

1999

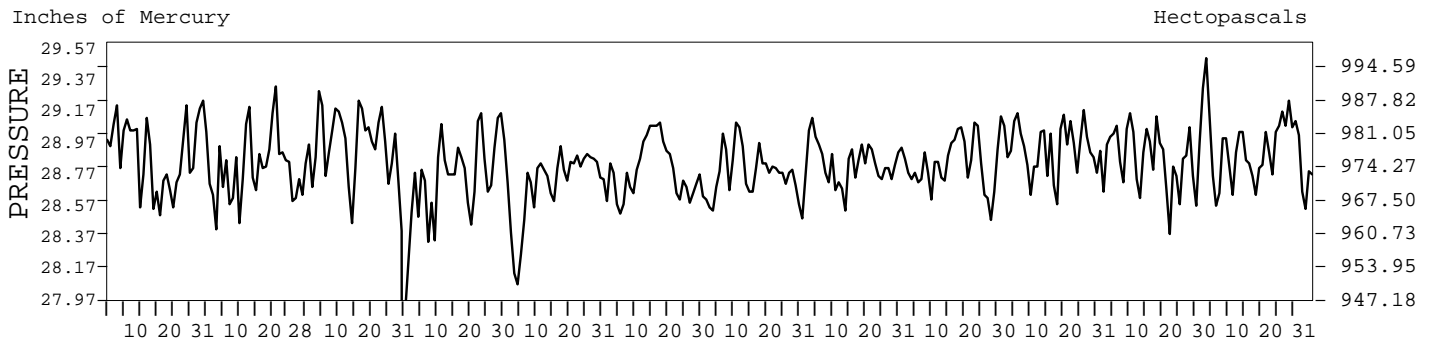
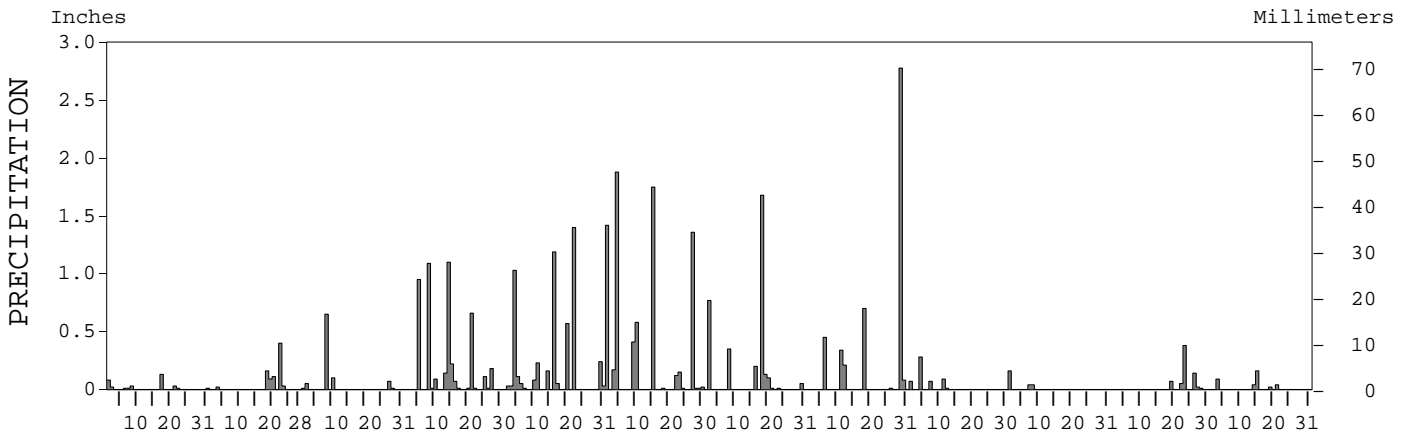
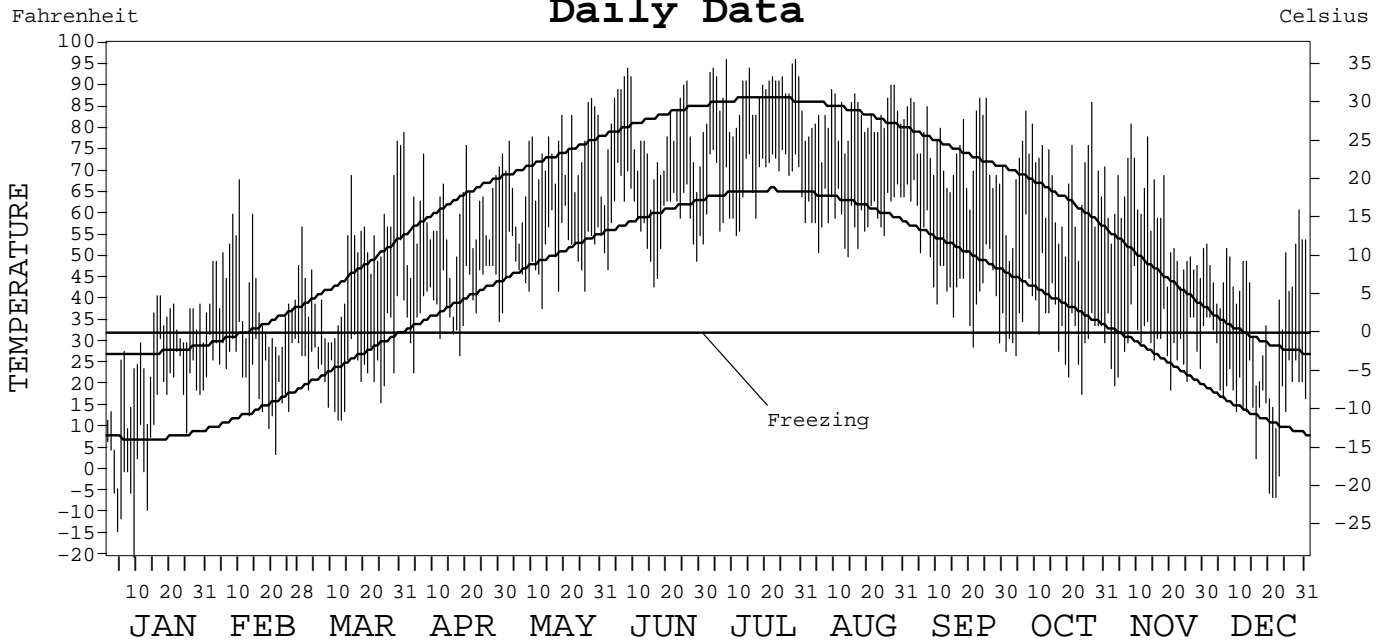
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-2095

