

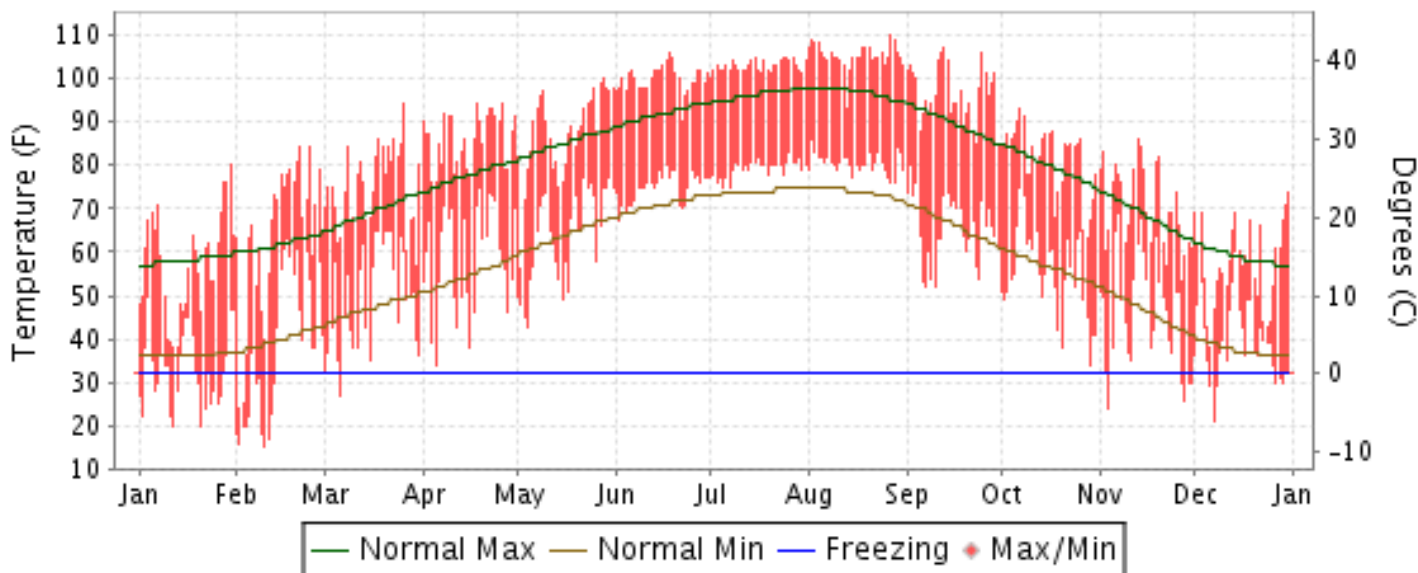


2011 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

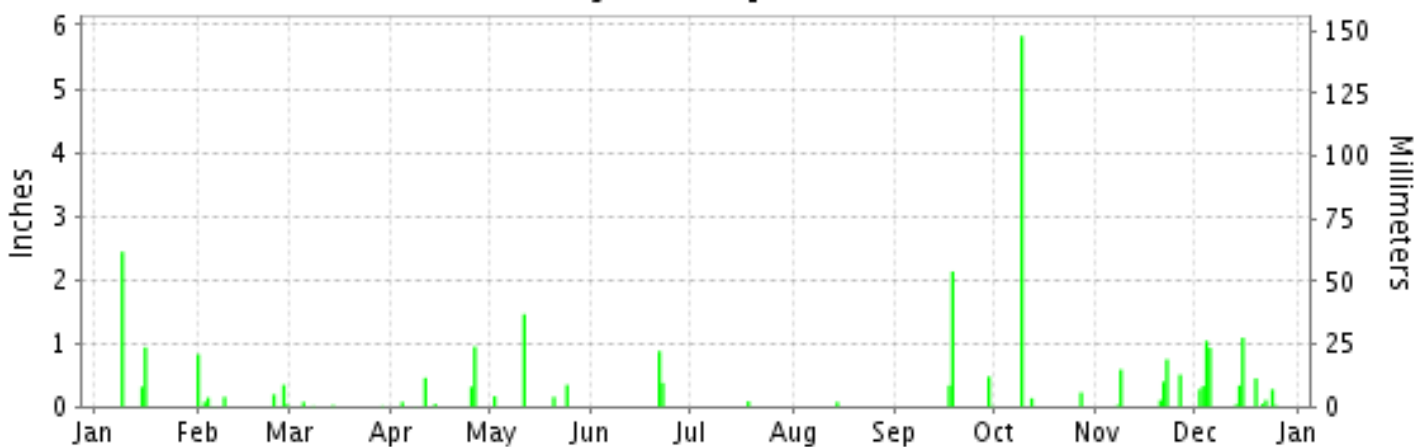
ISSN 0198-522X

WACO, TEXAS (KACT)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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ENVIRONMENTAL SATELLITE, DATA
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2011

WACO (KACT)

LATITUDE: 31° 37'N LONGITUDE: -97° 13'W ELEVATION (FT): GRND: 500 BARO: 516 TIME ZONE: CENTRAL (UTC -6) WBAN: 13959

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	57.2	64.0	75.0	86.1	87.5	99.9	102.8	105.2	96.5	81.5	70.6	57.4	82.0	
	HIGHEST DAILY MAXIMUM	80	84	94	94	100	106	105	110	107	93	86	74	110	
	DATE OF OCCURRENCE	30	24+	26	26+	28	18	27+	27	13	07	13	31	AUG 27	
	MEAN DAILY MINIMUM	32.9	38.3	49.7	58.8	63.7	74.8	79.4	80.5	65.3	54.9	46.0	39.2	57.0	
	LOWEST DAILY MINIMUM	20	15	27	34	43	67	75	76	52	34	24	21	15	
	DATE OF OCCURRENCE	21+	10	06	05	04	02	07+	28+	10+	29	04	07	FEB 10	
	AVERAGE DRY BULB	45.1	51.2	62.4	72.5	75.6	87.4	91.1	92.9	80.9	68.2	58.3	48.3	69.5	
	MEAN WET BULB	39.4		54.2	62.7	65.3	72.6	73.9	73.4	64.2	58.9	52.0	44.2		
	MEAN DEW POINT	31.9	37.8	46.6	55.2	59.0	65.3	65.7	63.7	52.5	51.5	45.0	39.5	51.1	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	1	13	14	30	31	31	25	3	0	0	148	
	MAXIMUM <= 32°	0	2	0	0	0	0	0	0	0	0	0	0	2	
MINIMUM <= 32°	16	12	1	0	0	0	0	0	0	0	6	7	42		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	609	414	168	30	25	0	0	0	0	66	249	511	2072	
	COOLING DEGREE DAYS	0	32	95	262	363	677	816	871	483	171	57	0	3827	
RH	MEAN (PERCENT)	65	66	60	58	61	51	46	42	42	59	64	74	57	
	HOUR 00 LST	72	75	67	71	69	59	52	47	51	67	70	77	65	
	HOUR 06 LST	77	77	80	81	82	78	71	64	66	80	78	83	76	
	HOUR 12 LST	54	58	50	45	48	39	35	31	28	46	53	67	46	
	HOUR 18 LST	54	52	42	40	44	31	29	25	25	46	55	70	43	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	0	1	0	0	1	0	0	0	1	1	2	4	10	
