

1999

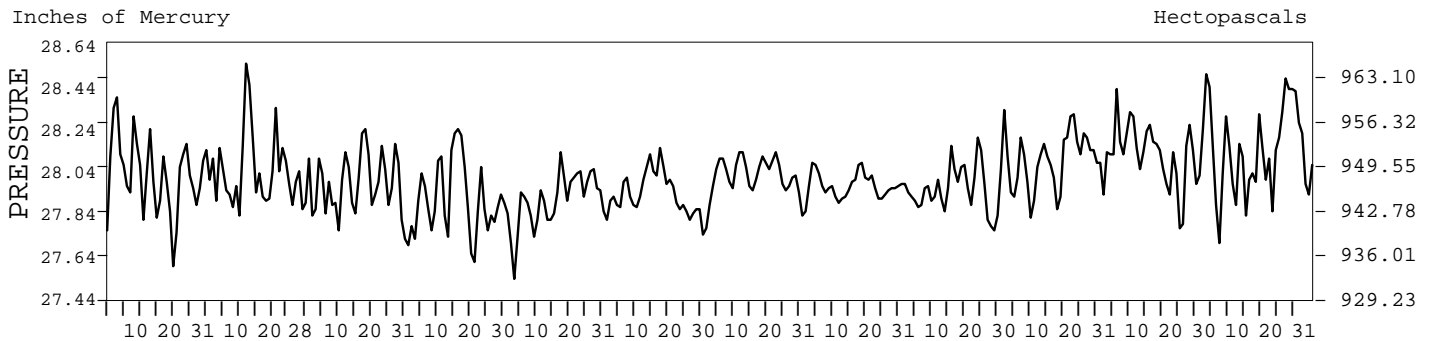
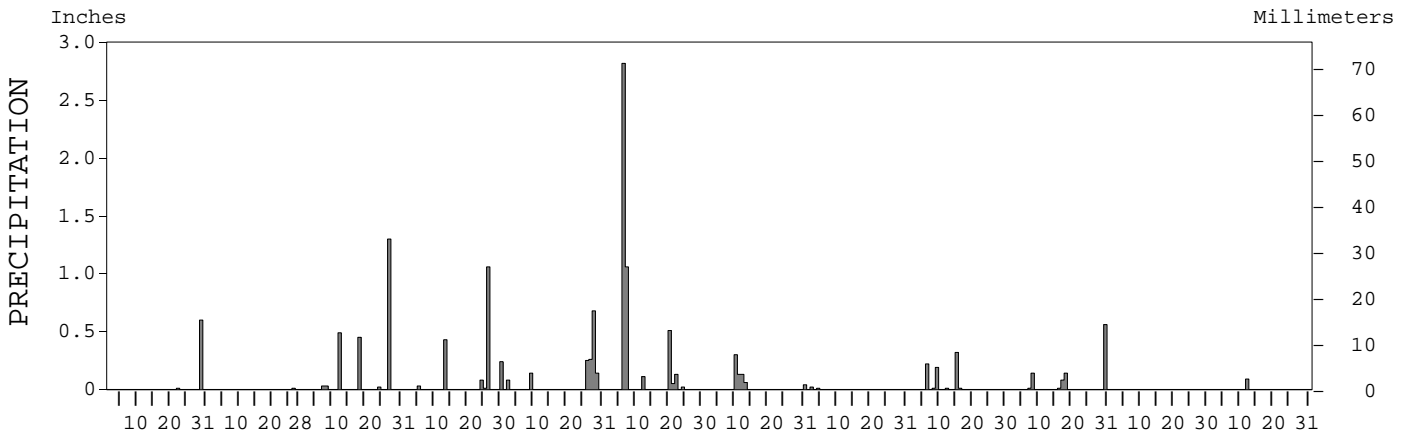
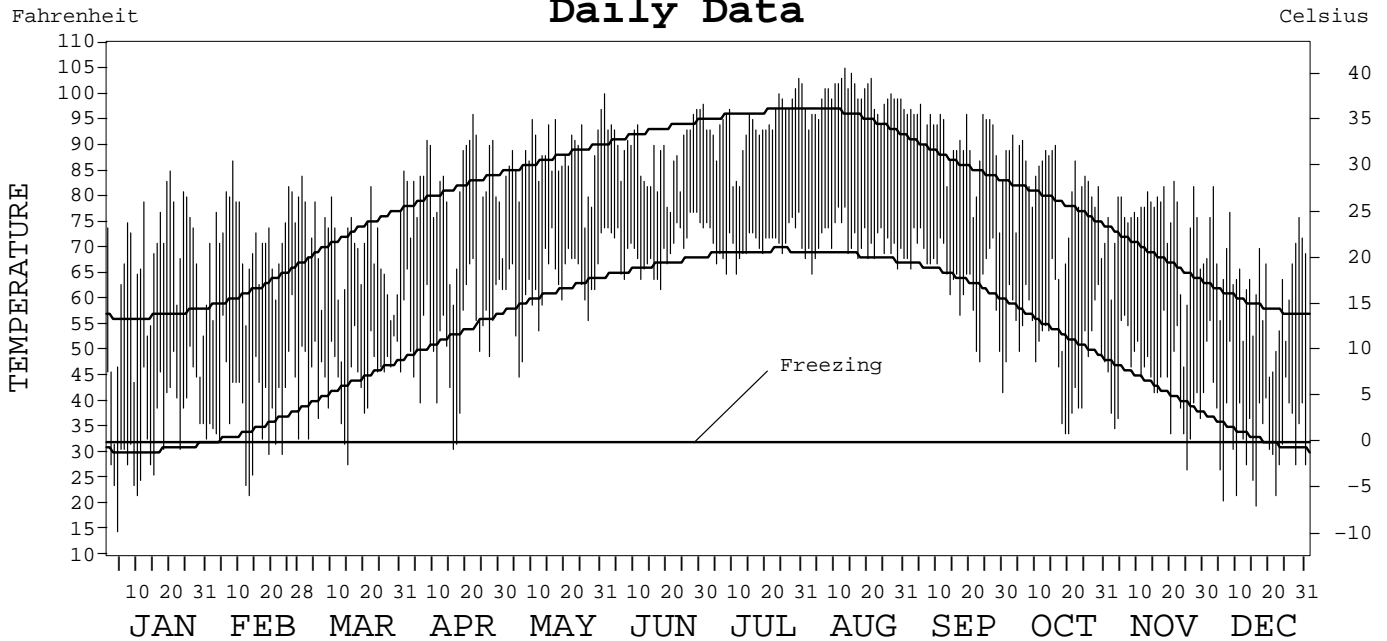
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-5167

