

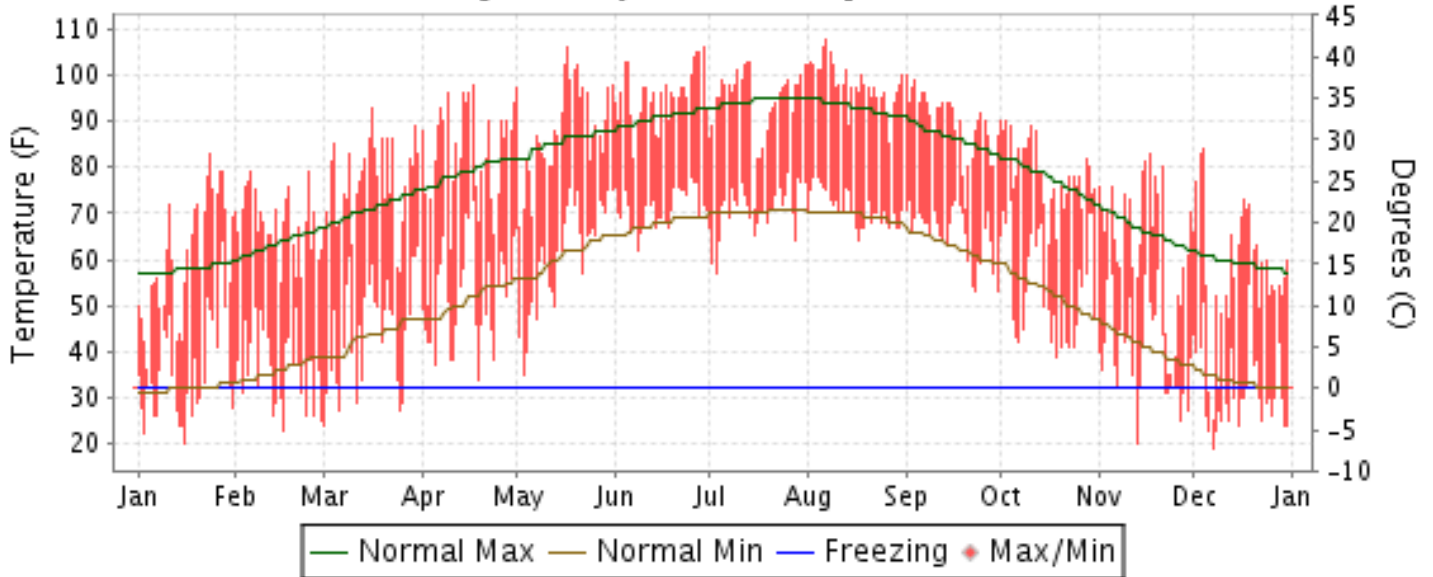


2013 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

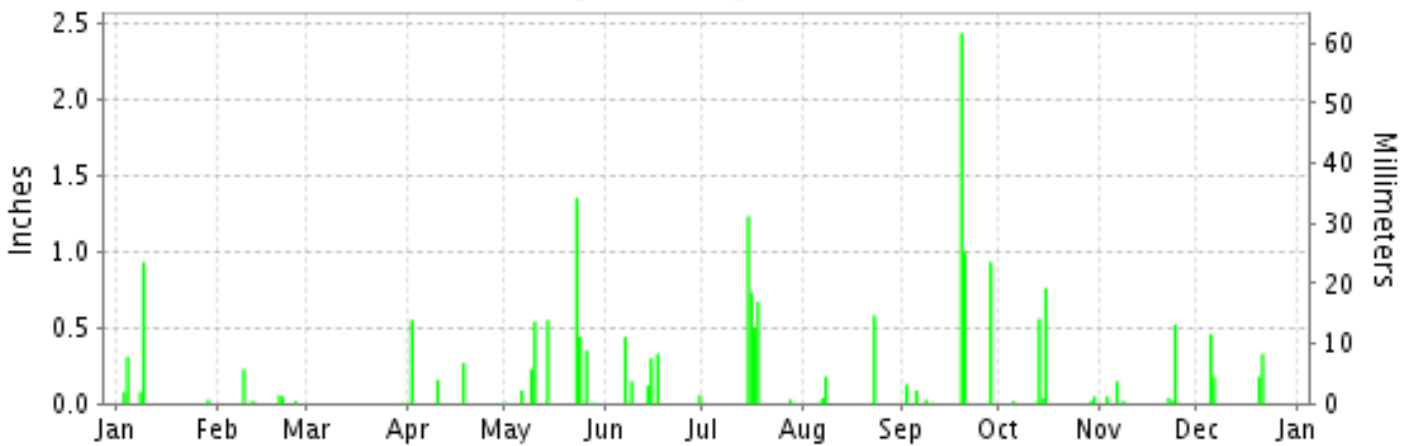
**SAN ANGELO,
TEXAS (KSJT)**

ISSN 0198-5167

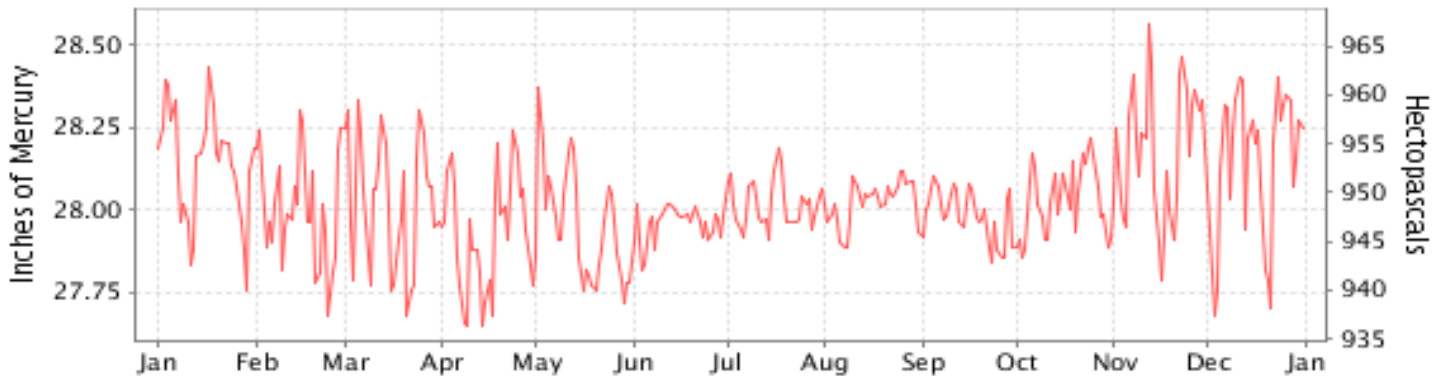
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
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NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2013

SAN ANGELO (KSJT)