	THUNDERSTORMS	0	4	0	4	5	2	1	1	5	2	3	3	30	
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.)	29.56	29.54	29.46	29.29	29.33	29.34	29.36	29.33	29.41	29.49	29.53	29.63	29.44	
	MEAN SEA-LEVEL PRESS. (IN.)	30.11	30.08	30.00	29.82	29.86	29.87	29.89	29.85	29.93	30.02	30.07	30.18	29.97	
WINDS	RESULTANT SPEED (MPH)	1.1	2.5	4.9	9.3	8.0	11.8	9.2	8.1	1.1	1.7	2.3	1.7	4.4	
	RES. DIR. (TENS OF DEGS.)	35	21	17	18	17	17	17	18	04	16	20	36	18	
	MEAN SPEED (MPH)	7.5	11.8	11.6	14.0	13.1	12.7	10.2	9.5	8.2	8.8	10.7	8.5	10.6	
	PREVAIL.DIR.(TENS OF DEGS.)	34	18	18	17	18	18	18	18	36	18	16	34	18	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	32	41	32	38	46	43	25	31	37	31	35	28	46	
	DIR. (TENS OF DEGS.)	35	29	19	17	16	30	18	13	01	34	20	32	16	
	DATE OF OCCURRENCE	20	27	22	22	21	21	22	24	29	18	12	22	MAY 21	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	40	52	41	47	56	52	31	38	47	40	45	45	56	
DIR. (TENS OF DEGS.)	35	29	19	16	16	30	18	14	01	35	33	31	16		
DATE OF OCCURRENCE	20	27	22	22	21	21	23	24	29	18	26	31	MAY 21		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.70	1.82	0.15	1.87	2.14	1.26	0.09	0.08	2.97	6.20	2.39	4.97	27.64	
	GREATEST 24-HOUR (IN.)	2.44	0.83	0.08	0.95	1.46	1.26	0.09	0.08	2.13	5.83	1.15	1.46	5.83	
	DATE OF OCCURRENCE	09	01	05	26	11	21-22	18	14	18	09	21-22	04-05	OCT 09	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	3	8	4	6	4	2	1	1	4	3	6	12	54	
PRECIPITATION 0.10	3	5	0	3	4	2	0	0	3	3	5	9	37		
PRECIPITATION 1.00	1	0	0	0	1	0	0	0	1	1	0	2	6		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	
	GREATEST 24-HOUR (IN.)	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	
	DATE OF OCCURRENCE		04											FEB 04	
	MAXIMUM SNOW DEPTH (IN.)	0	2	0	0	0	0	0	0	0	0	0	0	2	
	DATE OF OCCURRENCE		04											FEB 04	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	0	1	0	0	0	0	0	0	0	0	0	0	1		