SAN ANGELO,
TEXAS (SJT)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1999

SAN ANGELO, TX (SJT)

LATITUDE: 31° 21' 05" N LONGITUDE: 100° 29' 38" W ELEVATION (FT): GRND: 1906 BARO: 1906 TIME ZONE: CENTRAL (UTC + 6) WBAN: 23034

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	65.7	72.1	69.3	81.0	86.9	89.0	94.1	99.3	90.7	81.0	74.1	63.4	80.5	
	HIGHEST DAILY MAXIMUM	85	87	84	96	97	100	103	105	98	92	83	82	105	
	DATE OF OCCURRENCE	20	08	01	22	31	01	30	13	05	03	21	03	AUG 13	
	MEAN DAILY MINIMUM	35.2	39.2	45.2	52.8	62.7	70.1	71.2	71.0	64.0	51.4	44.1	34.9	53.5	
	LOWEST DAILY MINIMUM	15	22	28	31	45	62	65	65	42	34	27	20	15	
	DATE OF OCCURRENCE	04	13	15	16	06	18	11+	03	30	20+	25	16	JAN 04	
	AVERAGE DRY BULB	50.5	55.7	57.3	66.9	74.8	79.6	82.7	85.2	77.4	66.2	59.1	49.2	67.1	
	MEAN WET BULB	41.4	46.4	50.3	56.8	65.0	70.5	70.2	69.6	64.5	55.1	49.7	39.6	56.6	
	MEAN DEW POINT	30.8	34.2	43.1	47.5	59.1	66.5	64.0	61.0	56.6	46.3	40.4	27.1	48.0	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	8	10	17	26	31	18	4	0	0	114	
	MAXIMUM ≤ 32°	1	0	0	0	0	0	0	0	0	0	0	0	1	
	MINIMUM ≤ 32°	14	6	2	2	0	0	0	0	0	0	1	14	39	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	444	262	240	83	3	0	0	0	5	83	185	488	1793	
	COOLING DEGREE DAYS	0	8	8	149	313	445	554	635	382	126	14	1	2635	
RH	MEAN (PERCENT)	54	50	65	55	64	68	58	47	53	54	55	48	56	
	HOUR 00 LST	62	55	73	67	74	74	65	51	61	63	63	51	63	
	HOUR 06 LST	73	70	79	75	85	86	81	72	76	75	76	64	76	
	HOUR 12 LST	43	38	55	41	52	60	45	36	41	41	40	39	44	
	HOUR 18 LST	36	30	49	35	43	51	40	30	34	36	38	36	38	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	0	0	1	0	0	0	0	0	0	0	0	1	
	THUNDERSTORMS	2	0	6	5	9	7	3	5	1	2	0	0	40	
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.)	28.03	28.06	27.99	27.91	27.91	27.94	28.02	27.98	27.98	28.09	28.16	28.12	28.02	
	MEAN SEA-LEVEL PRESS. (IN.)	30.04	30.06	29.98	29.87	29.86	29.88	29.96	29.91	29.93	30.07	30.15	30.14	29.99	
WINDS	RESULTANT SPEED (MPH)	4.8	4.7	1.2	2.2	3.5	1.6	1.5	2.4	3.1	1.6	3.7	4.0	1.9	
	RES. DIR. (TENS OF DEGS.)	23	20	09	16	09	16	09	12	15	19	19	24	18	
	MEAN SPEED (MPH)	10.4	9.9	10.5	10.8	10.2	9.6	9.0	6.3	8.7	8.3	7.9	9.9	9.3	
	PREVAIL. DIR. (TENS OF DEGS.)	20	19	18	18	17	17	17	18	18	18	18	18	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	39	38	34	41	36	31	25	33	31	32	33	35	41	
	DIR. (TENS OF DEGS.)	26	25	27	30	25	35	27	01	01	33	01	30	30	
	DATE OF OCCURRENCE	21	26	08	14	04	12	31	04	05	30+	01	09	APR 14	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	48	47	44	49	45	38	33	37	37	37	37	44	49	
DIR. (TENS OF DEGS.)	25	21	27	30	24	34	24	01	01	33	01	29	30		
DATE OF OCCURRENCE	21	26	08	14	04	12	31	04	05	30+	02+	14+	APR 14		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	0.61	0.01	2.32	1.85	1.55	4.70	0.66	0.03	0.76	0.94	T	0.09	13.52	
	GREATEST 24-HOUR (IN.)	0.60	0.01	1.30	1.07	0.73	3.88	0.43	0.02	0.33	0.56	T	0.09	3.88	
	DATE OF OCCURRENCE	29	26	27	25-26	28-29	06-07	10-11	02	15-16	30	24	12	JUN 06-07	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	2	1	6	6	6	7	5	2	6	6	0	1	48	
PRECIPITATION ≥ 0.10	1	0	3	3	5	5	3	0	3	3	0	0	26		
PRECIPITATION ≥ 1.00	0	0	1	1	0	2	0	0	0	0	0	0	4		
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