SIOUX CITY,
IOWA (SUX)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE	NATIONAL 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

SIOUX CITY, IA (SUX)

LATITUDE: 42° 23' 29" N LONGITUDE: 96° 22' 45" W ELEVATION (FT): GRND: 1110 BARO: 1110 TIME ZONE: CENTRAL (UTC + 6) WBAN: 14943

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	27.3	41.8	48.8	59.3	72.4	78.4	88.2	82.1	75.0	66.5	58.1	40.0	61.5	
	HIGHEST DAILY MAXIMUM	41	68	77	79	87	94	96	90	87	86	81	61	96	
	DATE OF OCCURRENCE	17+	10	30	01	28	08	29+	28+	25+	27	08	29	JUL 29+	
	MEAN DAILY MINIMUM	10.4	23.1	25.2	39.1	50.3	58.6	67.2	59.6	47.0	34.4	30.2	17.5	38.6	
	LOWEST DAILY MINIMUM	-20	4	12	23	37	43	53	50	29	18	19	-6	-20	
	DATE OF OCCURRENCE	09	21	13+	04	01	16	01	14	21	24	20	22+	JAN 09	
	AVERAGE DRY BULB	18.9	32.5	37.0	49.2	61.4	68.5	77.7	70.9	61.0	50.5	44.2	28.8	50.1	
	MEAN WET BULB		30.1					71.8		54.3			26.4		
	MEAN DEW POINT		25.6					68.9		48.5			22.1		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	5	16	2	0	0	0	0	23	
	MAXIMUM ≤ 32°	18	7	5	0	0	0	0	0	0	0	0	7	37	
	MINIMUM ≤ 32°	31	27	27	5	0	0	0	0	2	13	20	28	153	
MINIMUM ≤ 0°	9	0	0	0	0	0	0	0	0	0	0	4	13		
H/C	HEATING DEGREE DAYS	1423	902	861	465	145	55	0	3	164	449	621	1117	6205	
	COOLING DEGREE DAYS	0	0	0	0	39	168	402	193	52	7	0	0	861	
RH	MEAN (PERCENT)	81	76	65	73	71	76	75	79	67	58	63	78	72	
	HOUR 00 LST	82	81	72	82	80	84	84	88	80	68	71	84	80	
	HOUR 06 LST	84	82	82	84	86	90	89	93	88	78	77	85	85	
	HOUR 12 LST	78	71	55	63	60	66	64	65	48	42	50	71	61	
	HOUR 18 LST	81	70	50	63	57	64	65	64	52	44	55	71	61	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	1	5	3	0	0	2	2	6	0	0	0	0	19	
	THUNDERSTORMS	0	0	0	3	7	7	9	5	3	0	0	0	34	
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.)	28.91	28.81	28.94		28.71	28.79	28.78	28.84	28.85	28.93	28.91	28.89		
	MEAN SEA-LEVEL PRESS. (IN.)		30.02					29.93		30.02			30.11		
WINDS	RESULTANT SPEED (MPH)	2.9	0.8	1.8	4.7	1.1	4.2	3.4	1.7	0.8	1.2		2.3		
	RES. DIR. (TENS OF DEGS.)	36	29	14	04	22	16	15	15	23	32		32		
	MEAN SPEED (MPH)	11.0	11.8	11.3	13.6	12.5	10.2	9.1	8.2	8.9	10.5	9.7	10.1	10.6	
	PREVAIL. DIR. (TENS OF DEGS.)	31	32	13	32	14	16	17	15	31	32	32	33	32	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	36	46	45	45	49	52	46	29	30	32	38	32	52	
	DIR. (TENS OF DEGS.)	31	32	19	09	31	19	06	30	19	32	32	33	19	
	DATE OF OCCURRENCE	18+	11	30	08	22	09	02	12	25	22	01	28+	JUN 09	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	44	56	53	54	56	69	56	38	39	39	47	40	69	
DIR. (TENS OF DEGS.)	30	33	20	09	30	17	07	30	31	32	32	01	17		
DATE OF OCCURRENCE	18	11	30	08	22	09	02	12	08	22	01	27	JUN 09		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.33	0.81	0.89	4.66	5.21	7.90	3.30	4.57	0.52	0.24	0.67	0.35	29.45	
	GREATEST 24-HOUR (IN.)	0.13	0.40	0.65	1.17	1.40	2.05	1.68	2.86	0.28	0.16	0.43	0.16	2.86	
	DATE OF OCCURRENCE	17	22	08	14-15	22	03-04	18	29-30	04	01	22-23	15	AUG 29-30	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	9	6	6	15	15	14	9	7	5	3	6	5	100	
PRECIPITATION ≥ 0.10	1	3	2	8	8	9	6	5	1	1	2	1	47		
PRECIPITATION ≥ 1.00	0	0	0	2	3	4	1	1	0	0	0	0	11		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	7.3	13.6	9.4	0.8	0.0	0.0	T	0.0	0.0	T	1.5	4.6	37.2	
	GREATEST 24-HOUR (IN.)	4.5	8.0	7.6	0.7	0.0	T	T	0.0	0.0	T	1.5	2.4	8.0	
	DATE OF OCCURRENCE	01	22	08	16	09	02	0	0	0	01	23	15	FEB 22	
	MAXIMUM SNOW DEPTH (IN.)	8	10	8	0	0	0	0	0	0	0	0	2	10	
	DATE OF OCCURRENCE	10+	23	09									24+	FEB 23	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3	4	2	0	0	0	0	0	0	0	1	2	12		