NORMALS, MEANS, AND EXTREMES WACO (KACT)

LATITUDE:
31° 37'N

LONGITUDE:
-97° 13'W

ELEVATION (FT):
GRND: 500 BARO: 516

TIME ZONE:
CENTRAL (UTC -6)

WBAN: 13959

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	57.0	62.3	70.2	77.6	84.8	92.0	96.7	96.9	90.1	80.4	67.8	59.1	77.9
	MEAN DAILY MAXIMUM	82	57.4	60.7	69.6	77.4	84.8	91.5	96.4	96.9	89.3	80.5	67.8	59.9	77.7
	HIGHEST DAILY MAXIMUM	69	88	96	100	101	102	109	109	112	111	101	92	91	112
	YEAR OF OCCURRENCE		1971	1996	1971	1963	1985	1980	1998	1969	2000	1989	1988	1955	AUG 1969
	MEAN OF EXTREME MAXS.	82	77.9	80.9	85.8	90.0	94.2	98.6	102.4	103.8	99.4	93.1	84.6	78.3	90.8
	NORMAL DAILY MINIMUM	30	35.1	39.3	46.8	54.2	63.3	70.6	74.1	73.5	67.0	56.7	45.8	37.5	55.3
	MEAN DAILY MINIMUM	82	36.2	39.3	47.0	55.4	64.2	70.9	74.8	74.4	67.3	57.2	45.9	38.5	55.9
	LOWEST DAILY MINIMUM	69	-5	4	15	26	37	52	60	53	40	25	17	-4	-5
	YEAR OF OCCURRENCE		1949	1985	1948	2009	1981	1964	1994	1992	1983	1993	1976	1989	JAN 1949
	MEAN OF EXTREME MINS.	82	19.0	22.8	28.9	37.8	49.6	61.0	68.1	66.4	53.0	40.0	29.1	22.0	41.5
	NORMAL DRY BULB	30	46.1	50.8	58.5	65.9	74.1	81.3	85.4	85.2	78.6	68.6	56.8	48.3	66.6
	MEAN DRY BULB	82	46.8	50.0	58.3	66.4	74.5	81.3	85.6	85.7	78.3	68.9	56.9	49.2	66.8
	MEAN WET BULB	28	40.8	44.5	51.1	58.4	66.6	71.7	73.0	72.3	67.8	59.5	50.9	42.6	58.3
	MEAN DEW POINT	28	38.2	41.6	48.1	55.5	64.7	70.1	70.3	69.6	64.8	57.0	48.1	40.0	55.7
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.1	0.3	1.4	7.6	21.9	28.7	28.2	18.3	4.5	0.1	0.0	111.1
	MAXIMUM <= 32	30	0.9	0.5	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.0
MINIMUM <= 32	30	12.4	6.5	2.1	0.2	0.0	0.0	0.0	0.0	0.0	0.1	2.9	9.4	33.6	
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	
H/C	NORMAL HEATING DEG. DAYS	30	589	409	235	77	7	0	0	0	6	58	271	512	2164
	NORMAL COOLING DEG. DAYS	30	2	8	39	111	292	497	637	628	416	170	34	6	2840
RH	NORMAL (PERCENT)	30	72	70	69	68	73	69	62	62	67	69	73	73	69
	HOURLY 00 LST	30	78	78	75	77	82	79	71	70	76	77	80	79	77
	HOURLY 06 LST	30	84	84	83	85	90	89	85	85	87	86	86	84	86
	HOURLY 12 LST	30	64	61	59	57	61	56	49	48	54	56	61	62	57
	HOURLY 18 LST	30	62	58	54	53	59	54	46	45	52	57	65	65	56
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	48	2.5	1.9	1.4	0.9	0.6	0.2	0.0	0.1	0.4	0.7	2.3	2.6	13.6
	THUNDERSTORMS	64	1.4	2.3	3.6	5.2	7.1	5.6	3.7	4.1	3.6	3.1	2.0	1.4	43.1
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)	2	4.5	5.0	9.0	4.5	3.5	1.6	2.0	2.5	3.0	4.0		1.0	
	MIDNIGHT-MIDNIGHT (OKTAS)	2	4.5	5.0	5.0	2.5	3.5	2.5	2.0	2.0	3.0	2.0			