SAN ANGELO, TX (SJT)

LATITUDE: 31° 21' 05" N LONGITUDE: 100° 29' 38" W ELEVATION (FT): GRND: 1906 BARO: 1906 TIME ZONE: CENTRAL (UTC + 6) WBAN: 23034

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	56.8	62.0	72.6	81.2	87.4	92.7	96.2	95.3	86.8	78.8	68.2	59.0	78.1
	MEAN DAILY MAXIMUM	52	58.4	63.3	71.0	79.6	86.3	92.3	95.5	94.6	87.6	78.9	67.6	60.6	78.0
	HIGHEST DAILY MAXIMUM	52	90	97	97	103	107	110	111	109	107	100	93	91	111
	YEAR OF OCCURRENCE		1969	1996	1974	1972	1989	1994	1960	1986	1952	1951	1980	1954	JUL 1960
	MEAN OF EXTREME MAXS.	52	78.6	82.9	87.7	93.9	98.9	101.3	102.3	102.0	97.8	91.9	83.8	78.8	91.7
	NORMAL DAILY MINIMUM	30	30.6	34.7	43.5	52.7	61.1	66.4	69.1	68.4	64.0	53.6	42.6	33.0	51.6
	MEAN DAILY MINIMUM	52	32.5	36.6	43.5	52.4	61.3	68.6	71.4	70.6	64.1	53.8	42.0	34.5	52.6
	LOWEST DAILY MINIMUM	52	5	-1	8	25	35	48	56	54	37	26	13	-4	-4
	YEAR OF OCCURRENCE		1982	1985	1980	1973	1967	1964	1990	1992	1989	1997	1979	1989	DEC 1989
	MEAN OF EXTREME MINS.	52	15.8	19.3	24.9	34.2	45.9	58.0	64.0	62.5	49.7	36.8	24.8	18.1	37.8
	NORMAL DRY BULB	30	43.7	48.4	58.1	67.0	74.2	79.5	82.7	81.9	75.4	66.2	55.4	46.0	64.9
	MEAN DRY BULB	52	45.5	50.0	57.3	66.2	73.7	80.5	83.4	82.7	75.8	66.3	54.8	47.4	65.3
	MEAN WET BULB	15	38.9	42.9	48.4	54.7	63.7	69.1	69.7	69.6	65.4	57.4	48.0	41.0	55.7
	MEAN DEW POINT	15	30.6	34.6	39.3	45.0	56.8	63.6	62.8	63.2	60.1	51.2	41.2	33.8	48.5
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	*	0.1	1.0	5.0	11.7	21.0	26.8	26.2	12.4	2.6	0.2	0.0	107.0	
MAXIMUM ≤ 32°	30	1.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	2.8	
MINIMUM ≤ 32°	30	17.7	10.8	4.3	0.6	0.0	0.0	0.0	0.0	0.0	0.1	5.1	14.7	53.3	
MINIMUM ≤ 0°	30	0.0	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
H/C	NORMAL HEATING DEG. DAYS	30	660	465	247	70	7	0	0	0	6	71	299	589	2414
	NORMAL COOLING DEG. DAYS	30	0	0	33	130	292	435	549	524	318	108	11	0	2400
RH	NORMAL (PERCENT)	30	61	60	54	54	60	59	54	57	65	65	64	63	60
	HOUR 00 LST	30	68	67	61	62	68	67	60	63	73	74	73	71	67
	HOUR 06 LST	30	75	76	72	74	81	81	77	78	84	83	80	78	78
	HOUR 12 LST	30	51	50	44	43	49	49	44	45	54	52	51	51	49
	HOUR 18 LST	30	47	43	36	36	42	41	37	40	49	50	51	51	44
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	52	1.5	1.2	0.5	0.3	0.2	0.1	0.0	0.1	0.3	0.6	1.4	1.4	7.6
	THUNDERSTORMS	52	0.6	1.3	2.5	4.2	7.2	5.6	4.2	4.8	3.6	2.7	1.0	0.5	38.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	48	4.4	4.2	4.1	4.1	4.2	3.4	3.4	3.2	3.6	3.3	3.6	4.1	3.8
	MIDNIGHT-MIDNIGHT (OKTAS)	32	4.1	4.0	3.7	3.6	3.9	3.3	2.9	3.0	3.4	3.0	3.4	3.8	3.5
