATE OF OCCURRENCE	12	09	23	04	20	15	31	16	27	02	12	25	MAR 23	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	49	62	67	58	41	45	58	52	39	52	47	51	67	
DIR. (TENS OF DEGS.)	34	22	18	19	19	21	24	26	34	30	17	32	18		
DATE OF OCCURRENCE	12	09	23	04	20	15	03	16	27	02	12	24	MAR 23		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.03	0.31	0.43	3.83	1.01	5.63	3.87	2.80	3.80	2.76	0.79	1.54	26.80	
	GREATEST 24-HOUR (IN.)	0.03	0.15	0.37	2.23	0.33	1.65	0.85	1.13	2.30	1.12	0.37	0.69	2.30	
	DATE OF OCCURRENCE	16	13	07-08	25-26	07	01-02	12	09-10	21	28-29	15-16	07-08	SEP 21	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	1	3	4	14	8	12	14	10	6	8	6	8	94	
PRECIPITATION 0.10	0	1	1	5	4	6	7	6	4	4	3	4	45		
PRECIPITATION 1.00	0	0	0	1	0	3	0	1	1	1	0	0	7		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	0.9	0.9	0.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	21.1	29.9	
	GREATEST 24-HOUR (IN.)	0.3	0.5	0.5	3.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	12.0	12.0	
	DATE OF OCCURRENCE	23+	27	28	02							16	08	DEC 08	
	MAXIMUM SNOW DEPTH (IN.)	T	1	0	0	0	0	0	0	0	0	2	14	14	
	DATE OF OCCURRENCE	16	28									16	09	DEC 09	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	0	0	0	1	0	0	0	0	0	0	1	6	8		

# NORMALS, MEANS, AND EXTREMES CONCORDIA (KCNK)

LATITUDE: 39 ° 32'N      LONGITUDE: -97 ° 39'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	61	36.5	41.7	52.6	64.3	74.4	84.2	90.5	88.5	78.9	67.6	51.8	40.1	64.3
	HIGHEST DAILY MAXIMUM	47	74	86	88	98	102	109	109	108	109	96	85	82	109
	YEAR OF OCCURRENCE		1990	1972	1986	1989	1998	1980	2006	1983	2000	1963	2006	1964	JUL 2006
	MEAN OF EXTREME MAXS.	61	60.2	66.6	78.0	85.0	89.9	97.8	102.4	101.2	95.1	86.8	73.0	62.4	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	61	17.1	21.2	30.1	41.3	52.4	61.6	67.6	65.7	55.7	44.2	30.9	21.0	42.4
	LOWEST DAILY MINIMUM	47	-17	-15	-7	14	26	41	48	44	29	14	-4	-26	-26
	YEAR OF OCCURRENCE		1985	1979	1978	1975	1967	1964	1972	2009	1984	1993	1976	1989	DEC 1989
	MEAN OF EXTREME MINS.	61	-3.5	0.9	10.4	25.0	37.6	49.2	55.9	53.7	39.5	27.0	14.2	1.2	25.9
	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	61	26.9	31.5	41.4	52.8	63.4	73.1	79.1	77.1	67.3	55.9	41.4	30.6	53.4
	MEAN WET BULB	26	24.4	28.5	36.2	45.6	56.3	64.5	68.4	67.4	59.0	48.0	35.8	26.6	46.7
	MEAN DEW POINT	26	20.0	23.0	30.6	40.8	53.0	61.2	64.9	64.0	54.7	42.6	31.5	22.5	42.4
	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	65	70	73	68
	HOURLY 00 LST	30	75	75	72	72	78	76	72	75	73	70	75	76	74
	HOURLY 06 LST	30	79	79	79	81	85	85	82	84	82	79	81	80	81
	HOURLY 12 LST	30	64	62	57	55	59	55	52	55	53	53	61	65	58
	HOURLY 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)	46	2.2	2.3	1.6	1.0	1.0	0.6	0.5	1.2	1.3	1.2	1.5	2.4	16.8
	THUNDERSTORMS	48	0.3	0.5	2.0	5.3	8.9	10.5	10.3	9.0	6.1	2.9	0.9	0.1	56.8
CLOUDNESS	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)	26	28.51	28.50	28.43	28.36	28.36	28.36	28.41	28.43	28.45	28.46	28.47	28.51	28.44
	MEAN SEA-LEVEL PRES. (IN)	26	30.14	30.11	30.02	29.92	29.91	29.89	29.93	29.96	29.99	30.02	30.06	30.12	30.01
WINDS	MEAN SPEED (MPH)	26	11.1	11.3	12.6	13.0	11.5	11.0	10.6	9.9	10.8	11.0	11.3	10.8	11.2
	PREVAIL.DIR(TENS OF DEGS)	29	36	36	19	19	19	19	19	19	19	19	19	19	19
	MAXIMUM 2-MINUTE: SPEED (MPH)	17	46	47	52	55	44	54	52	41	49	46	41	41	55
	DIR. (TENS OF DEGS)		32	22	17	24	18	24	34	20	31	26	32	18	24
	YEAR OF OCCURRENCE		1996	2009	2009	2001	2004	1997	1996	1998	2004	1996	1997	2007	APR 2001
	MAXIMUM 3-SECOND SPEED (MPH)	17	60	62	67	87	59	62	67	52	64	57	52	51	87
	DIR. (TENS OF DEGS)		33	22	18	23	24	22	32	26	29	26	29	32	23
	YEAR OF OCCURRENCE		1996	2009	2009	2001	2008	1993	1996	2009	2004	1996	2008	2009	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)	47	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)	47	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	2006	1968	1989	1966	1996	1984	2000	1991	1999	1989	1976	JAN 1986
	MAXIMUM IN 24 HOURS (IN)	47	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)	38	15.8	20.6	10.7	6.1	0.2	T	T	T	T	4.6	10.1	21.1	21.1
	YEAR OF OCCURRENCE		1993	1971	1987	1983	1994	1989	1992		1985	1970	1972	2009	DEC 2009
	MAXIMUM IN 24 HOURS (IN)	38	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)	41	13	15	9	3	0	0	0	0	0	3	7	14	15
	YEAR OF OCCURRENCE		1979	1983	1987	1970						1970	1983	2009	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) 2009 CONCORDIA (KCNK)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2005	1.10	1.96	1.90	3.67	2.86	4.32	3.22	3.08	0.65	2.70	0.95	0.35	26.76
2006	0.08	0.01	1.85	2.10	2.87	2.11	1.68	4.91	3.98	1.00	0.10	3.24	23.93
2007	0.48	1.13	2.15	1.84	6.29	1.08	3.32	2.08	4.55	4.36	0.06	2.29	29.63
2008	0.34	0.34	1.31	3.01	4.62	4.71	6.39	2.99	4.85	3.68	0.65	0.53	33.42
2009	0.03	0.31	0.43	3.83	1.01	5.63	3.87	2.80	3.80	2.76	0.79	1.54	26.80
POR= 61 YRS	0.62	0.87	1.90	2.35	4.15	4.14	3.74	3.20	2.83	1.93	1.05	0.81	27.59