	MEAN NO. DAYS WITH: CLEAR	3	4.7	8.7	9.0	7.0	6.0	10.0	10.5	13.5	5.0	7.5	3.0	4.5	89.4
	PARTLY CLOUDY	2	1.5	1.0	3.3	3.5	5.3	3.0	3.5	3.0	3.0	2.5	2.0	4.0	35.6
	CLOUDY	3	6.0	7.7	6.7	4.5	4.7	1.7	2.5	2.5	2.0	3.5	5.5	5.5	52.8
PR	MEAN STATION PRESSURE(IN)	28	29.60	29.55	29.47	29.41	29.38	29.39	29.43	29.43	29.44	29.49	29.54	29.59	29.48
	MEAN SEA-LEVEL PRES. (IN)	28	30.15	30.09	30.01	29.94	29.90	29.91	29.95	29.95	29.96	30.03	30.08	30.13	30.01
WINDS	MEAN SPEED (MPH)	28	10.0	10.8	11.5	11.6	10.6	9.9	9.8	9.1	8.6	9.2	10.0	9.7	10.1
	PREVAIL.DIR.(TENS OF DEGS)	37	19	19	19	19	19	19	19	19	19	19	19	19	19
	MAXIMUM 2-MINUTE: SPEED (MPH)	18	41	44	53	55	47	48	54	39	37	48	47	37	55
	DIR. (TENS OF DEGS)		32	28	29	28	00	36	10	04	01	29	12	30	28
	YEAR OF OCCURRENCE		1994	2009	2004	1999	1994	1997	2010	2010	2011	2000	2001	2003	APR 1999
	MAXIMUM 3-SECOND SPEED (MPH)	18	47	59	64	69	61	63	77	49	55	60	55	46	77
	DIR. (TENS OF DEGS)		31	27	16	27	11	35	11	03	31	28	12	31	11
YEAR OF OCCURRENCE		2008	2009	2005	1999	2005	1997	2010	2010	1995	2000	2001	2003	JUL 2010	
PRECIPITATION	NORMAL (IN)	30	1.90	2.43	2.48	2.99	4.46	3.08	2.23	1.85	2.88	3.67	2.61	2.76	33.34
	MAXIMUM MONTHLY (IN)	69	6.10	7.91	9.76	13.37	15.00	12.06	8.58	10.33	9.49	10.51	9.72	9.81	15.00
	YEAR OF OCCURRENCE		1998	1997	2007	1957	1965	1961	1971	2008	2010	1984	2004	1997	MAY 1965
	MINIMUM MONTHLY (IN)	69	0.03	0.07	0.04	0.12	0.55	0.18	0.00	T	0.00	0.00	0.13	0.04	0.00
	YEAR OF OCCURRENCE		1971	1999	1956	1983	1998	2008	1993	1952	1956	1952	1970	1950	JUL 1993
	MAXIMUM IN 24 HOURS (IN)	69	4.79	3.97	4.22	5.09	7.18	4.21	4.93	4.80	5.89	5.83	4.26	7.98	7.98
	YEAR OF OCCURRENCE		1998	1997	2007	1957	1953	1947	2004	1958	2010	2011	1952	1997	DEC 1997
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	7.4	6.4	7.9	6.7	9.0	7.3	5.0	5.3	6.6	6.9	7.5	6.7	82.7
PRECIPITATION >= 1.00	30	0.3	0.7	0.6	1.0	1.4	1.0	0.6	0.7	0.8	1.2	0.7	0.7	9.7	
SNOWFALL	NORMAL (IN)	30	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.2	0.*	1.2
	MAXIMUM MONTHLY (IN)	61	7.0	4.8	1.1	3.5	T	0.0	0.0	T	0.0	T	2.4	2.0	7.0
	YEAR OF OCCURRENCE		1949	1966	2008	2007	1989			1991		1993	1993	1946	JAN 1949
	MAXIMUM IN 24 HOURS (IN)	61	7.0	4.8	1.0	T	T	0.0	0.0	T	0.0	T	2.4	2.0	7.0
	YEAR OF OCCURRENCE'		1949	1966	1987	1993	1989			1991		1993	1993	1946	JAN 1949
	MAXIMUM SNOW DEPTH (IN)	55	7	5	1	1	0	0	0	0	0	0	1	1	7
YEAR OF OCCURRENCE		1949	1966	2008	2007							1976	1963	JAN 1949	
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	