	MEAN NO. DAYS WITH:														
	CLEAR	48	11.8	10.7	11.9	11.3	10.7	13.6	14.6	15.2	13.4	15.4	13.5	12.2	154.3
PARTLY CLOUDY	48	6.0	6.3	7.7	8.0	10.1	10.4	9.8	9.9	8.4	7.2	6.3	6.7	96.8	
CLOUDY	48	13.1	11.2	11.4	10.7	10.3	6.0	6.6	5.9	8.2	8.4	10.1	12.1	114.0	
PR	MEAN STATION PRESSURE (IN)	26	28.12	28.07	27.98	27.95	27.92	27.96	28.01	28.02	28.03	28.06	28.07	28.11	28.02
	MEAN SEA-LEVEL PRES. (IN)	15	30.12	30.06	29.98	29.89	29.87	29.87	29.93	29.94	29.96	30.01	30.07	30.12	29.99
WINDS	MEAN SPEED (MPH)	33	10.3	10.6	12.1	12.1	11.5	10.9	9.8	8.6	8.9	9.2	9.9	9.8	10.3
	PREVAIL. DIR (TENS OF DEGS)	20	20	18	18	18	18	18	18	18	18	18	18	20	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	39	48	39	41	44	34	40	43	31	36	33	36	48
	DIR. (TENS OF DEGS)		26	20	33	30	27	26	36	31	01	33	01	26	20
	YEAR OF OCCURRENCE		1999	1997	1998	1999	1998	1997	1998	1998	1999	1998	1999	1997	FEB 1997
	MAXIMUM 5-SECOND:														
SPEED (MPH)	3	48	63	47	49	56	46	47	55	37	45	43	44	63	
DIR. (TENS OF DEGS)		25	23	32	30	28	27	36	31	01	32	19	29	23	
YEAR OF OCCURRENCE		1999	1997	1998	1999	1998	1997	1998	1998	1999	1998	1997	1999	FEB 1997	
PRECIPITATION	NORMAL (IN)	30	0.80	1.07	0.91	1.67	3.00	2.33	1.06	1.93	3.41	2.40	1.08	0.79	20.45
	MAXIMUM MONTHLY (IN)	52	3.65	4.54	5.00	5.10	11.24	6.01	7.21	8.13	11.00	8.68	3.55	3.98	11.24
	YEAR OF OCCURRENCE		1961	1997	1953	1977	1987	1982	1959	1971	1980	1981	1968	1991	MAY 1987
	MINIMUM MONTHLY (IN)	52	0.00	0.01	T	0.07	0.26	0.05	T	T	T	0.00	0.00	T	0.00
	YEAR OF OCCURRENCE		1967	1974	1972	1998	1962	1990	1970	1959	1983	1952	1950	1973	JAN 1967
	MAXIMUM IN 24 HOURS (IN)	52	2.49	3.16	4.65	3.32	3.12	3.88	2.95	4.67	6.25	5.11	2.16	2.71	6.25
	YEAR OF OCCURRENCE		1961	1987	1953	1971	1987	1999	1959	1996	1980	1959	1975	1984	SEP 1980
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	4.5	4.7	4.4	4.9	7.3	5.4	4.2	5.6	6.6	5.0	4.1	4.4	61.1	
PRECIPITATION ≥ 1.00	30	0.1	0.1	0.1	0.4	1.0	0.8	0.2	0.5	1.2	0.7	0.2	0.2	5.5	
SNOWFALL	NORMAL (IN)	30	1.8	0.8	0.3	T	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	3.7
	MAXIMUM MONTHLY (IN)	49	9.0	5.8	3.1	T	T	T	T	0.0	T	T	8.8	3.7	9.0
	YEAR OF OCCURRENCE		1978	1973	1962	1990	1995	1992	1992	1992	1992	1994	1968	1986	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	49	7.4	4.1	3.1	T	T	T	T	0.0	T	T	5.8	3.3	7.4
	YEAR OF OCCURRENCE		1978	1966	1962	1990	1995	1992	1992	1992	1992	1994	1968	1986	JAN 1978
	MAXIMUM SNOW DEPTH (IN)	48	6	4	2	0	0	0	0	0	0	0	4	3	6
	YEAR OF OCCURRENCE		1985	1966	1989								1957	1986	JAN 1985
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.3	