LATITUDE: 31° 21'N LONGITUDE: 100° 29'W ELEVATION (FT): GRND: 1916 BARO: 1894 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	60.5	67.8	76.8	82.6	88.3	95.7	94.5	98.1	89.8	78.8	64.0	57.9	79.6	
	HIGHEST DAILY MAXIMUM	83	79	93	98	106	106	103	108	100	90	83	84	108	
	DATE OF OCCURRENCE	24	24+	16	17	17	29	14+	07	01	03+	17	04	AUG 07	
	MEAN DAILY MINIMUM	35.9	36.4	44.7	52.0	61.5	71.3	70.9	71.1	65.6	54.2	39.9	31.6	52.9	
	LOWEST DAILY MINIMUM	20	23	24	34	35	62	57	64	53	39	20	19	19	
	DATE OF OCCURRENCE	16	16	01	19	03	08	03	17	30+	19	13	07	DEC 07	
	AVERAGE DRY BULB	48.2	52.1	60.8	67.3	74.9	83.5	82.7	84.6	77.7	66.5	51.9	44.7	66.2	
	MEAN WET BULB	41.6	43.1	47.7	54.6	62.5	69.7	68.7	69.4	66.7	59.0	46.0	38.8	55.7	
	MEAN DEW POINT	34.4	31.0	32.1	43.7	53.7	62.6	60.7	61.5	60.6	54.1	40.2	32.4	47.3	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	1	11	13	27	24	29	19	2	0	0	126	
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	3	3	
MINIMUM <= 32°	15	10	6	0	0	0	0	0	0	0	11	22	64		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	522	355	187	98	32	0	0	0	0	82	394	623	2293	
	COOLING DEGREE DAYS	12	0	63	174	347	561	554	615	388	137	9	3	2863	
RH	MEAN (PERCENT)	64	49	39	49	54	54	53	50	60	69	69	68	57	
	HOUR 00 LST	71	59	43	57	63	58	57	57	68	78	79	76	64	
	HOUR 06 LST	79	70	59	72	76	78	73	74	81	87	83	82	76	
	HOUR 12 LST	53	38	31	40	43	46	45	38	48	55	55	54	46	
	HOUR 18 LST	49	30	22	26	34	35	36	32	42	54	59	57	40	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	THUNDERSTORMS	0	3	1	2	4	4	0	4	2	3	1	1	25	
PR	MEAN STATION PRESS. (IN.)	28.14	28.01	28.03	27.93	27.95	27.96	28.02	28.02	27.99	28.03	28.18	28.15	28.03	
	MEAN SEA-LEVEL PRESS. (IN.)	30.14	30.00	30.00	29.88	29.89	29.88	29.94	29.95	29.92	29.99	30.18	30.19	30.00	
WINDS	RESULTANT SPEED (MPH)	2.1	2.6	4.1	4.8	5.1	6.6	4.2	3.8	3.7	3.4	1.4	2.1	3.2	
	RES. DIR. (TENS OF DEGS.)	23	23	19	17	17	16	15	15	14	18	20	24	18	
	MEAN SPEED (MPH)	8.5	10.5	11.7	11.6	11.0	9.9	7.2	7.1	6.7	7.5	8.0	7.9	9.0	
	PREVAIL.DIR.(TENS OF DEGS.)	19	19	19	18	18	18	18	18	15	18	19	19	18	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	45	47	38	46	36	36	30	37	29	36	31	32	47	
	DIR. (TENS OF DEGS.)	28	30	34	33	35	35	06	27	08	35	02	23	30	
	DATE OF OCCURRENCE	29	25	23	18	10	30	14	08	08	18	12	21	FEB 25	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	55	61	47	54	44	46	37	53	38	45	37	40	61	
DIR. (TENS OF DEGS.)	28	31	32	34	35	35	05	21	12	33	03	26	31		
DATE OF OCCURRENCE	29	25	23	18	10	30	14	08	08	18	12	21	FEB 25		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.43	0.39	0.01	0.98	3.57	1.40	3.17	0.81	4.62	1.46	0.81	1.15	19.80	
	GREATEST 24-HOUR (IN.)	0.93	0.23	0.01	0.55	1.79	0.44	1.41	0.58	3.01	0.76	0.53	0.56	3.01	
	DATE OF OCCURRENCE	09	09	30	02	23-24	07	15-16	23	19-20	15	24-25	05-06	SEP 19-20	
	NUMBER OF DAYS WITH:														
PRECIPITATION 0.01	5	6	1	3	9	6	6	4	7	7	7	4	65		
PRECIPITATION 0.10	2	1	0	3	6	5	4	2	4	2	2	4	35		
PRECIPITATION 1.00	0	0	0	0	1	0	1	0	2	0	0	0	4		
SNOWFALL	SNOW,ICE PELLETS,HAIL	2.8	T	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T	1.5	4.3	
	TOTAL (IN.)	2.3	T	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T	1.0	2.3	
	GREATEST 24-HOUR (IN.)	04	25+		18+	09						26+	06	JAN 04	
	DATE OF OCCURRENCE	2	0	0	0	0	0	0	0	0	0	0	2	2	
	MAXIMUM SNOW DEPTH (IN.)	04											06	DEC 06	
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	1	0	0	0	0	0	0	0	0	0	0	1	2		