NORMALS, MEANS, AND EXTREMES

SIOUX CITY, IA (SUX)

LATITUDE: 42° 23' 29" N LONGITUDE: 96° 22' 45" W ELEVATION (FT): GRND: 1110 BARO: 1110 TIME ZONE: CENTRAL (UTC + 6) WBAN: 14943

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	27.6	33.2	45.8	62.2	73.2	82.1	86.5	83.5	74.9	64.0	46.4	30.9	59.2
	MEAN DAILY MAXIMUM	52	27.5	33.9	44.7	61.4	72.9	82.0	86.2	83.9	75.7	64.3	46.1	32.5	59.3
	HIGHEST DAILY MAXIMUM	59	70	71	91	97	102	108	108	104	102	94	81	70	108
	YEAR OF OCCURRENCE		1981	1981	1968	1980	1967	1988	1995	1955	1976	1997	1999	1998	JUL 1995
	MEAN OF EXTREME MAXS.	52	49.7	56.1	71.3	85.6	90.2	96.1	97.6	95.5	91.5	84.2	68.2	54.3	78.4
	NORMAL DAILY MINIMUM	30	7.7	13.9	25.7	38.3	50.0	59.6	64.8	62.0	51.9	39.6	26.4	12.7	37.7
	MEAN DAILY MINIMUM	52	7.9	14.7	24.6	37.5	49.9	59.5	64.1	62.0	51.6	39.7	25.7	13.8	37.6
	LOWEST DAILY MINIMUM	59	-26	-26	-22	-2	25	38	42	37	24	12	-9	-24	-26
	YEAR OF OCCURRENCE		1970	1962	1960	1975	1997	1950	1971	1950	1945	1993	1991	1989	JAN 1970
	MEAN OF EXTREME MINS.	52	-15.2	-9.0	3.7	21.7	34.0	45.6	52.1	49.5	34.7	22.9	7.1	-7.7	19.9
	NORMAL DRY BULB	30	17.7	23.6	35.8	50.2	61.6	70.8	75.7	72.8	63.4	51.8	36.4	21.8	48.5
	MEAN DRY BULB	52	17.6	24.2	34.7	49.4	61.3	70.8	75.1	72.9	63.5	52.0	35.9	23.1	48.4
	MEAN WET BULB	13	19.3	24.0	32.6	42.7	54.1	63.5	67.6	66.2	57.0	41.7	29.2	22.1	43.3
	MEAN DEW POINT	13	14.2	18.9	26.7	35.4	47.7	58.3	64.0	63.1	52.3	35.7	24.5	17.9	38.2
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	*	0.5	1.4	5.5	10.3	6.4	1.9	0.2	0.0	0.0	26.2	
MAXIMUM ≤ 32°	30	18.1	13.2	5.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.7	15.9	56.1	
MINIMUM ≤ 32°	30	30.7	26.8	22.8	8.2	0.8	0.0	0.0	0.0	0.5	7.3	22.4	30.1	149.6	
MINIMUM ≤ 0°	30	10.0	5.1	0.6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.4	21.6	
H/C	NORMAL HEATING DEG. DAYS	30	1466	1159	905	444	171	19	0	12	103	417	858	1339	6893
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	65	193	332	254	55	8	0	0	907
RH	NORMAL (PERCENT)	30	72	72	70	62	62	65	69	72	71	66	72	76	69
	HOUR 00 LST	30	75	77	76	69	70	74	78	81	80	74	78	79	76
	HOUR 06 LST	30	77	78	80	78	78	81	85	87	86	81	82	81	81
	HOUR 12 LST	30	67	66	62	52	53	56	58	60	58	54	64	71	60
	HOUR 18 LST	30	69	67	60	48	49	51	56	59	58	55	66	73	59
S	PERCENT POSSIBLE SUNSHINE	56	57	56	57	59	61	67	73	70	66	63	51	50	61
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	59	2.3	2.7	2.1	0.7	0.6	0.5	0.7	1.8	1.5	1.5	2.2	2.9	19.5
	THUNDERSTORMS	59	0.1	0.3	1.3	3.1	6.8	8.6	8.2	7.5	4.8	1.8	0.4	0.1	43.0