PRECIPITATION (inches) 1999 SAN ANGELO, TX (SJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0.14	1.31	2.36	1.10	1.83	0.39	T	0.47	4.28	0.94	T	0.06	12.88
1971	T	0.42	T	3.89	1.42	1.72	1.84	8.13	3.59	2.09	0.27	0.88	24.25
1972	0.48	0.09	T	0.57	4.89	4.21	0.17	3.66	5.30	3.22	0.31	0.03	22.93
1973	1.86	1.82	1.18	1.67	1.43	2.75	1.06	0.36	4.22	2.03	0.03	T	18.41
1974	0.12	0.01	0.48	1.86	2.43	0.16	1.54	4.77	6.11	4.82	1.40	1.40	25.10
1975	0.37	1.28	0.09	0.86	5.26	2.32	2.66	0.38	2.25	3.37	2.19	0.55	21.58
1976	0.04	0.42	0.30	3.41	1.77	0.41	3.51	1.41	4.66	5.11	0.58	0.18	21.80
1977	0.61	0.26	0.99	5.10	2.14	0.47	0.52	0.38	0.27	1.38	0.68	0.15	12.95
1978	0.61	1.17	0.41	0.73	1.83	2.81	0.41	2.93	1.35	0.42	1.75	0.25	14.67
1979	0.19	1.83	2.25	1.90	0.67	2.15	1.30	2.18	0.06	0.93	T	2.70	16.16
1980	0.84	0.79	0.71	0.52	4.72	3.14	0.33	3.30	11.00	0.01	2.53	2.20	30.09
1981	1.17	0.68	2.81	3.51	4.70	1.97	2.68	1.23	2.72	8.68	T	0.02	30.17
1982	1.06	1.53	0.40	0.83	4.17	6.01	0.35	0.46	0.09	1.26	1.11	0.91	18.18
1983	2.06	0.42	1.20	0.81	0.52	3.72	1.18	0.03	T	3.47	1.78	0.07	15.26
1984	2.38	0.54	0.49	0.23	0.54	2.82	0.60	0.26	2.99	3.74	1.09	3.48	19.16
1985	0.67	0.38	1.69	0.42	4.78	3.55	1.13	0.24	2.84	5.64	0.48	0.01	21.83
1986	0.30	0.65	0.52	0.07	7.28	3.30	0.74	2.50	7.53	5.72	1.83	2.48	32.92
1987	0.65	4.45	1.77	1.33	11.24	3.28	0.22	1.91	3.86	0.34	0.80	2.05	31.90
1988	0.01	0.42	0.69	1.36	3.31	2.14	1.22	0.92	3.20	T	0.00	0.79	14.06
1989	0.68	3.01	1.95	1.04	1.06	2.83	0.35	2.78	2.82	0.41	0.48	0.23	17.64
1990	1.60	1.65	0.85	4.14	4.02	0.05	4.09	1.05	6.23	2.40	2.51	0.21	28.80
1991	2.08	0.26	0.61	0.48	1.15	4.22	1.80	1.36	4.77	3.34	0.24	3.98	24.29
1992	1.90	3.79	1.05	1.00	1.49	4.74	1.98	1.78	0.27	1.33	0.95	0.75	21.03
1993	0.94	0.81	0.28	1.46	3.87	0.94	0.82	2.64	1.99	1.07	0.05	0.76	15.63
1994	1.69	0.34	0.04	0.97	3.29	1.04	0.25	1.30	3.04	4.27	1.96	1.21	19.40
1995	0.31	2.81	1.01	2.67	4.39	1.37	0.17	2.41	2.27	1.86	1.68	0.20	21.15
1996	0.06	0.23	0.28	2.38	2.08	1.81	0.26	7.66	1.92	2.42	3.35	0.05	22.50
1997	0.37	4.54	2.69	2.50	2.69	2.57	0.74	2.76	1.56	0.82	0.76	1.38	23.38
1998	0.70	0.53	1.85	T	1.75	0.88	0.46	2.77	0.10	2.39	1.06	0.49	12.98
1999	0.61	0.01	2.32	1.85	1.55	4.70	0.66	0.03	0.76	0.94	T	0.09	13.52
POR= 112 YRS	0.88	0.98	0.95	1.84	3.00	2.06	1.56	1.95	2.83	2.18	1.11	0.98	20.32

