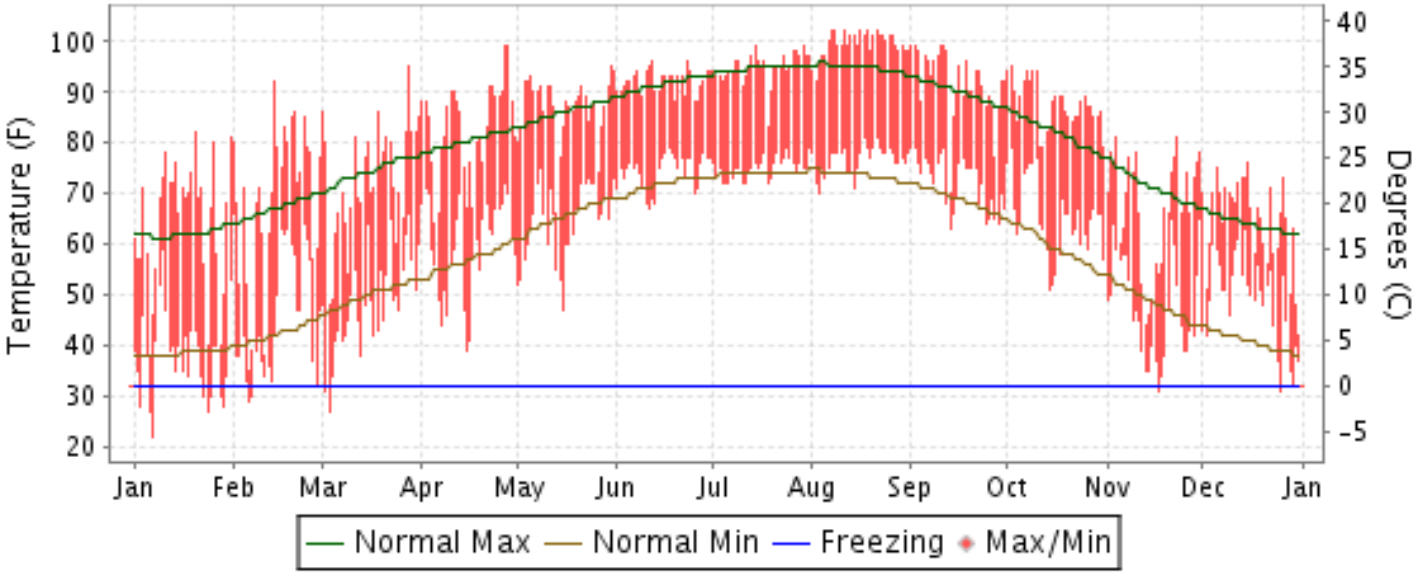
2014
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

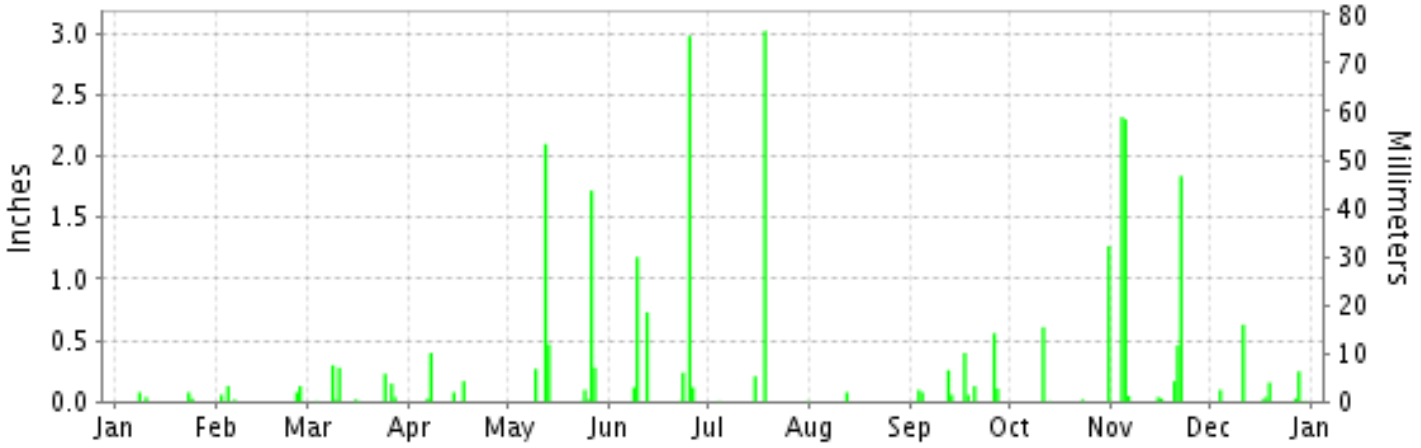
ISSN 0198-5183

SAN ANTONIO,
TEXAS (KSAT)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure

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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2014
SAN ANTONIO (KSAT)

LATITUDE: 29° 32'N **LONGITUDE:** 98° 29'W **ELEVATION (FT):** GRND: 789 BARO: 821 **TIME ZONE:** CENTRAL (UTC -6) **WBAN:** 12921