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1		2.0	5.0		3.0	12.0								
PARTLY CLOUDY	1	3.0		6.0		1.0	4.0								
CLOUDY	1	3.0		5.0		10.0	8.0								
PR	MEAN STATION PRESSURE (IN)	26	28.92	28.91	28.81	28.77	28.76	28.75	28.80	28.82	28.84	28.85	28.85	28.90	28.83
	MEAN SEA-LEVEL PRES. (IN)	13	30.14	30.13	30.04	29.95	29.93	29.90	29.95	30.00	30.01	30.04	30.05	30.13	30.02
WINDS	MEAN SPEED (MPH)	44	11.6	11.4	12.7	13.2	11.9	10.7	9.2	9.0	9.9	10.7	11.7	11.3	11.1
	PREVAIL. DIR (TENS OF DEGS)	28	32	32	32	32	32	16	16	14	14	32	32	32	32
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	55	46	57	53	49	52	49	39	48	51	48	44	57
	DIR. (TENS OF DEGS)		33	32	33	32	31	19	03	27	20	32	33	35	33
	YEAR OF OCCURRENCE		1996	1999	1996	1996	1999	1999	1996	1997	1998	1996	1997	1997	MAR 1996
	MAXIMUM 5-SECOND:														
SPEED (MPH)	4	63	57	68	63	77	69	57	54	57	61	62	54	77	
DIR. (TENS OF DEGS)		34	31	33	32	19	17	03	22	21	32	29	35	19	
YEAR OF OCCURRENCE		1996	1996	1996	1996	1998	1999	1996	1997	1998	1996	1998	1997	MAY 1998	
PRECIPITATION	NORMAL (IN)	30	0.55	0.71	1.96	2.34	3.67	3.71	3.27	2.97	2.88	1.94	1.08	0.78	25.86
	MAXIMUM MONTHLY (IN)	59	2.44	2.66	5.90	6.73	8.46	8.78	10.33	7.75	9.69	5.30	4.10	2.23	10.33
	YEAR OF OCCURRENCE		1949	1971	1987	1984	1959	1967	1972	1951	1965	1979	1948	1982	JUL 1972
	MINIMUM MONTHLY (IN)	59	0.11	0.07	0.04	0.45	0.60	0.53	0.41	0.12	0.07	T	0.01	0.01	T
	YEAR OF OCCURRENCE		1986	1996	1994	1942	1955	1988	1985	1971	1950	1958	1967	1943	OCT 1958
	MAXIMUM IN 24 HOURS (IN)	59	1.09	2.15	2.75	2.09	2.70	3.89	5.50	4.28	2.94	4.55	3.45	1.18	5.50
	YEAR OF OCCURRENCE		1982	1971	1987	1998	1992	1957	1972	1961	1965	1979	1948	1959	JUL 1972
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.7	6.4	8.6	9.7	11.1	9.9	8.8	9.1	8.9	6.5	5.9	7.0	98.6	
PRECIPITATION ≥ 1.00	30	*	0.1	0.5	0.3	0.8	1.2	0.9	0.7	0.7	0.3	0.2	0.0	5.7	
SNOWFALL	NORMAL (IN)	30	6.4	5.7	7.5	1.3	T	0.0	0.0	0.0	0.*	0.9	3.3	6.7	31.8
	MAXIMUM MONTHLY (IN)	58	29.1	24.5	26.2	9.7	4.0	T	T	0.0	0.4	9.8	16.5	20.6	29.1
	YEAR OF OCCURRENCE		1982	1993	1962	1983	1945	1996	1992		1961	1991	1983	1968	JAN 1982
	MAXIMUM IN 24 HOURS (IN)	58	17.4	15.2	12.4	6.8	4.0	T	T	0.0	0.4	8.8	12.4	9.4	17.4
	YEAR OF OCCURRENCE		1982	1993	1983	1957	1945	1996	1992		1961	1991	1983	1994	JAN 1982
	MAXIMUM SNOW DEPTH (IN)	51	19	18	28	7	0	0	0	0	0	4	13	15	28
	YEAR OF OCCURRENCE		1982	1993	1962	1957						1982	1983	1968	MAR 1962
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.8	1.8	2.2	0.5	0.0	0.0	0.0	0.0	0.0	0.2	1.1	2.0	9.6	