WBAN : 23034

AVERAGE TEMPERATURE (°F) 1999 SAN ANGELO, TX (SJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	43.9	50.8	52.9	66.2	71.3	78.9	83.3	85.4	78.3	64.0	54.4	54.6	65.3
1971	50.2	52.0	59.6	66.7	75.2	80.9	82.8	75.4	74.3	66.8	56.0	50.2	65.8
1972	47.4	52.4	62.4	71.7	70.8	81.1	83.3	79.9	78.2	66.2	50.4	46.2	65.8
1973	41.0	46.4	59.0	60.6	73.0	78.9	83.3	82.6	75.1	67.0	60.7	49.4	64.8
1974	47.0	52.4	64.9	67.9	76.0	80.9	84.0	79.6	68.9	66.4	55.0	46.8	65.8
1975	46.5	48.0	56.1	64.8	71.8	79.7	78.6	80.6	71.6	65.3	54.7	48.0	63.8
1976	43.9	56.7	58.1	65.5	68.8	79.7	76.2	80.7	73.8	58.6	47.5	45.6	62.9
1977	40.4	51.5	57.9	65.0	75.5	82.3	84.8	86.2	83.5	69.2	57.1	52.3	67.1
1978	38.5	43.8	56.3	70.6	75.7	80.3	85.1	79.5	74.6	64.7	55.5	44.2	64.1
1979	36.2	46.7	57.2	65.4	72.1	78.0	83.4	80.4	75.2	69.9	50.8	47.4	63.6
1980	46.1	49.2	55.4	63.7	71.8	82.6	86.9	84.4	76.9	64.5	53.0	49.9	65.4
1981	45.8	50.2	54.2	66.4	70.7	77.8	82.1	80.0	74.3	64.6	55.6	48.7	64.2
1982	46.0	45.9	59.1	63.5	69.6	77.9	83.2	84.6	77.4	66.0	54.3	45.8	64.4
1983	45.1	48.8	56.6	62.2	72.5	76.6	82.2	82.1	77.4	70.2	58.4	36.3	64.0
1984	40.4	50.3	57.4	65.1	76.0	82.3	81.5	82.8	72.5	64.5	53.0	50.2	64.7
1985	38.8	46.2	59.3	68.1	75.1	77.5	80.5	84.5	75.7	66.9	57.9	43.6	64.5
1986	48.4	52.9	60.9	70.8	73.7	78.0	83.3	81.4	77.9	63.8	53.0	45.3	65.8
1987	44.9	49.9	51.3	61.5	71.1	76.0	80.2	82.4	72.9	66.5	53.5	46.2	63.0
1988	42.6	47.9	56.8	64.7	70.7	79.2	80.7	81.9	75.4	66.1	57.9	48.0	64.3
1989	50.2	44.7	58.4	66.6	78.2	77.9	83.2	81.9	72.2	67.3	56.5	39.5	64.7
1990	50.6	53.4	57.7	64.7	73.2	85.1	79.1	80.0	75.0	63.6	57.1	45.1	65.4
1991	43.7	51.9	58.9	66.7	76.6	78.5	81.5	80.3	72.0	65.9	50.0	49.3	64.6
1992	45.7	52.9	58.4	64.8	70.5	79.2	83.1	79.3	77.6	68.3	53.0	49.6	65.2
1993	44.9	49.2	56.9	66.3	72.4	81.2	85.8	84.4	74.1	64.1	51.9	50.1	65.1
1994	46.9	51.0	60.5	66.5	73.3	84.2	85.8	84.0	74.5	66.7	56.6	49.9	66.7
1995	48.7	52.3	55.2	65.7	73.9	77.6	84.2	82.3	75.9	66.1	55.2	48.3	65.5
1996	45.5	52.7	53.6	64.7	80.7	82.3	85.4	81.4	73.0	65.1	54.3	48.9	65.6
1997	43.9	46.7	58.2	59.2	69.6	77.2	83.8	82.7	78.6	66.5	51.4	43.9	63.5
1998	49.5	50.0	55.1	64.7	80.0	84.3	87.4	80.9	78.8	67.9	57.5	46.6	66.9
1999	50.5	55.7	57.3	66.9	74.8	79.6	82.7	85.2	77.4	66.2	59.1	49.2	67.1
POR= 89 YRS	45.6	49.7	57.1	65.7	73.5	80.7	83.4	82.9	75.9	66.2	54.4	47.3	65.2

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HEATING DEGREE DAYS (base 65°F) 1999 SAN ANGELO, TX (SJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	26	126	320	326	453	359	211	81	9	0	1911
1971-72	0	0	23	33	289	450	539	382	138	26	3	0	1883
1972-73	0	0	3	97	438	577	738	514	183	191	20	0	2761
1973-74	0	0	1	33	170	476	554	352	115	53	1	0	1755
1974-75	0	0	33	37	308	560	568	470	288	101	1	0	2366
1975-76	0	0	32	75	320	519	645	251	237	48	30	0	2157
1976-77	0	0	3	220	518	595	757	377	227	45	0	0	2742
1977-78	0	0	0	44	249	390	818	588	286	31	21	0	2427
1978-79	0	0	3	74	294	642	886	510	251	60	34	0	2754
1979-80	0	0	0	57	430	542	578	453	300	105	11	0	2476
1980-81	0	0	5	101	374	464	588	411	330	62	17	0	2352
1981-82	0	0	8	133	281	496	582	532	220	124	20	0	2396
1982-83	0	0	0	105	338	586	611	448	268	163	13	3	2535
1983-84	0	0	7	20	245	883	754	422	258	74	5	0	2668
1984-85	0	0	59	90	365	455	804	522	223	52	1	0	2571
1985-86	0	0	22	50	232	655	506	354	158	15	7	0	1999
1986-87	0	0	0	96	354	604	615	418	417	167	0	0	2671
1987-88	0	0	0	49	354	577	689	491	280	96	9	0	2545
1988-89	0	0	2	35	245	520	449	567	264	101	1	0	2184
1989-90	0	0	37	84	284	784	444	324	259	95	52	0	2363
1990-91	0	0	3	124	257	610	651	364	214	38	8	0	2269
1991-92	0	0	33	90	443	482	592	344	199	88	20	0	2291
1992-93	0	0	0	27	370	473	619	436	273	89	4	0	2291
1993-94	0	0	7	159	401	457	554	392	207	78	17	0	2272
1994-95	0	0	4	85	267	463	499	349	335	95	2	0	2099
1995-96	0	0	21	57	294	515	599	377	363	112	0	0	2338
1996-97	0	0	29	74	326	491	653	506	212	200	32	0	2523
1997-98	0	0	0	98	403	646	474	416	338	85	0	0	2460
1998-99	0	0	0	57	228	566	444	262	240	83	3	0	1883
1999-	0	0	5	83	185	488							