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	64.4	68.9	72.7	83.0	86.9	91.9	94.7	99.4	91.8	87.3	67.2	64.5	81.1
	HIGHEST DAILY MAXIMUM	82	92	95	99	95	96	99	102	99	95	81	76	102
	DATE OF OCCURRENCE	20	14	28	28+	30	23+	29+	21+	11+	02	23+	15	AUG 21+
	MEAN DAILY MINIMUM	37.8	46.0	48.5	59.5	64.5	74.3	75.0	76.7	72.1	65.2	47.5	48.9	59.7
	LOWEST DAILY MINIMUM	22	29	27	39	47	67	72	70	63	51	31	31	22
	DATE OF OCCURRENCE	07	06	03	15	15	11	18+	03	13	14	17	25	JAN 07
	AVERAGE DRY BULB	51.1	57.4	60.6	71.3	75.7	83.1	84.9	88.1	82.0	76.3	57.3	56.7	70.4
	MEAN WET BULB	43.2	49.4	52.7	60.7	65.3	74.1	74.0	73.8	71.9	65.7	50.6	51.6	61.1
	MEAN DEW POINT	32.0	42.5	45.6	52.5	58.5	70.5	69.3	67.7	67.8	59.4	43.0	47.2	54.7
	NUMBER OF DAYS WITH:													
	MAXIMUM >= 90°	0	1	1	7	12	25	30	31	21	8	0	0	136
	MAXIMUM <= 32°	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM <= 32°	8	3	2	0	0	0	0	0	0	0	1	2	16
	MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	428	266	188	40	4	0	0	0	0	0	247	256	1429
	COOLING DEGREE DAYS	3	62	61	236	342	551	624	721	516	355	28	7	3506
RH	MEAN (PERCENT)	53	65	63	59	62	70	64	57	68	61	62	74	63
	HOUR 00 LST	63	71	74	70	73	80	72	68	78	71	69	78	72
	HOUR 06 LST	69	76	76	76	80	86	86	82	86	82	75	83	80
	HOUR 12 LST	42	60	55	49	50	62	54	43	55	46	52	67	53
	HOUR 18 LST	38	50	48	42	44	53	44	34	53	43	53	66	47
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY <= 1/4 MI)	1	4	3	0	2	2	0	0	0	0	0	6	18
	THUNDERSTORMS	0	0	4	3	6	4	6	1	2	2	2	0	30
PR	MEAN STATION PRESS. (IN.)	29.33	29.18	29.16	29.08	29.11	29.07	29.16	29.10	29.13	29.14	29.28	29.26	29.17
	MEAN SEA-LEVEL PRESS. (IN.)	30.15		29.99	29.90	29.93	29.88	29.97	29.92	29.95	29.96	30.12	30.10	
WINDS	RESULTANT SPEED (MPH)	1.3	1.8	1.7	4.0	6.7	10.4	6.6	6.4	4.1	3.2	0.8	2.1	3.4
	RES. DIR. (TENS OF DEGS.)	34	06	09	13	15	15	14	14	11	14	07	04	14
	MEAN SPEED (MPH)	7.5	8.1	9.5	10.1	11.3	11.9	8.4	9.1	7.8	8.0	8.6	7.5	9.0
	PREVAIL.DIR.(TENS OF DEGS.)	01	02	16	16	14	16	15	15	07	16	01	02	16
	MAXIMUM 2-MINUTE WIND													
	SPEED (MPH)	29	29	33	32	31	33	30	29	35	29	38	25	38
	DIR. (TENS OF DEGS.)	36	01	14	36	34	03	16	13	17	32	32	34	32
	DATE OF OCCURRENCE	27	26	26	14	09	12	10	26	04	13	22	23	NOV 22
	MAXIMUM 3-SECOND WIND:													
	SPEED (MPH)	43	40	42	45	43	45	38	35	43	37	63	32	63
	DIR. (TENS OF DEGS.)	02	02	14	36	35	03	33	12	13	32	32	02	32
	DATE OF OCCURRENCE	23	26	26	14	09	12	15	26	03	13	22	27	NOV 22
PRECIPITATION	WATER EQUIVALENT:	0.23	0.42	1.06	0.68	4.97	5.38	3.25	0.08	1.77	1.91	7.21	1.24	28.20
	TOTAL (IN.)	0.11	0.20	0.30	0.40	2.52	2.98	3.02	0.08	0.67	1.27	3.94	0.63	3.94
	GREATEST 24-HOUR (IN.)	23-24	25-26	08	07	12-13	25	18	12	26-27	31	04-05	11	NOV 04-05
	DATE OF OCCURRENCE													
	NUMBER OF DAYS WITH:	4	5	9	4	8	7	4	1	10	4	8	8	72
	PRECIPITATION 0.01	0	2	4	2	6	6	2	0	6	2	5	4	39
	PRECIPITATION 0.10	0	0	0	0	2	2	1	0	0	1	3	0	9
	PRECIPITATION 1.00													
SNOWFALL	SNOW,ICE PELLETS,HAIL	0.1	0.3	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
	TOTAL (IN.)	0.1	0.3	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
	GREATEST 24-HOUR (IN.)	24	06		07									FEB 06
	DATE OF OCCURRENCE	T	T	0	0	0	0	0	0	0	0	0	0	T
	MAXIMUM SNOW DEPTH (IN.)	24	06											FEB 06
	DATE OF OCCURRENCE													
	NUMBER OF DAYS WITH:	0	0	0	0	0	0	0	0	0	0	0	0	0
	SNOWFALL >= 1.0													