NORMALS, MEANS, AND EXTREMES SAN ANGELO (KSJT)

LATITUDE: 31° 21'N **LONGITUDE:** 100° 29'W **ELEVATION (FT):** GRND: 1916 BARO: 1894 **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	59.5	63.5	71.1	80.1	87.2	92.1	95.1	94.7	87.8	78.8	68.3	59.9	78.2
	MEAN DAILY MAXIMUM	67	58.8	63.3	71.3	80.1	86.8	92.8	95.6	95.0	87.8	79.0	67.8	60.6	78.2
	HIGHEST DAILY MAXIMUM	66	90	97	97	105	110	110	111	109	107	100	93	91	111
	YEAR OF OCCURRENCE		1969	1996	1974	2012	2011	1994	1960	1986	2005	1951	1980	1954	JUL 1960
	MEAN OF EXTREME MAXS.	67	79.1	83.1	88.0	94.2	99.6	101.7	102.5	102.4	98.2	92.0	83.9	79.0	92.0
	NORMAL DAILY MINIMUM	30	33.3	37.0	44.4	51.9	61.8	68.8	71.2	70.7	63.5	53.6	42.3	33.6	52.7
	MEAN DAILY MINIMUM	67	32.7	36.6	43.9	52.6	61.6	69.0	71.5	70.8	64.0	53.8	42.0	34.3	52.7
	LOWEST DAILY MINIMUM	66	5	-1	8	25	35	48	56	54	37	26	13	-4	-4
	YEAR OF OCCURRENCE		1982	1985	1980	1973	2013	1964	1990	1992	1989	1997	1979	1989	DEC 1989
	MEAN OF EXTREME MINS.	67	16.4	19.4	25.0	34.3	45.9	58.6	64.2	62.8	49.8	36.8	24.6	18.3	38.0
	NORMAL DRY BULB	30	46.4	50.3	57.8	66.0	74.5	80.4	83.1	82.7	75.6	66.2	55.3	46.7	65.4
	MEAN DRY BULB	67	45.8	50.0	57.6	66.4	74.2	80.9	83.5	82.9	75.9	66.4	54.9	47.5	65.5
	MEAN WET BULB	30	36.8	40.1	46.0	52.5	61.4	66.8	67.7	67.5	63.3	55.7	45.6	37.8	53.4
	MEAN DEW POINT	30	33.6	36.7	42.5	48.6	58.5	64.8	64.7	65.0	61.1	53.2	43.0	34.7	50.5
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.3	0.6	4.1	11.9	19.4	26.0	25.3	12.2	2.1	0.1	0.0	102.0
	MAXIMUM <= 32	30	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	1.6
MINIMUM <= 32	30	14.5	8.2	3.5	0.6	0.0	0.0	0.0	0.0	0.0	0.3	5.1	13.6	45.8	
MINIMUM <= 0	30	0.0	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	577	417	257	88	10	0	0	0	9	82	309	567	2316
	NORMAL COOLING DEG. DAYS	30	1	4	33	118	304	464	563	549	329	119	18	1	2503
RH	NORMAL (PERCENT)	30	63	61	56	54	60	62	55	58	63	65	66	65	61
	HOURLY 00 LST	30	70	68	63	63	69	69	62	65	72	74	75	72	69
	HOURLY 06 LST	30	78	77	74	75	82	83	79	80	84	83	81	79	80
	HOURLY 12 LST	30	53	50	44	43	49	51	44	47	52	52	52	52	49
	HOURLY 18 LST	30	48	43	37	35	41	43	37	41	47	50	53	51	44
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	50	1.3	1.0	0.6	0.3	0.2	0.1	0.0	0.1	0.2	0.7	1.2	1.2	6.9
	THUNDERSTORMS	66	0.6	1.3	2.5	4.1	6.6	5.3	4.0	4.7	3.5	2.9	1.1	0.5	37.1