PRECIPITATION (inches) 1999 SIOUX CITY, IA (SUX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0.21	0.25	1.84	2.96	3.04	2.63	1.89	1.01	7.54	4.57	1.80	1.07	28.81
1971	0.45	2.66	0.46	1.61	2.85	3.65	1.57	0.12	0.60	3.16	1.71	0.79	19.63
1972	0.37	0.89	1.31	3.44	4.29	3.79	10.33	2.09	2.62	1.71	0.96	1.92	33.72
1973	1.23	0.46	4.02	1.33	1.72	3.54	4.90	1.05	4.04	2.22	2.66	0.72	27.89
1974	0.27	0.21	0.68	1.60	4.16	3.28	1.29	3.27	0.87	1.55	0.26	0.52	17.96
1975	1.66	0.29	1.43	3.99	2.66	5.34	1.61	4.56	1.17	0.07	3.24	0.29	26.31
1976	0.14	0.85	2.63	2.23	3.12	0.75	1.50	0.30	1.96	0.42	0.04	0.39	14.33
1977	0.27	0.25	4.05	3.14	3.08	4.80	6.34	2.53	4.90	2.79	1.88	1.00	35.03
1978	0.20	0.97	0.60	3.89	3.39	1.50	3.25	4.25	1.77	0.75	0.71	0.80	22.08
1979	1.09	0.35	3.27	2.34	4.43	3.39	1.91	6.28	2.02	5.30	1.90	0.21	32.49
1980	0.59	0.41	1.03	1.37	3.88	1.21	0.50	5.68	1.40	1.39	0.03	0.22	17.71
1981	0.37	0.32	1.78	0.47	1.98	3.07	4.36	1.72	0.97	2.89	1.90	0.57	20.40
1982	1.58	0.38	1.53	0.64	6.93	1.82	3.63	1.54	3.64	4.83	1.75	2.23	30.50
1983	0.39	0.68	4.91	2.19	4.41	4.58	1.27	1.16	3.07	2.09	3.08	0.45	28.28
1984	0.17	1.14	1.79	6.73	5.54	6.79	2.56	0.79	0.71	4.59	1.85	1.36	34.02
1985	0.29	0.12	2.20	5.04	3.24	1.15	0.41	3.69	4.50	1.20	1.01	0.52	23.37
1986	0.11	0.63	3.03	5.73	3.00	5.35	3.26	1.86	5.06	2.56	1.13	0.21	31.93
1987	0.23	0.41	5.90	0.61	4.20	3.09	3.08	3.94	1.44	0.44	0.90	0.48	24.72
1988	0.73	0.43	0.59	2.50	2.47	0.53	2.93	5.16	5.17	0.08	2.08	0.58	23.25
1989	0.96	0.36	0.86	0.94	1.51	1.83	5.76	2.01	4.33	0.19	0.24	0.40	19.39
1990	0.30	0.31	2.18	1.61	7.48	4.20	3.22	1.34	0.86	1.48	0.87	0.78	24.63
1991	0.46	0.38	2.02	3.48	3.87	5.27	0.77	2.17	2.17	2.04	2.70	0.87	26.20
1992	0.60	0.77	3.52	1.13	3.56	2.74	4.81	4.60	2.82	3.69	0.95	0.80	29.99
1993	0.70	2.08	0.85	3.66	3.06	4.23	6.71	6.43	1.29	1.84	1.03	0.53	32.41
1994	1.09	0.65	0.04	2.37	0.88	3.44	4.53	3.33	4.59	2.01	2.24	1.04	26.21
1995	0.31	0.18	2.09	4.74	4.81	2.18	1.36	2.04	3.52	2.22	0.64	0.31	24.40
1996	1.17	0.07	1.09	0.84	6.22	4.39	7.33	4.69	2.65	0.86	1.83	0.43	31.57
1997	0.35	0.34	0.46	2.42	3.71	3.09	1.94	0.63	2.43	1.29	0.26	0.20	17.12
1998	0.80	0.46	4.01	6.06	2.87	5.67	1.49	3.55	0.42	3.49	1.82	0.15	30.79
1999	0.33	0.81	0.89	4.66	5.21	7.90	3.30	4.57	0.52	0.24	0.67	0.35	29.45
POR= 110 YRS	0.65	0.80	1.48	2.48	3.65	4.00	3.21	2.93	2.76	1.70	1.11	0.69	25.46