NORMALS, MEANS, AND EXTREMES
SAN ANTONIO (KSAT)

LATITUDE: 29° 32'N **LONGITUDE:** 98° 29'W **ELEVATION (FT):** GRND: 789 BARO: 821 **TIME ZONE:** CENTRAL (UTC -6) **WBAN:** 12921

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	62.9	66.9	73.5	80.5	87.0	92.3	94.6	96.0	90.3	82.2	72.2	64.0	80.2
	MEAN DAILY MAXIMUM	68	62.3	66.5	73.7	80.6	86.5	92.1	94.9	95.6	90.0	82.1	71.5	64.5	80.0
	HIGHEST DAILY MAXIMUM	73	89	100	100	101	104	108	106	110	111	99	94	90	111
	YEAR OF OCCURRENCE		1971	1996	1991	1996	2004	2013	1989	2011	2000	1991	1988	1955	SEP 2000
	MEAN OF EXTREME MAXS.	68	80.0	83.7	88.4	91.8	94.8	98.3	99.8	100.9	97.7	92.2	85.2	80.2	91.1
	NORMAL DAILY MINIMUM	30	40.7	44.2	50.8	58.1	66.8	72.6	74.6	74.7	69.1	60.1	50.1	41.7	58.6
	MEAN DAILY MINIMUM	68	39.9	43.4	50.3	58.5	66.2	72.3	74.5	74.2	69.2	59.8	49.0	41.8	58.3
	LOWEST DAILY MINIMUM	73	0	6	19	31	42	53	62	61	41	27	21	6	0
	YEAR OF OCCURRENCE		1949	1951	2002	1987	2013	1964	1967	1992	1942	1993	1976	1989	JAN 1949
	MEAN OF EXTREME MINS.	68	23.0	26.6	31.4	40.8	52.2	63.0	69.1	68.0	56.1	42.2	31.3	25.1	44.1
	NORMAL DRY BULB	30	51.8	55.6	62.2	69.3	76.9	82.4	84.6	85.3	79.7	71.2	61.1	52.9	69.4
	MEAN DRY BULB	68	51.1	55.0	62.0	69.6	76.4	82.3	84.7	84.9	79.6	71.0	60.2	53.2	69.2
	MEAN WET BULB	31	43.6	47.2	53.2	59.7	67.1	71.7	72.8	72.4	68.6	61.6	52.6	45.7	59.7
	MEAN DEW POINT	31	41.4	44.8	50.6	57.4	65.7	70.3	70.9	70.6	66.7	59.9	50.6	43.1	57.7
	NORMAL NO. DAYS WITH:														
	MAXIMUM >= 90	30	0.0	0.2	0.4	2.1	9.5	21.5	26.9	28.4	17.8	3.7	0.1	0.0	110.6
	MAXIMUM <= 32	30	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	MINIMUM <= 32	30	5.3	2.7	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1	5.2	15.4
	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	0.0	0.0
H/C	NORMAL HEATING DEG. DAYS	30	416	283	154	39	2	0	0	0	2	31	178	391	1496
	NORMAL COOLING DEG. DAYS	30	7	19	65	168	370	523	608	631	443	221	62	14	3131
RH	NORMAL (PERCENT)	30	67	66	65	65	71	70	65	64	66	68	69	68	67
	HOUR 00 LST	30	75	74	73	75	81	81	75	75	77	78	79	76	77
	HOUR 06 LST	30	80	80	81	82	88	88	87	87	86	85	83	81	84
	HOUR 12 LST	30	57	56	54	55	61	59	53	52	54	55	57	57	56
	HOUR 18 LST	30	55	50	48	49	55	53	46	46	51	53	58	56	52
S	PERCENT POSSIBLE SUNSHINE	53	47	50	57	56	56	67	74	74	67	64	54	48	60
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	51	4.0	2.4	2.0	1.0	0.6	0.1	0.1	0.0	0.2	1.1	2.5	3.7	17.7
	THUNDERSTORMS	67	0.9	1.5	2.7	3.8	6.2	4.8	3.9	4.0	3.9	2.8	1.6	1.0	37.1
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR	1	4.0	5.0	8.0		6.0	12.0							
	PARTLY CLOUDY	1	1.0	4.0	2.0		11.0	5.0							
	CLOUDY	1	1.0		6.0		3.0	2.0							
PR	MEAN STATION PRESSURE(IN)	31	29.25	29.22	29.13	29.13	29.05	29.08	29.14	29.13	29.13	29.18	29.24	29.27	29.16
	MEAN SEA-LEVEL PRES. (IN)	31	30.12	30.06	29.98	29.93	29.89	29.89	29.95	29.94	29.94	30.00	30.07	30.11	29.99
WINDS	MEAN SPEED (MPH)	31	7.6	8.1	9.0	9.2	9.3	9.2	8.5	7.9	7.2	7.5	7.6	7.4	8.2
	PREVAIL.DIR(TENS OF DEGS)	37	02	02	16	15	15	15	17	17	17	17	02	36	17
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	72	39	40	41	43	46	51	39	41	48	36	38	40	51
	DIR. (TENS OF DEGS)		29	30	29	17	28	33	11	35	13	34	32	32	33
	YEAR OF OCCURRENCE		1999	2013	2002	2009	1997	2010	2010	2012	2010	2009	2014	2012	JUN 2010
	MAXIMUM 3-SECOND														
	SPEED (MPH)	72	46	54	49	55	58	64	55	53	71	48	63	53	71
	DIR. (TENS OF DEGS)		28	29	29	17	29	32	10	36	26	34	32	33	26
	YEAR OF OCCURRENCE		1999	2013	2002	2009	2012	2010	2010	2012	1996	2011	2014	2012	SEP 1996
PRECIPITATION	NORMAL (IN)	30	1.76	1.79	2.31	2.10	4.01	4.14	2.74	2.09	3.03	4.11	2.28	1.91	32.27
	MAXIMUM MONTHLY (IN)	72	8.52	6.43	7.24	9.32	13.19	11.95	16.92	11.14	15.78	18.07	9.46	13.96	18.07
	YEAR OF OCCURRENCE		1968	1965	2007	1957	2013	1986	2002	1974	1946	1998	2004	1991	OCT 1998
	MINIMUM MONTHLY (IN)	72	T	0.01	0.01	.01	0.12	0.01	T	0.00	0.05	T	T	0.03	0.00
	YEAR OF OCCURRENCE		1996	1999	2011	2005	2003	2008	1993	1952	1999	1952	1966	1950	AUG 1952
	MAXIMUM IN 24 HOURS (IN)	72	3.18	2.44	3.59	4.88	12.17	6.30	9.79	5.79	7.28	13.35	4.87	6.90	13.35
	YEAR OF OCCURRENCE		1968	1986	1992	1977	2013	1986	2002	2007	1973	1998	1977	1991	OCT 1998
	NORMAL NO. DAYS WITH:														
	PRECIPITATION >= 0.01	30	7.0	7.2	8.8	6.4	8.5	7.5	5.2	4.7	6.6	6.9	6.7	7.5	83.0
	PRECIPITATION >= 1.00	30	0.4	0.4	0.6	0.6	1.4	1.4	0.7	0.6	1.0	1.2	0.8	0.3	9.4
SNOWFALL	NORMAL (IN)	30	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
	MAXIMUM MONTHLY (IN)	69	15.9	3.5	T	T	T	T	0.0	0.0	0.0	T	0.3	0.2	15.9
	YEAR OF OCCURRENCE		1985	1966	2013	2014	2012	1989				1993	1957	1964	JAN 1985
	MAXIMUM IN 24 HOURS (IN)	69	13.2	3.5	T	T	T	T	0.0	0.0	0.0	T	0.3	0.2	13.2
	YEAR OF OCCURRENCE'		1985	1966	2013	2014	2012	1989				1993	1957	1964	JAN 1985
	MAXIMUM SNOW DEPTH (IN)	63	9	3	0	0	0	0	0	0	0	0	0	0	9
	YEAR OF OCCURRENCE		1985	1966											JAN 1985
	NORMAL NO. DAYS WITH:														
	SNOWFALL >= 1.0	30	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