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COOLING DEGREE DAYS (base 65°F) 1999 SAN ANGELO, TX (SJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	6	1	7	135	248	422	575	639	432	101	10	9	2585
1971	0	4	49	139	332	482	557	328	308	96	23	0	2318
1972	0	20	65	232	191	488	574	468	406	140	7	2	2593
1973	0	0	6	67	274	425	573	554	314	104	49	0	2366
1974	3	4	120	147	349	481	597	460	159	87	15	0	2422
1975	3	0	18	103	220	448	427	493	238	90	18	0	2058
1976	0	12	29	66	155	449	354	491	272	27	0	0	1855
1977	0	6	14	53	333	523	621	662	562	183	17	1	2975
1978	0	0	22	204	360	467	634	454	302	72	13	0	2528
1979	0	2	17	77	263	394	579	487	309	217	12	0	2357
1980	0	0	9	73	229	535	685	610	368	90	19	2	2620
1981	0	1	2	112	202	390	536	474	290	129	6	0	2142
1982	0	4	43	88	170	392	572	616	378	142	24	0	2429
1983	0	0	13	88	253	359	539	535	390	191	55	0	2423
1984	0	2	30	86	352	528	517	558	291	82	10	4	2460
1985	0	1	53	153	318	381	486	610	352	113	26	0	2493
1986	0	19	38	196	284	397	572	515	396	69	4	0	2490
1987	0	0	1	65	195	338	475	548	246	100	17	0	1985
1988	0	0	33	91	193	430	492	528	322	78	40	1	2208
1989	0	3	65	158	417	396	571	531	261	165	33	0	2600
1990	4	5	40	94	312	611	443	469	311	88	26	0	2403
1991	0	0	30	98	371	413	517	481	248	123	0	2	2283
1992	0	0	3	86	195	432	567	450	386	134	16	3	2272
1993	0	0	28	131	239	494	653	608	283	138	14	0	2588
1994	0	5	72	131	281	581	651	599	294	144	24	1	2783
1995	0	0	38	123	283	381	604	543	353	98	7	3	2433
1996	0	27	16	110	495	528	641	515	275	82	14	0	2703
1997	7	0	9	32	184	373	593	555	412	151	0	0	2316
1998	0	0	37	83	471	583	701	500	422	156	10	0	2963
1999	0	8	8	149	313	445	554	635	382	126	14	1	2635

SNOWFALL (inches) 1999 SAN ANGELO, TX (SJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	T
1971-72	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	T	0.0	0.0	0.0	3.3
1972-73	0.0	0.0	0.0	0.0	T	T	7.7	5.8	0.0	0.0	0.0	0.0	13.5
1973-74	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.2	0.0	0.0	0.0	0.2
1974-75	0.0	0.0	0.0	0.0	0.0	0.1	1.5	T	0.0	0.0	0.0	0.0	1.6
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1976-77	0.0	0.0	0.0	0.0	3.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	3.1
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	9.0	T	0.6	0.0	0.0	0.0	9.6
1978-79	0.0	0.0	0.0	0.0	0.0	1.0	T	T	0.0	0.0	0.0	0.0	1.0
1979-80	0.0	0.0	0.0	0.0	0.0	0.0	T	1.0	0.0	T	0.0	0.0	1.0
1980-81	0.0	0.0	0.0	0.0	2.3	0.0	1.8	T	0.0	0.0	0.0	0.0	4.1
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	6.8	T	0.0	0.0	0.0	0.0	6.8
1982-83	0.0	0.0	0.0	0.0	0.0	T	2.9	0.0	0.0	0.0	0.0	0.0	2.9
1983-84	0.0	0.0	0.0	0.0	0.0	0.3	T	0.9	T	0.0	0.0	0.0	1.2
1984-85	0.0	0.0	0.0	0.0	T	T	8.4	0.4	0.0	0.0	0.0	0.0	8.8
1985-86	0.0	0.0	0.0	0.0	0.0	T	3.3	T	0.0	0.0	0.0	0.0	3.3
1986-87	0.0	0.0	0.0	0.0	0.0	3.7	0.7	T	T	0.0	0.0	0.0	4.4
1987-88	0.0	0.0	0.0	0.0	0.0	T	T	2.7	0.0	0.0	0.0	0.0	2.7
1988-89	0.0	0.0	0.0	0.0	0.0	T	1.2	T	2.6	0.0	T	T	3.8
1989-90	0.0	0.0	0.0	0.0	T	T	T	0.0	T	T	T	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	1.1	3.3	0.0	T	0.0	T	0.0	4.4
1991-92	0.0	0.0	0.0	T	0.0	0.0	T	T	T	0.0	0.0	T	T
1992-93	T	0.0	T	T	T	T	0.1	0.0	T	0.0	T	0.0	0.1
1993-94	0.0	0.0	0.0	T	0.0	T	2.4	0.0	T	0.0	0.0	0.0	2.4
1994-95	0.0	0.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	T	0.0	T
1995-96	0.0	0.0	0.0	0.0	T	0.0	T						
1996-97					3.0	0.1							
1997-98													
1998-99													
1999-													
POR= 48 YRS	T	0.0	T	T	0.4	0.2	1.5	0.6	0.2	T	T	T	2.9