WBAN : 13984

**AVERAGE TEMPERATURE (°F) 2009 CONCORDIA (KCNK)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2005	25.4	37.8	44.5	55.4	64.0	75.9	79.2	76.8	73.0	57.4	45.2	28.2	55.2
2006	40.7	33.1	43.4	58.1	65.4	76.4	81.3	77.2	63.8	53.4	42.5	36.1	56.0
2007	26.6	28.7	50.9	51.0	65.2	72.2	79.6	81.2	68.8	58.1	43.2	26.0	54.3
2008	26.4	30.0	40.9	48.9	62.1	73.2	77.6	73.5	66.1	54.9	42.3	26.5	51.9
2009	29.7	36.5	43.0	51.9	63.5	74.0	75.0	74.4	65.8	48.3	46.3	21.4	52.5
POR= 61 YRS	26.9	31.5	41.4	52.8	63.4	73.1	79.1	77.1	67.3	55.9	41.4	30.6	53.4

**HEATING DEGREE DAYS (base 65°F) 2009 CONCORDIA (KCNK)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
2004-05	2	5	7	240	616	930	1218	755	630	302	132	0	4837
2005-06	1	0	23	294	586	1137	745	888	661	231	121	0	4687
2006-07	0	0	88	397	669	891	1181	1012	439	426	51	9	5163
2007-08	0	0	44	244	648	1200	1190	1010	744	477	140	0	5697
2008-09	0	0	59	328	677	1186	1088	792	676	402	118	11	5337
2009-	0	11	57	510	554	1345							

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**COOLING DEGREE DAYS (base 65°F) 2009 CONCORDIA (KCNK)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
2005	0	0	0	20	105	334	446	374	272	66	0	0	1617
2006	0	0	0	33	141	351	512	386	57	45	1	0	1526
2007	0	0	8	16	66	232	459	511	165	38	0	0	1495
2008	0	0	0	0	58	254	399	270	101	20	3	0	1105
2009	0	0	2	13	77	284	315	308	88	0	0	0	1087

## SNOWFALL (inches) 2009 CONCORDIA (KCNK)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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													
2004-05													
2005-06					3.0	7.7	T	T	5.5	0.0	0.0	0.0	
2006-07	0.0	0.0	0.0	0.0	0.0	3.8	7.8	4.8	3.0	T	0.0	0.0	19.4
2007-08	0.0	0.0	0.0	0.0	2.2	11.7	6.5	3.3	T	T	0.0	0.0	23.7
2008-09	0.0	0.0	0.0	0.0	T	6.3	0.9	0.9	0.5	3.0	0.0	0.0	11.6
2009-	0.0	0.0	0.0	0.0	3.5	21.1							
POR= 62 YRS	T	0.0	T	0.2	1.9	4.1	4.9	4.7	3.8	0.8	T	T	20.4

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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. 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.</p>	<p>GENERAL CONTINUED: 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. 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. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK METADATA SYSTEM", URL IS: <a href="https://mi3.ncdc.noaa.gov/mi3qry/login.cfm">https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</a></p> <p><b>NOTE:</b> The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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# 2009 CONCORDIA KANSAS (KCNK)

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.

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