PRECIPITATION (inches) 2014 SAN ANTONIO (KSAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1985	2.68	1.91	2.85	3.27	2.47	8.20	5.80	0.45	4.80	3.91	5.00	0.09	41.43
1986	0.76	2.52	0.35	0.60	6.29	11.95	0.05	1.86	2.83	6.58	1.83	7.11	42.73
1987	1.13	4.78	1.10	1.48	12.85	7.69	1.21	0.33	2.24	0.44	2.53	2.18	37.96
1988	0.39	0.92	0.86	1.23	0.41	5.50	5.58	1.98	0.83	0.62	0.02	0.67	19.01
1989	2.96	0.29	1.24	2.55	0.33	3.96	0.69	0.48	1.54	5.81	1.93	0.36	22.14
1990	1.17	2.68	5.17	4.52	3.28	1.18	8.29	1.30	3.70	3.71	3.11	0.20	38.31
1991	5.08	2.34	1.06	4.91	5.30	2.28	2.23	2.84	1.42	0.87	0.47	13.96	42.76
1992	5.64	6.37	6.12	3.03	8.15	5.67	1.28	2.56	1.12	0.92	3.47	2.16	46.49
1993	1.31	3.72	1.56	1.81	12.47	6.43	T	0.01	0.52	3.07	0.66	0.44	32.00
1994	1.55	0.64	5.06	2.21	7.01	1.66	0.50	2.54	5.52	9.75	0.71	3.28	40.43
1995	0.28	1.19	1.58	1.07	5.36	4.81	0.71	2.03	4.49	0.23	0.82	0.64	23.21
1996	T	0.69	0.30	0.89	1.26	2.12	1.31	2.86	3.66	.36	2.79	1.56	17.80
1997	0.44	2.44	2.24	5.72	3.91	7.30	T	0.62	1.86	4.08	1.76	3.55	33.92
1998	3.21	3.37	2.85	0.05	0.34	0.81	0.21	7.78	1.57	18.07	3.40	0.39	42.05
1999	0.04	0.01	3.48	0.91	2.78	3.37	1.80	2.11	0.05	1.29	0.05	0.52	16.41
2000	1.40	2.20	0.91	1.22	3.59	7.61	0.34	0.16	2.65	5.62	8.58	1.57	35.85
2001	2.85	0.70	2.77	2.29	2.48	3.39	0.50	7.83	4.05	2.06	4.37	3.43	36.72
2002	0.37	0.42	1.19	3.82	2.26	1.48	16.92	0.54	7.02	7.64	2.08	2.53	46.27
2003	0.99	2.15	0.77	0.17	0.12	2.90	8.12	1.65	9.21	1.94	0.32	0.11	28.45
2004	2.31	1.73	2.35	5.02	1.80	9.47	0.61	1.10	1.92	9.47	9.46	0.08	45.32
2005	2.18	2.42	2.00	0.01	2.97	0.81	2.10	1.22	1.39	1.14	0.20	0.10	16.54
2006	0.35	0.62	1.36	1.40	3.80	1.63	1.41	0.03	4.11	3.44	0.75	2.44	21.34
2007	4.33	0.08	7.24	4.61	3.35	6.47	11.76	6.77	1.09	0.75	0.40	0.40	47.25
2008	0.42	0.20	1.82	0.83	0.66	0.01	3.86	4.98	0.46	0.26	0.01	0.25	13.76
2009	0.27	0.65	2.51	2.05	1.57	0.45	0.48	0.45	6.35	11.90	2.09	1.92	30.69
2010	4.45	4.38	2.09	3.57	4.48	4.24	3.68	0.07	9.37	0.17	0.26	0.63	37.39
2011	2.66	0.49	0.01	0.03	0.84	1.58	0.96	0.15	2.93	3.28	1.81	2.84	17.58
2012	3.99	5.63	3.24	0.04	9.84	0.11	3.79	2.41	7.31	2.40	0.27	0.37	39.40
2013	2.83	0.10	0.95	2.77	13.19	2.02	0.73	0.85	3.70	2.81	1.50	0.55	32.00
2014	0.23	0.42	1.06	0.68	4.97	5.38	3.25	0.08	1.77	1.91	7.21	1.24	28.20
POR= 68 YRS	1.69	1.80	1.75	2.39	3.93	3.48	2.29	2.43	3.49	3.37	2.22	1.61	30.45