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)	30	28.12	28.07	28.00	27.94	27.93	27.95	28.01	28.01	28.02	28.04	28.09	28.11	28.02
	MEAN SEA-LEVEL PRES. (IN)	30	30.13	30.07	29.97	29.90	29.86	29.87	29.93	29.93	29.96	30.00	30.08	30.12	29.99
WINDS	MEAN SPEED (MPH)	30	9.7	10.2	11.1	11.4	10.6	10.1	9.0	8.1	8.0	8.6	9.4	9.4	9.6
	PREVAIL.DIR(TENS OF DEGS)	34	20	19	19	19	19	19	19	19	19	19	19	20	19
	MAXIMUM 2-MINUTE: SPEED (MPH)	17	45	48	46	47	44	55	51	52	47	43	40	43	55
	DIR. (TENS OF DEGS)		28	20	17	30	27	34	30	21	02	35	26	28	34
	YEAR OF OCCURRENCE		2013	1997	2001	2007	1998	2003	2012	2003	2004	2001	2004	2004	JUN 2003
	MAXIMUM 3-SECOND SPEED (MPH)	17	55	63	58	70	61	63	68	69	64	48	51	51	70
	DIR. (TENS OF DEGS)		28	23	17	27	36	34	31	21	02	36	27	27	27
YEAR OF OCCURRENCE		2013	1997	2001	2011	2008	2007	2012	2003	2004	2011	2004	2004	APR 2011	
PRECIPITATION	NORMAL (IN)	30	0.93	1.35	1.50	1.42	2.82	2.59	1.20	2.26	2.46	2.73	1.14	0.85	21.25
	MAXIMUM MONTHLY (IN)	66	3.65	4.54	5.00	5.10	11.24	6.01	7.21	8.13	11.00	8.68	5.18	3.98	11.24
	YEAR OF OCCURRENCE		1961	1997	1953	1977	1987	1982	1959	1971	1980	1981	2004	1991	MAY 1987
	MINIMUM MONTHLY (IN)	66	0.00	0.01	T	0.03	0.12	0.05	T	0.00	T	0.00	0.00	T	0.00
	YEAR OF OCCURRENCE		1967	1974	1972	2011	2009	1990	2011	2000	1983	1952	1950	1973	AUG 2000
	MAXIMUM IN 24 HOURS (IN)	66	2.49	3.16	4.65	3.32	3.12	3.88	2.95	5.60	6.25	5.11	2.57	2.71	6.25
	YEAR OF OCCURRENCE		1961	1987	1953	1971	1987	1999	1959	2007	1980	1959	2001	1984	SEP 1980
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	4.6	5.0	5.6	4.5	6.6	6.2	4.7	5.5	4.8	6.2	4.0	4.5	62.2
PRECIPITATION >= 1.00	30	0.2	0.3	0.3	0.4	0.9	0.8	0.2	0.6	0.9	0.7	0.3	0.1	5.7	
SNOWFALL	NORMAL (IN)	30	1.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	2.2
	MAXIMUM MONTHLY (IN)	60	9.0	5.8	3.1	0.9	T	T	0.0	0.0	T	T	8.8	3.7	9.0
	YEAR OF OCCURRENCE		1978	1973	1962	2007	2013	1992	2011		1992	2012	1968	1986	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	60	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	2013	2013	1992	1992		1992	2012	1968	1986	JAN 1978
	MAXIMUM SNOW DEPTH (IN)	59	6	4	2	T	0	0	0	0	0	0	4	3	6
	YEAR OF OCCURRENCE		1985	1966	1989	2007							1957	1986	JAN 1985
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.8	