WBAN : 14943

AVERAGE TEMPERATURE (°F) 1999 SIOUX CITY, IA (SUX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	10.4	27.0	30.3	49.7	65.4	72.3	75.1	75.0	63.9	49.5	35.8	22.0	48.0
1971	13.8	24.4	35.2	51.9	59.6	75.4	72.5	73.6	65.0	56.6	37.8	24.4	49.2
1972	15.5	18.3	37.7	49.4	62.7	72.3	73.7	72.9	64.1	48.9	36.3	18.0	47.5
1973	21.5	25.5	42.9	50.3	60.2	72.4	74.7	77.1	63.1	57.1	38.1	21.5	50.4
1974	16.8	30.0	39.6	52.6	62.2	69.6	81.4	70.8	60.2	54.6	37.5	24.8	50.0
1975	18.3	19.2	29.1	45.6	64.6	69.5	76.4	75.1	59.6	55.1	36.4	25.3	47.9
1976	21.1	33.5	36.4	53.1	58.6	70.2	76.3	74.2	64.2	45.1	29.4	19.3	48.5
1977	8.8	28.3	40.7	55.6	67.3	70.9	75.9	69.4	64.8	51.0	35.5	22.6	49.2
1978	7.5	10.1	32.5	48.5	60.0	70.7	73.8	71.7	68.0	50.3	33.2	15.5	45.2
1979	3.9	9.2	31.3	46.6	57.6	70.0	74.4	72.4	65.2	50.1	34.1	30.1	45.4
1980	21.6	20.3	33.6	51.5	61.2	70.7	78.6	73.8	64.3	48.2	39.9	24.4	49.0
1981	24.4	28.3	40.5	56.6	59.2	72.0	74.5	71.0	65.1	49.5	40.1	20.7	50.2
1982	6.4	20.4	34.0	46.5	62.4	65.4	76.4	72.4	63.1	53.2	34.2	26.3	46.7
1983	22.5	28.1	36.5	43.2	56.5	68.1	77.2	80.9	66.3	52.6	38.2	6.0	48.0
1984	20.7	31.7	29.3	46.8	57.8	70.4	73.7	74.9	60.4	51.8	37.9	24.4	48.3
1985	17.8	23.7	41.5	54.7	64.5	67.9	74.5	69.3	61.4	51.4	25.9	13.8	47.2
1986	28.0	23.0	41.0	51.2	61.8	72.9	76.8	68.6	64.0	51.9	31.9	27.0	49.8
1987	26.9	34.8	40.5	54.8	66.4	74.3	76.9	70.1	64.0	46.6	41.6	28.9	52.2
1988	16.0	20.8	39.4	49.0	67.5	76.5	76.4	76.1	64.9	47.4	37.5	27.2	49.9
1989	29.9	15.3	34.0	52.2	61.1	69.4	77.4	72.7	61.9	52.6	32.9	14.3	47.8
1990	30.4	28.4	40.2	49.2	58.3	73.4	73.4	73.6	67.8	51.2	40.0	19.6	50.5
1991	15.7	33.1	40.2	52.9	65.0	73.9	74.5	74.0	64.3	49.0	28.3	28.9	50.0
1992	30.7	34.7	40.4	46.7	60.8	68.1	68.6	66.8	62.1	51.1	33.3	24.0	48.9
1993	17.5	18.5	31.6	46.5	59.1	67.7	73.1	72.5	58.4	49.4	32.2	25.6	46.0
1994	12.1	17.7	39.5	49.1	63.8	72.6	70.9	69.9	66.7	54.0	38.5	23.4	48.2
1995	20.6	28.8	36.4	45.8	56.9	70.1	74.9	77.0	60.7	50.1	31.7	25.6	48.2
1996	14.6	26.2	29.0	46.1	57.4	71.4	70.5	70.4	60.6	51.2	28.2	15.3	45.1
1997	14.6	24.8	37.9	42.8	55.5	71.8	74.1	70.7	64.8	52.4	32.4	28.5	47.5
1998	23.2	34.8	30.6	50.2	65.2	66.5	74.6	73.5	70.1	54.2	40.5	27.8	50.9
1999	18.9	32.5	37.0	49.2	61.4	68.5	77.7	70.9	61.0	50.5	44.2	28.8	50.1
POR= 110 YRS	18.7	23.0	34.8	49.3	60.8	70.4	75.4	73.0	64.2	52.2	36.1	23.8	48.5

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HEATING DEGREE DAYS (base 65°F) 1999 SIOUX CITY, IA (SUX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	4	0	148	489	868	1326	1581	1133	918	390	182	8	7047
1971-72	11	2	126	283	807	1252	1530	1350	838	463	156	16	6834
1972-73	6	5	116	493	854	1452	1342	1099	679	434	179	4	6663
1973-74	0	0	98	259	799	1343	1491	973	783	374	126	25	6271
1974-75	0	7	180	317	820	1241	1439	1277	1107	575	97	21	7081
1975-76	1	0	204	328	850	1223	1355	907	881	361	218	18	6346
1976-77	1	0	108	620	1062	1411	1738	1019	745	296	24	2	7026
1977-78	0	9	55	428	878	1309	1778	1534	1007	487	194	33	7712
1978-79	1	8	63	448	948	1531	1895	1560	1038	546	255	31	8324
1979-80	1	13	81	457	922	1075	1339	1287	966	419	170	11	6741
1980-81	0	0	108	516	746	1254	1253	1023	752	269	200	3	6124
1981-82	10	4	81	471	741	1367	1816	1245	955	547	116	61	7414
1982-83	0	17	132	366	916	1197	1310	1027	879	648	270	44	6806
1983-84	0	0	113	390	799	1825	1365	956	1098	543	235	7	7331
1984-85	0	5	194	405	805	1254	1459	1149	720	336	86	45	6458
1985-86	1	13	221	414	1168	1581	1142	1172	737	409	124	1	6983
1986-87	0	27	79	396	984	1172	1178	840	752	332	76	6	5842
1987-88	1	44	80	563	693	1111	1514	1276	786	475	47	6	6596
1988-89	0	9	75	542	818	1165	1083	1387	956	428	164	35	6662
1989-90	0	7	161	389	956	1567	1065	1018	759	500	218	21	6661
1990-91	0	2	85	431	744	1401	1521	887	759	379	148	2	6359
1991-92	0	0	150	488	1092	1115	1056	872	757	551	173	21	6275
1992-93	15	45	140	437	944	1262	1466	1297	1032	550	194	49	7431
1993-94	0	12	211	499	978	1217	1633	1322	782	488	136	9	7287
1994-95	1	12	73	338	790	1285	1372	1006	878	567	245	47	6614
1995-96	4	1	198	468	994	1214	1560	1122	1109	562	273	28	7533
1996-97	5	0	181	427	1098	1533	1557	1119	834	660	302	0	7716
1997-98	9	19	85	431	974	1127	1288	841	1062	441	83	79	6439
1998-99	0	0	34	334	723	1146	1423	902	861	465	145	55	6088
1999-	0	3	164	449	621	1117							