WBAN : 12921

AVERAGE TEMPERATURE (°F) 2014 SAN ANTONIO (KSAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1985	44.2	50.5	64.1	69.4	76.7	80.2	82.2	85.5	79.4	71.7	64.4	49.9	68.2
1986	53.4	58.0	62.9	72.6	74.6	81.5	85.8	85.7	83.7	69.7	59.4	51.6	69.9
1987	50.7	55.9	57.8	66.1	75.8	80.5	83.8	86.0	79.2	71.2	60.6	54.2	68.5
1988	47.6	54.3	61.3	69.1	76.1	81.2	84.6	86.4	80.7	73.2	65.1	56.0	69.6
1989	56.2	51.6	61.9	70.4	81.7	83.3	86.6	86.0	79.1	71.3	61.8	43.4	69.4
1990	56.4	58.9	61.5	69.7	79.3	87.5	83.4	85.3	80.0	69.3	63.0	51.9	70.5
1991	48.9	56.6	64.0	72.4	77.7	82.8	84.5	85.8	77.8	73.3	57.4	55.5	69.7
1992	50.8	59.1	63.3	69.0	73.7	82.5	84.7	82.2	81.7	73.4	57.3	56.3	69.5
1993	51.2	55.5	61.5	67.3	73.9	81.6	86.1	87.3	81.5	70.7	56.3	55.1	69.0
1994	52.3	56.2	63.9	69.8	76.0	84.5	87.9	86.1	78.4	72.7	64.8	57.0	70.8
1995	53.5	57.4	61.9	69.8	78.6	79.3	84.3	85.5	80.1	69.8	59.5	55.6	69.6
1996	51.0	57.9	57.6	69.5	81.9	84.1	87.3	84.4	78.4	71.1	61.3	54.5	69.9
1997	49.2	53.1	63.3	63.9	74.0	79.8	85.1	86.1	82.2	70.2	57.4	50.2	67.9
1998	56.4	55.3	59.8	66.7	79.8	86.3	88.1	83.6	80.5	71.4	62.4	52.7	70.3
1999	54.6	61.8	62.7	71.2	76.2	81.9	82.9	86.1	80.3	69.6	63.1	54.0	70.4
2000	55.2	62.6	67.0	70.7	78.6	81.0	85.9	86.3	81.0	71.1	56.9	46.4	70.2
2001	49.2	57.5	56.6	70.8	76.3	82.6	85.4	85.6	76.9	67.9	62.9	53.8	68.8
2002	54.0	50.8	60.3	73.2	76.8	83.4	82.5	85.3	78.7	70.7	57.8	53.8	68.9
2003	49.8	53.1	60.6	71.6	80.4	81.7	82.0	83.7	76.7	70.6	63.1	53.9	68.9
2004	54.5	52.7	66.0	67.2	76.2	80.9	82.9	83.4	80.5	76.9	61.1	53.2	69.6
2005	55.9	56.3	61.4	68.4	75.0	82.6	85.3	85.7	84.3	70.9	64.9	53.0	70.3
2006	58.2	56.0	67.6	76.7	78.8	83.6	85.7	88.3	79.7	72.4	63.8	54.4	72.1
2007	48.3	54.9	65.0	65.2	75.5	80.7	80.4	83.7	80.3	73.1	62.7	56.1	68.8
2008	51.9	61.7	64.5	70.7	80.1	86.8	84.1	84.4	79.5	71.5	63.7	55.0	71.2
2009	54.5	62.9	65.2	69.8	79.5	86.3	88.8	88.4	78.5	69.9	60.7	48.3	71.1
2010	49.7	49.4	59.3	68.6	77.5	83.6	84.1	87.5	80.1	70.3	62.1	53.9	68.8
2011	50.5	55.5	66.9	75.7	78.6	86.2	87.9	90.0	82.9	71.0	62.9	53.9	71.8
2012	56.2	57.5	66.4	73.9	78.1	84.8	85.4	87.3	79.6	70.8	63.3	57.1	71.7
2013	53.9	59.1	62.8	67.7	75.8	83.9	86.1	88.6	83.4	73.5	59.9	52.1	70.6
2014	51.1	57.4	60.6	71.3	75.7	83.1	84.9	88.1	82.0	76.3	57.3	56.7	70.4
POR= 68 YRS	51.1	55.0	62.0	69.6	76.4	82.3	84.7	84.9	79.6	71.0	60.2	53.2	69.2