PRECIPITATION (inches) 2013 SAN ANGELO (KSJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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	.26	7.66	1.92	2.42	3.35	.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
2000	0.08	0.23	0.77	0.57	2.21	3.44	0.02	0.00	0.58	3.61	3.08	0.60	15.19
2001	1.29	2.17	1.26	0.82	2.51	0.26	0.57	3.67	0.89	1.48	3.46	0.14	18.52
2002	0.32	1.10	1.31	0.33	0.46	0.88	2.02	0.41	1.64	4.06	0.52	1.37	14.42
2003	0.33	1.57	1.25	0.06	1.07	4.78	0.90	2.52	3.16	3.38	0.74	T	19.76
2004	1.37	1.72	1.70	1.91	0.86	3.66	2.18	4.32	2.05	5.16	5.18	0.38	30.49
2005	0.54	2.03	2.81	0.03	4.43	0.98	1.15	4.65	0.02	3.72	0.00	0.02	20.38
2006	0.16	0.64	1.92	1.34	1.90	0.30	0.87	4.87	2.60	2.21	0.01	0.83	17.65
2007	1.86	0.54	3.86	2.66	4.74	5.54	1.84	6.55	2.55	0.83	0.89	0.18	32.04
2008	0.39	0.30	4.64	0.62	1.01	2.19	0.19	3.59	3.99	1.81	0.23	0.04	19.00
2009	0.06	0.48	1.73	4.61	0.12	1.74	4.64	1.89	5.66	2.92	0.01	1.67	25.53
2010	2.16	2.72	1.17	2.65	1.42	1.96	1.73	1.10	1.72	2.51	T	0.99	20.13
2011	0.67	0.31	0.10	0.03	1.36	0.46	T	1.64	0.43	2.91	0.32	0.98	9.21
2012	3.30	2.70	1.49	0.57	4.50	0.53	0.52	0.77	6.91	0.49	T	0.18	21.96
2013	1.43	0.39	0.01	0.98	3.57	1.40	3.17	0.81	4.62	1.46	0.81	1.15	19.80
POR= 67 YRS	0.85	1.08	1.08	1.58	2.70	2.15	1.21	1.95	2.75	2.29	0.98	0.75	19.37