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COOLING DEGREE DAYS (base 65°F) 1999 SIOUX CITY, IA (SUX)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	23	131	237	323	318	121	15	0	0	1168
1971	0	0	0	7	19	329	251	273	134	30	0	0	1043
1972	0	0	0	3	93	241	284	259	98	1	0	0	979
1973	0	0	0	0	38	232	308	381	50	19	0	0	1028
1974	0	0	0	9	47	173	513	193	41	4	0	0	980
1975	0	0	0	0	91	162	362	320	50	28	0	0	1013
1976	0	0	0	13	26	181	359	294	89	7	0	0	969
1977	0	0	0	21	102	186	346	152	55	0	0	0	862
1978	0	0	5	0	49	210	280	225	159	0	0	0	928
1979	0	0	0	3	33	186	299	249	95	0	0	0	865
1980	0	0	0	24	57	185	430	279	90	4	0	0	1069
1981	0	0	0	25	26	222	309	199	89	0	0	0	870
1982	0	0	0	3	41	79	358	254	85	7	0	0	827
1983	0	0	0	0	16	144	385	502	158	9	0	0	1214
1984	0	0	0	4	16	180	279	320	61	3	0	0	863
1985	0	0	0	35	77	134	302	153	120	1	0	0	822
1986	0	0	2	3	34	246	367	142	55	0	0	0	849
1987	0	0	0	34	132	292	377	210	56	0	0	0	1101
1988	0	0	0	3	132	356	363	361	80	0	0	0	1295
1989	0	0	0	53	49	175	391	254	71	12	0	0	1005
1990	0	0	0	33	14	278	267	272	176	10	0	0	1050
1991	0	0	0	22	156	276	302	287	135	1	0	0	1179
1992	0	0	0	7	49	119	133	108	57	13	0	0	486
1993	0	0	0	0	18	135	261	247	17	18	0	0	696
1994	0	0	0	20	104	242	188	172	130	2	0	0	858
1995	0	0	0	0	1	207	320	380	73	12	0	0	993
1996	0	0	0	1	43	227	179	178	55	7	0	0	690
1997	0	0	0	0	13	212	298	204	89	49	0	0	865
1998	0	0	0	2	95	135	304	271	191	5	0	0	1003
1999	0	0	0	0	39	168	402	193	52	7	0	0	861

SNOWFALL (inches) 1999 SIOUX CITY, IA (SUX)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	5.1	0.4	7.0	4.8	3.5	1.7	0.2	0.0	0.0	22.7
1971-72	0.0	0.0	0.0	0.0	3.4	6.7	5.7	9.1	1.6	0.8	0.0	0.0	27.3
1972-73	0.0	0.0	0.0	0.2	1.0	9.7	11.3	3.8	T	0.4	0.0	0.0	26.4
1973-74	0.0	0.0	0.0	0.0	0.6	7.0	4.2	3.3	4.0	2.1	0.0	0.0	21.2
1974-75	0.0	0.0	0.0	0.0	2.4	6.2	18.2	3.0	6.8	3.4	0.0	0.0	40.0
1975-76	0.0	0.0	0.0	0.0	6.2	0.3	0.8	3.8	7.1	0.0	T	0.0	18.2
1976-77	0.0	0.0	0.0	0.2	0.4	4.3	4.1	0.8	9.4	0.2	0.0	0.0	19.4
1977-78	0.0	0.0	0.0	T	5.7	5.3	1.8	10.8	3.0	T	0.0	0.0	26.6
1978-79	0.0	0.0	0.0	0.0	4.7	7.5	11.3	3.3	8.4	1.2	0.0	0.0	36.4
1979-80	0.0	0.0	0.0	0.1	4.0	1.5	4.7	4.3	5.8	1.3	0.0	0.0	21.7
1980-81	0.0	0.0	0.0	3.0	0.2	2.5	5.5	5.5	0.4	0.0	0.0	0.0	17.1
1981-82	0.0	0.0	0.0	2.0	6.8	6.8	29.1	3.7	4.5	3.9	0.0	0.0	56.8
1982-83	0.0	0.0	0.0	8.0	0.3	12.4	3.2	6.8	19.1	9.7	0.0	0.0	59.5
1983-84	0.0	0.0	0.0	0.0	16.5	9.4	1.8	10.2	17.8	5.1	0.0	0.0	60.8
1984-85	0.0	0.0	0.0	T	2.2	6.2	3.7	0.9	10.8	T	0.0	0.0	23.8
1985-86	0.0	0.0	T	T	9.4	9.0	1.4	1.9	5.4	2.1	0.0	0.0	29.2
1986-87	0.0	0.0	0.0	T	5.1	2.1	3.5	3.4	7.7	T	0.0	0.0	21.8
1987-88	0.0	0.0	0.0	T	5.4	1.9	7.5	5.5	1.0	4.4	0.0	0.0	25.7
1988-89	0.0	0.0	0.0	0.0	9.1	1.9	3.3	6.2	6.3	0.3	T	0.0	27.1
1989-90	T	0.0	0.0	0.0	2.4	7.1	5.5	3.8	3.0	0.1	T	T	21.9
1990-91	0.0	0.0	0.0	0.4	5.7	7.7	6.7	3.9	8.5	T	0.0	T	32.9
1991-92	0.0	0.0	0.0	9.8	8.4	0.5	1.2	1.8	2.1	6.2	T	0.0	30.0
1992-93	T	0.0	0.0	T	1.7	6.9	7.8	24.5	2.4	0.3	0.0	0.0	43.6
1993-94	0.0	0.0	T	T	10.2	9.1	7.9	12.9	0.4	2.9	T	T	43.4
1994-95	0.0	0.0	0.0	0.0	8.4	13.9	2.6	1.9	8.5	0.3	0.0	0.0	35.6
1995-96	0.0	0.0	0.0		1.5	2.7	8.1	0.1	4.7	2.0	T	T	
1996-97	0.0	0.0	0.0	0.0		9.7			1.6		0.0	0.0	
1997-98		0.0	0.0	0.3	0.9	1.6	5.7	3.0	11.5	0.1	0.0	T	
1998-99	0.0	0.0	0.0	0.0	4.1	5.0	7.3	13.6	9.4	0.8	0.0	0.0	40.2
1999-	T	0.0	0.0	T	1.5	4.6							
POR= 57 YRS	T	0.0	0.0	0.7	3.8	6.0	6.2	5.7	7.2	1.5	0.1	T	31.2