HEATING DEGREE DAYS (base 65°F) 2014 SAN ANTONIO (KSAT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1985-86	0	0	10	9	112	467	354	232	106	8	1	0	1299
1986-87	0	0	0	14	204	413	443	254	233	98	0	0	1659
1987-88	0	0	0	1	194	339	538	323	179	38	0	0	1612
1988-89	0	0	0	0	122	291	292	392	187	55	0	0	1339
1989-90	0	0	0	42	165	663	283	190	154	32	0	0	1529
1990-91	0	0	0	50	142	422	494	240	96	7	0	0	1451
1991-92	0	0	5	30	271	306	435	188	91	31	5	0	1362
1992-93	0	0	0	0	260	287	421	269	147	42	0	0	1426
1993-94	0	0	0	85	287	323	391	273	130	28	10	0	1527
1994-95	0	0	0	19	99	267	359	215	180	29	0	0	1168
1995-96	0	0	9	12	187	324	435	280	277	63	0	0	1587
1996-97	0	0	0	27	165	325	498	338	108	84	0	0	1545
1997-98	0	0	0	44	251	449	269	270	214	30	0	0	1527
1998-99	0	0	0	22	120	404	328	137	109	32	0	0	1152
1999-00	0	0	0	56	98	346	300	135	79	29	0	0	1043
2000-01	0	0	2	76	269	570	484	234	255	15	0	0	1905
2001-02	0	0	0	38	133	367	357	389	202	14	1	0	1501
2002-03	0	0	0	24	217	353	465	339	160	20	0	0	1578
2003-04	0	0	0	16	154	345	336	356	38	43	2	0	1290
2004-05	0	0	0	2	135	368	312	248	146	28	2	0	1241
2005-06	0	0	0	40	132	372	205	263	73	0	0	0	1085
2006-07	0	0	0	20	113	341	516	290	81	84	0	0	1445
2007-08	0	0	0	22	160	307	414	146	116	18	0	0	1183
2008-09	0	0	0	32	107	327	331	117	117	27	0	0	1058
2009-10	0	0	7	44	143	508	468	433	178	17	0	0	1798
2010-11	0	0	0	12	159	344	443	323	66	8	13	0	1368
2011-12	0	0	0	33	152	349	270	249	77	0	0	0	1130
2012-13	0	0	0	55	120	284	362	173	140	57	15	0	1206
2013-14	0	0	0	11	217	412	428	266	188	40	4	0	1566
2014-	0	0	0	0	247	256							