WBAN : 23034

AVERAGE TEMPERATURE (°F) 2013 SAN ANGELO (KSJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2000	50.8	57.6	63.0	70.0	81.1	80.1	87.2	85.8	78.4	66.5	49.1	42.6	67.7
2001	43.3	50.5	52.3	67.2	75.6	83.6	87.4	83.1	74.4	65.8	58.3	47.6	65.8
2002	48.5	46.7	55.9	71.1	76.4	81.6	81.0	84.6	75.9	63.3	51.5	46.7	65.3
2003	45.9	47.6	57.6	68.1	77.1	78.5	82.1	83.3	74.0	66.2	56.6	49.0	65.5
2004	49.2	47.2	61.4	63.9	74.5	80.2	81.4	79.5	74.6	67.8	53.8	46.6	65.0
2005	50.2	50.0	55.2	64.2	72.2	80.2	83.0	80.1	79.3	65.0	57.1	46.3	65.2
2006	52.0	49.8	60.9	70.8	77.4	82.2	84.3	85.1	74.0	66.6	57.7	48.0	67.4
2007	40.5	49.6	61.3	62.7	70.8	77.9	78.1	81.2	76.8	68.5	57.7	48.2	64.4
2008	44.8	54.3	59.3	66.4	76.1	84.8	83.1	81.3	72.3	65.4	55.4	48.5	66.0
2009	48.0	55.9	61.5	66.6	74.8	84.7	84.9	84.8	74.6	65.0	56.9	44.3	66.8
2010	45.2	45.3	56.4	65.7	75.9	85.1	83.7	88.0	79.7	67.9	56.6	50.1	66.6
2011	45.8	50.3	64.5	74.0	77.2	88.6	89.6	89.7	79.2	68.1	57.9	46.3	69.3
2012	49.9	52.1	62.2	72.7	77.0	85.5	85.7	86.0	78.5	65.7	59.9	51.7	68.9
2013	48.2	52.1	60.8	67.3	74.9	83.5	82.7	84.6	77.7	66.5	51.9	44.7	66.2
POR= 67 YRS	45.8	50.0	57.6	66.4	74.2	80.9	83.5	82.9	75.9	66.4	54.9	47.5	65.5