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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
SAN ANGELO,
TEXAS (SJT)

San Angelo is located near the center of Texas at the northern edge of the Edwards Plateau. Ground elevation ranges from about 1,700 to 2,700 feet above sea level. Topography varies from level and slightly rolling to broken. The climate is generally classified as semi-arid or steppe, but has some humid temperate characteristics. Warm, dry weather predominates, although changes may be rapid and frequent with the passage of cold fronts or northers.

High temperatures of summer are associated with fair skies, south to southwest winds and dry air. Low humidities, however, are conducive to personal comfort because of rapid evaporation. Rapid temperature drops occur after sunset, and most nights are pleasant with lows in the upper 60s and lower 70s. Rapid temperature drops occur in the winter as cold polar air invades the region. Temperature drops of 20 to 30 degrees in a short time are not uncommon. Cold polar outbreaks have produced record low temperatures of zero or below throughout the area.

The rainfall is typical of the Great Plains. Much of the rainfall occurs from thunderstorm activity, and wide variations in annual precipitation occur from year to year. Heavy rainfall occurs in April, May, June, September and October. Also, in the late summer months, heavy precipitation may occur when tropical disturbances move inland over south Texas and pass near the San Angelo area.

The prevailing wind direction is from the south, and winds are frequently high and persistent for several days. Dusty conditions are infrequent and occur in early spring when west or northwest winds predominate. The frequency and intensity of the dust storms are dependent on soil conditions in the Texas Panhandle and in New Mexico.

Agriculture in the region consists of cattle, sheep, and goat raising. Cotton, from dry-land and irrigated fields, maize, corn, melons, truck farming, and pecan production are also important crops.

STATION LOCATION

SAN ANGELO, TEXAS

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE												AUCOM MATHIS FIELD GAGE	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND													
							WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND			
COOPERATIVE																				
115 West Twohig	7/15/07	10/30/09		31° 28'	100°26'	1842														
721 Koberlin	11/27/09	-	1 mi. ENE	31° 29'	100°25'	1846														
131 West Harris	-	8/31/21	7/8 mi. WSW	31° 28'	100°26'	1845														
108 South Chadbourne	9/01/21	-	1/4 mi. E	31° 28'	100°26'	1845														
721 Powell	1927	1928	7/8 mi. SE	31° 27'	100°25'	1842														
1208 South Abe	1928	3-1930	1 mi. WSW	31° 27'	100°26'	1855														
117 Bird	3/1930	-	7/8 mi. NE	31° 28'	100°26'	1840														
131 West Harris	-	1/31/41	5/8 mi. NW	31° 28'	100°26'	1845														
319 West Harris	4/01/41	10/31/41	1/8 mi. W	31° 28'	100°26'	1843														
2109 West Avenue J	4/01/42	9/11/44	1-5/8 mi. SW	31° 27'	100°27'	1890														
West Texas Power Plant	9/12/44	10/31/47	2-1/8 mi. ENE	31° 27'	100°25'	1833														
<u>AIRPORT STATION</u> Mathis Field	11/01/47	7/22/65	7-3/4 mi. SSW	31° 22'	100°30'	1903	a20	50	49					47	47	5		First Order Stations established 11/1/47. Hygro-thermometer commissioned 5/1/60. a - 63 ft. to 9/15/60.		
Weather Bureau Building Mathis Field	9/22/65	02/01/96	900 ft. S	31° 22'	100°30'	1903	b20	c6 c6	c5 c5	NA	d4 h4	4 e4	4 e4	b5 f6 g6	NA		b - Not moved 7/22/65. c - Standby status. d - Added 2/8/77. e - Minor move 50 ft. SE on 12/14/78. f - Minor adjustment & type change 11/17/84. g - Minor adjustment and type change 11/17/84. h - Relocated to other raingage site 3/29/85.			
Mathis Field	02/01/96	Present	NA	31°21'	100°30'	1906										S		ASOS Commissioned 02/01/96		

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

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