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COOLING DEGREE DAYS (base 65°F) 2014 SAN ANTONIO (KSAT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1985	0	8	85	165	368	462	539	641	450	223	101	5	3047
1986	2	45	49	244	304	500	652	646	568	166	40	4	3220
1987	4	5	17	135	340	471	589	658	434	199	67	12	2931
1988	6	19	71	166	352	492	617	671	480	264	131	20	3289
1989	24	23	99	222	524	557	678	656	429	244	75	0	3531
1990	22	26	53	177	450	681	578	635	459	192	91	23	3387
1991	0	10	70	234	402	541	612	654	396	295	49	20	3283
1992	0	23	47	158	281	531	618	542	508	267	34	24	3033
1993	1	7	45	117	283	503	660	698	503	267	31	22	3137
1994	8	34	102	183	357	593	715	659	410	261	97	27	3446
1995	7	9	90	177	429	436	603	644	467	167	28	40	3097
1996	9	79	57	203	530	578	700	610	411	220	60	8	3465
1997	12	11	61	60	286	449	628	660	522	212	27	0	2928
1998	11	3	56	84	467	645	724	582	470	227	49	32	3350
1999	12	56	45	225	352	512	561	664	467	206	46	11	3157
2000	7	73	147	207	428	487	654	668	487	270	33	0	3461
2001	1	30	1	195	357	530	640	642	362	135	76	26	2995
2002	24	0	64	268	375	559	550	634	416	206	11	11	3118
2003	0	12	29	224	482	510	533	588	357	197	101	7	3040
2004	19	2	74	116	353	483	563	576	472	378	26	7	3069
2005	37	13	41	136	317	534	637	649	585	231	135	6	3321
2006	4	17	160	352	434	567	649	730	447	257	85	21	3723
2007	4	13	89	99	328	478	486	586	465	282	99	41	2970
2008	13	57	108	191	477	661	598	610	439	240	73	26	3493
2009	14	63	128	180	456	647	744	730	416	202	20	0	3600
2010	1	2	10	130	393	562	598	704	459	182	77	3	3121
2011	2	62	133	336	443	644	715	780	543	229	97	10	3994
2012	5	38	126	274	413	599	640	698	447	241	76	46	3603
2013	27	13	77	144	356	575	662	739	558	282	73	18	3524
2014	3	62	61	236	342	551	624	721	516	355	28	7	3506

SNOWFALL (inches) 2014 SAN ANTONIO (KSAT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	1.3
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	T	T
1989-90	0.0	0.0	0.0	0.0	0.0	T	0.0	T	T	T	0.0	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T	T	0.0	T
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	T
1992-93	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	T	T	0.0	T
1993-94	0.0	0.0	0.0	T	0.0	0.0	T	T	T	0.0	0.0	0.0	T
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
1996-97													
1997-98													
1998-99													
1999-00							0.0	T	0.0	T	0.0	0.0	
2000-01	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
2001-02	0.0	0.0	0.0	T	0.0	0.0	0.0	T	T	T	0.0	0.0	T
2002-03	0.0	0.0	0.0	0.0	T	T	0.0	0.2	0.0	0.0	0.0	0.0	0.2
2003-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
2004-05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T
2005-06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T
2006-07	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
2007-08	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
2008-09	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	T
2009-10	0.0	0.0	0.0	0.0	0.0	T	0.0	0.2	T	0.0	0.0	0.0	0.2
2010-11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.4
2011-12	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T	0.0	T
2012-13	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T	T	0.0	0.0	T
2013-14	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.0	T	0.0	0.0	0.4
2014-	0.0	0.0	0.0	0.0	0.0	0.0							
POR= 67 YRS	0.0	0.0	0.0	T	T	T	0.4	0.2	T	T	T	T	0.6

WBAN : 12921

REFERENCE NOTES :

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).
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).
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.
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 SATION 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.

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.

2014
SAN ANTONIO
TEXAS (KSAT)

The city of San Antonio is located in the south-central portion of Texas on the Balcones escarpment. Northwest of the city, the terrain slopes upward to the Edwards Plateau and to the southeast it slopes downward to the Gulf Coastal Plains. Soils are blackland clay and silty loam on the Plains and thin limestone soils on the Edwards Plateau.

The location of San Antonio on the edge of the Gulf Coastal Plains is influenced by a modified subtropical climate, predominantly continental during the winter months and marine during the summer months. Temperatures range from 50 degrees in January to the middle 80s in July and August. While the summer is hot, with daily temperatures above 90 degrees over 80 percent of the time, extremely high temperatures are rare. Mild weather prevails during much of the winter months, with below-freezing temperatures occurring on an average of about 20 days each year.

San Antonio is situated between a semi-arid area to the west and the coastal area of heavy precipitation to the east. The normal annual rainfall of nearly 28 inches is sufficient for the production of most crops. Precipitation is fairly well distributed throughout the year with the heaviest amounts occurring during May and September. The precipitation from April through September usually occurs from thunderstorms. Large amounts of precipitation may fall during short periods of time. Most of the winter precipitation occurs as light rain or drizzle. Thunderstorms and heavy rains have occurred in all months of the year. Hail of damaging intensity seldom occurs but light hail is frequent with the springtime thunderstorms. Measurable snow occurs only once in three or four years. Snowfall of 2 to 4 inches occurs about every ten years.

Northerly winds prevail during most of the winter, and strong northerly winds occasionally occur during storms called northers. Southeasterly winds from the Gulf of Mexico also occur frequently during winter and are predominant in summer.

Since San Antonio is located only 140 miles from the Gulf of Mexico, tropical storms occasionally affect the city with strong winds and heavy rains. One of the fastest winds recorded, 74 mph, occurred as a tropical storm moved inland east of the city in August 1942.

Relative humidity is above 80 percent during the early morning hours most of the year, dropping to near 50 percent in the late afternoon.

San Antonio has about 50 percent of the possible amount of sunshine during the winter months and more than 70 percent during the summer months. Skies are clear to partly cloudy more than 60 percent of the time and cloudy less than 40 percent. Air carried over San Antonio by southeasterly winds is lifted orographically, causing low stratus clouds to develop frequently during the later part of the night. These clouds usually dissipate around noon, and clear skies prevail a high percentage of the time during the afternoon.