HEATING DEGREE DAYS (base 65°F) 2013 SAN ANGELO (KSJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1999-00	0	0	5	83	185	488	436	224	130	64	2	0	1617
2000-01	0	0	18	94	471	686	667	399	388	52	2	0	2777
2001-02	0	0	11	51	218	534	505	508	312	45	2	0	2186
2002-03	0	0	0	145	403	562	586	481	242	50	10	0	2479
2003-04	0	0	0	49	290	487	489	511	148	110	18	0	2102
2004-05	0	0	0	17	331	564	454	416	297	94	27	0	2200
2005-06	0	0	0	113	253	573	399	423	183	15	2	0	1961
2006-07	0	0	2	79	236	528	753	431	155	151	6	0	2341
2007-08	0	0	0	69	251	521	623	316	223	85	6	0	2094
2008-09	0	0	3	87	306	507	520	275	181	73	0	0	1952
2009-10	0	0	0	110	246	631	611	545	277	60	4	0	2484
2010-11	0	0	0	24	263	456	586	434	126	27	26	0	1942
2011-12	0	0	0	65	246	573	466	376	148	9	3	0	1886
2012-13	0	0	2	115	188	420	522	355	187	98	32	0	1919
2013-	0	0	0	82	394	623							

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COOLING DEGREE DAYS (base 65°F) 2013 SAN ANGELO (KSJT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
2000	4	14	75	221	509	461	692	651	429	147	0	0	3203
2001	0	0	3	125	339	567	699	569	302	82	24	2	2712
2002	1	3	38	236	362	506	500	616	332	101	5	1	2701
2003	0	1	20	150	396	412	535	573	279	92	45	0	2503
2004	4	1	47	85	318	465	515	458	296	110	0	0	2299
2005	3	2	2	77	259	464	564	474	432	120	23	1	2421
2006	3	3	63	197	392	524	604	631	280	136	22	5	2860
2007	0	6	45	88	194	392	417	508	363	185	37	5	2240
2008	2	12	51	136	359	600	567	510	230	109	25	4	2605
2009	0	28	79	128	308	597	626	620	294	120	11	0	2811
2010	3	0	17	87	348	608	588	721	444	122	20	1	2959
2011	0	27	117	304	410	714	771	771	432	167	40	0	3753
2012	2	8	68	244	383	622	648	657	412	141	41	17	3243
2013	12	0	63	174	347	561	554	615	388	137	9	3	2863

SNOWFALL (inches) 2013 SAN ANGELO (KSJT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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													
1999-00													
2000-01					3.0								
2001-02													
2002-03							0.0						
2003-04							0.0	0.3	0.0	0.0	0.0	0.0	
2004-05	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.5
2005-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2006-07	0.0	0.0	0.0	0.0	T	0.0	1.9	T	0.0	0.9	0.0	0.0	2.8
2007-08	0.0	0.0	0.0	0.0	T	T	0.0	0.0	T	T	T	0.0	T
2008-09	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009-10	0.0	0.0	0.0	0.0	0.0	1.7	T	4.0	0.0	0.0	0.0	0.0	5.7
2010-11	0.0	0.0	0.0	0.0	0.0	0.0	T	0.6	0.0	T	0.0	0.0	0.6
2011-12	0.0	0.0	0.0	0.0	0.0	T	2.6	0.5	T	T	T	0.0	3.1
2012-13	0.0	0.0	0.0	T	0.0	0.0	2.8	T	0.0	T	T	0.0	2.8
2013-	0.0	0.0	0.0	0.0	T	1.5							
POR= 63 YRS	T	0.0	T	T	0.4	0.2	1.4	0.6	0.2	T	T	T	2.8

WBAN : 23034

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. 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 CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.</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</p>	<p>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 EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED STATION HISTORY INFORMATION GO TO "Historical Observing Metadata Repository", URL IS: http://www.ncdc.noaa.gov/homr/ SNOWFALL STOPPED MONTH & YEAR INDICATED ABOVE. NO FURTHER YEARS INCLUDED UNLESS RESTARTED.</p> <p>NOTE: The "Period of Record:(POR)" for all "averages" is based on "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2013 SAN ANGELO TEXAS (KSJT)