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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 (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
SIOUX CITY,
IOWA (SUX)

Sioux City is located along the Missouri River at a point where Iowa borders both Nebraska and South Dakota. Except for the river valleys, the countryside is rolling. The Sioux City business section lies in the river valley and the residential sections, for the most part, are spread over the hills which range from 100 to 200 feet higher than the valley. The local topography causes minor variations in wind and temperature.

Located in the midland of a continent and in the northern half of the Great Plains, the climate of Sioux City is typically continental and is largely determined by the movement and interaction of the large-scale weather systems. Under normal conditions, winters are cold and summers warm, and most of the precipitation comes during the warmer months from April to September. There is

considerable fluctuation in temperature and precipitation from season to season and from year to year, as elsewhere in the northern plains. Except for an occasional dry year, the climate is quite favorable for agriculture with corn, the small grains, and grasses producing abundantly.

The grass usually starts to grow about the middle of April. The growing season averages about 160 days. Summers are sunny and most summer rains are associated with showers or thunderstorms. Winds are lightest in the summer months, except for occasional strong gusts with thunderstorms. Winds gradually increase in autumn and winter and usually reach their highest average velocities in April.

STATION LOCATION

SIOUX CITY, IOWA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATED STATION	* Type	REMARKS	
						SEA LEVEL	GROUND												
							WIND INSTRUMENT	EXPOSURE	HEIGHT	SOUNDING	TEMPERATURE	RAIN GAGE	WIND GAGE	8 INCH RAIN GAGE	HOURLY				MINUTE
<u>COOPERATIVE</u>																			
Exact location unknown	8/1857	6/1889		42° 30'	96° 24'												Approximate coordinates. Several locations within 5 miles north and west.		
<u>CITY</u>																			
Chamber of Commerce Building 4th St. between Jones & Jackson	7/01/89	7/31/92		42° 29'	96° 23'		100	90	89										
Public Library Building NW Corner 6th & Douglas	8/01/92	3/15/97	1/4 mi. NW	42° 30'	96° 24'	1110	109	97	96										
Federal Building NE Corner 6th & Douglas	3/16/97	12/01/33	200 ft. E	42° 30'	96° 24'	1110	164	96	B94	A86							Wind velocities exceed other exposures account of elevations. A - Operative beginning 1907. B - 96 ft. through 1912.		
U.S. Post Office Court House SW Corner 6th & Douglas	12/02/33	5/01/41	250 ft. SW	42° 30'	96° 24'	1110	106	64	64		57								
<u>AIRPORT</u>																			
First Administration Building Municipal Airport 6 mi. SSE Sioux City Post Office	4/01/40	10/15/42		42° 25'	96° 22'	1095	27	5	5		3	3	3				Shelter and rain gages over sod. Exposure excellent.		
Second Admn. Building Municipal Airport	10/16/42	1/28/54	1 mi. S	42° 23'	96° 22'	1093	41	5	5		3	3	3				Wind velocity diminished by trees to NW; otherwise exposure good.		
Third Admn. Building Municipal Airport	1/29/54	06/01/95	3/4 mi. NW	42° 24'	96° 23'	1095	a24 e28	19	19	18	17	c8	NA dl7	b5 f5	NA		a - 103 ft. to 6/5/58. b - Commissioned 1650 ft. W of thermometer site 1/1/60. c - 4 ft. to 4/28/66. d - Installed on roof 5/14/80. e - Raised 8/25/83. f - Type Change 9/6/85.		
Municipal Airport	06/01/95	Present	NA	42°23'	96°23'	1110									S		ASOS Commissioned 06/01/95		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
INQUIRIES/COMMENTS CALL: (828) 271-4800

National Climatic Data Center
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