The first occurrence of 32 degrees Fahrenheit is in late November and the average last occurrence is in early March.

Station History

SAN ANTONIO, TX

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
SAN ANTONIO INTL AP	1994-04-05	1995-07-01	29° 31'	-98° 28'	788	1 MI NW	COOP,USHCN
SAN ANTONIO INTL AP	1953-01-01	1966-06-30	29° 31'	-98° 28'	788		AIRWAYS,COOP,UPPERAIR,USHCN
SAN ANTONIO INTL AP	1939-07-01	1942-01-01	29° 19'	-98° 28'			AIRWAYS,UPPERAIR
SAN ANTONIO INTL AP	1969-01-01	1981-12-31	29° 31'	-98° 28'	788		COOP,USHCN,WXSVC
SAN ANTONIO INTL AP	1981-12-31	1994-04-05	29° 31'	-98° 28'	788		COOP,USHCN
SAN ANTONIO INTL AP	1942-01-01	1946-08-01	29° 31'	-98° 28'			AIRWAYS,UPPERAIR
SAN ANTONIO INTL AP	1966-06-30	1969-01-01	29° 31'	-98° 28'	788		AIRWAYS,COOP,USHCN
SAN ANTONIO INTL AP	1995-07-01	Present	29° 32'	-98° 29'	789		ASOS,COOP,USHCN
SAN ANTONIO INTL AP	1946-08-01	1953-01-01	29° 31'	-98° 28'	791		AIRWAYS,COOP,UPPERAIR,USHCN
SAN ANTONIO INTL AP	1933-07-01	1939-07-01	29° 19'	-98° 28'			AIRWAYS

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1963-09-01	1991-07-17	DAILY	2400	UNIV	RCRD	
TEMP	1991-07-17	1994-04-05	DAILY	2400	HYGR		
WIND	2002-07-08	2005-04-11	HOURLY	UNKN	ANEMCUP		
TEMP	2008-10-22	2010-07-01	DAILY	2400	ATEMP		
PRECIP	2010-07-01	Present	HOURLY	2400	AWPAG	RCRD;HTD	
PRECIP	1991-07-17	1994-04-05	HOURLY	2400	UNIV	RCRD	ROOF
PRECIP	1994-04-05	1995-07-01	HOURLY	2400			
WIND	1995-07-01	1996-12-01	HOURLY	UNKN	ANEMCUP		
TEMP	1996-12-01	2002-07-08	DAILY	2400	HYGR		
PRECIP	2005-04-11	2008-10-22	DAILY	2400	PCPNX		
PRECIP	2008-10-22	2010-07-01	HOURLY	2400	AHTB	RCRD;HTD	
TEMP	2010-07-01	Present	DAILY	2400	ATEMP		
TEMP	1995-07-01	1996-12-01	DAILY	2400	HYGR		
TEMP	2002-07-08	2005-04-11	DAILY	2400	ATEMP		
TEMP	1963-09-01	1991-07-17	DAILY	2400			
PRECIP	2008-10-22	2010-07-01	DAILY	2400	PCPNX		
PRECIP	1963-09-01	1991-07-17	HOURLY	2400			
TEMP	1994-04-05	1995-07-01	DAILY	2400	HYGR		
PRECIP	1995-07-01	1996-12-01	HOURLY		TB	RCRD	
PRECIP	1995-07-01	1996-12-01	DAILY	2400			
PRECIP	2002-07-08	2005-04-11	DAILY	2400	PCPNX		
WIND	2005-04-11	2008-10-22	HOURLY	UNKN	ANEMCUP		
TEMP	1933-07-01	1963-09-01	DAILY	2400			
PRECIP	1996-12-01	2002-07-08	HOURLY		TB	RCRD	
PRECIP	2002-07-08	2005-04-11	HOURLY		AHTB	RCRD;HTD	
PRECIP	2005-04-11	2008-10-22	HOURLY	2400	AHTB	RCRD;HTD	
WIND	2008-10-22	2010-07-01	HOURLY	UNKN	ANEMSONIC		
PRECIP	2010-07-01	Present	DAILY	2400	PCPNX		
PRECIP	1933-07-01	1963-09-01	DAILY	2400	UNIV	RCRD	
PRECIP	1991-07-17	1994-04-05	DAILY	2400	UNIV	RCRD	ROOF
PRECIP	1994-04-05	1995-07-01	DAILY	2400			
PRECIP	1996-12-01	2002-07-08	DAILY	2400	SRG		ROOF
WIND	1996-12-01	2002-07-08	HOURLY	UNKN	ANEMCUP		
TEMP	2005-04-11	2008-10-22	DAILY	2400	ATEMP		
WIND	2010-07-01	Present	HOURLY	UNKN	ANEMSONIC		

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

Other Station Information can be found at:
ASOS Implementation by NWS: http://www.nws.noaa.gov/ops2/Surface/asos2implementation.htm
Station Metadata website: http://www.ncdc.noaa.gov/homr

INQUIRES/COMMENTS CALL: (828) 271-4800, option 2
Fax Number : (828) 271-4876
TDD : (828) 271-4010
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