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 History

SAN ANGELO, TX

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
SAN ANGELO MATHIS FIELD	1947-11-01	1965-01-01	31° 22'	-100° 30'	1919		AIRWAYS, COOP
SAN ANGELO MATHIS FIELD	1969-01-01	1981-12-31	31° 22'	-100° 30'	1903		COOP, WXSVC
SAN ANGELO MATHIS FIELD	2002-11-14	2006-01-17	31° 21'	-100° 29'	1916		ASOS, COOP
SAN ANGELO MATHIS FIELD	2006-08-09	Present	31° 21'	-100° 29'	1916		AIRSAMPLE, ASOS, COOP
SAN ANGELO MATHIS FIELD	1981-12-31	1993-06-14	31° 22'	-100° 30'	1903		COOP
SAN ANGELO MATHIS FIELD	1996-02-13	2002-11-14	31° 21'	-100° 29'	1916	1 MI N	ASOS, COOP
SAN ANGELO MATHIS FIELD	1993-06-14	1996-02-01	31° 22'	-100° 30'	1901		COOP
SAN ANGELO MATHIS FIELD	2006-01-17	2006-08-09	31° 21'	-100° 29'	1916		ASOS, COOP
SAN ANGELO CONCHO FIELD	1944-11-01	1947-11-01	31° 27'	-100° 25'	1833		AIRWAYS, COOP
SAN ANGELO MATHIS FIELD	1996-02-01	1996-02-13	31° 21'	-100° 29'	1901		ASOS, COOP
SAN ANGELO MATHIS FIELD	1965-01-01	1969-01-01	31° 22'	-100° 30'	1903		AIRWAYS, COOP

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1944-11-01	1979-08-01	DAILY	2400	UNIV	RCRD	
PRECIP	1979-08-01	1989-02-13	DAILY	2400	UNIV	RCRD	
PRECIP	1979-08-01	1989-02-13	HOURLY	2400			
PRECIP	1989-02-13	1995-07-01	HOURLY	2400			
TEMP	1989-02-13	1995-07-01	DAILY	2400	HYGR		
TEMP	1944-11-01	1979-08-01	DAILY	2400			
MAX/MINTEM	1989-02-13	1995-07-01	DAILY	0700	PALMER		
PRECIP	2002-11-14	2006-01-17	DAILY	2400	TB	RCRD	
TEMP	1979-08-01	1989-02-13	DAILY	2400			
TEMP	1995-07-01	2002-11-14	DAILY	2400	HYGR		
TEMP	2006-01-17	Present	DAILY	2400	HYGR		
MAX/MINTEM	1944-11-01	1979-08-01	DAILY	0700	PALMER		
PRECIP	1995-07-01	2002-11-14	DAILY	2400	UNIV	RCRD	
PRECIP	2006-01-17	Present	DAILY	2400	PCPN1		
PRECIP	2006-01-17	Present	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	1989-02-13	1995-07-01	DAILY	2400	UNIV	RCRD	
PRECIP	1995-07-01	2002-11-14	HOURLY	2400	UNIV	RCRD	
MAX/MINTEM	1979-08-01	1989-02-13	DAILY	0700	PALMER		
MAX/MINTEM	1995-07-01	2002-11-14	DAILY	0700	PALMER		
PRECIP	2002-11-14	2006-01-17	HOURLY	2400	TB	RCRD	
TEMP	2002-11-14	2006-01-17	DAILY	2400	HYGR		

* For explanation of codes and abbreviations see Station Metadata link below.

Other Station Information can be found at:

ASOS Implementation by NWS: <http://www.nws.noaa.gov/ops2/Surface/asosimplementation.htm>

Station Metadata website: <http://www.ncdc.noaa.gov/homr>

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2

Fax Number : (828) 271-4876

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Email : ncdc.orders@noaa.gov

NOAA/National Climatic Data Center

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