PRECIPITATION (inches) 2011 WACO (KACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	1.86	1.41	3.79	2.46	5.54	3.93	2.61	0.18	0.15	1.43	3.57	2.11	29.04
1983	1.28	2.97	3.46	0.12	3.83	0.95	3.41	2.54	0.71	1.55	2.90	0.46	24.18
1984	0.82	1.00	3.45	0.54	3.71	1.75	1.82	1.33	1.32	10.51	3.05	5.07	34.37
1985	0.76	1.91	2.57	3.37	1.59	5.62	0.68	0.68	6.38	3.84	3.53	2.02	32.95
1986	0.07	4.51	0.43	2.74	6.89	3.95	0.37	0.68	3.94	5.09	3.56	3.48	35.71
1987	1.29	2.60	1.67	1.63	5.16	5.84	1.42	0.76	5.69	1.19	4.44	3.31	35.00
1988	0.44	1.68	3.09	1.28	0.65	5.57	1.15	0.56	5.52	0.98	1.76	2.01	24.69
1989	2.45	2.27	2.42	1.60	9.34	4.16	1.99	2.21	0.27	0.91	0.32	0.54	28.48
1990	2.72	2.80	5.07	3.11	6.12	0.97	0.69	1.05	6.57	4.48	3.50	1.35	38.43
1991	3.13	1.43	0.93	2.68	5.89	3.16	3.65	7.21	3.81	3.58	1.68	8.44	45.59
1992	4.49	6.29	3.57	1.27	6.36	2.66	2.39	0.49	2.22	1.51	4.05	3.31	38.61
1993	2.45	3.84	4.31	3.63	2.06	2.15	0.00	0.81	4.44	5.50	2.11	1.48	32.78
1994	1.52	3.32	2.23	2.78	6.66	1.97	0.31	1.17	0.34	5.40	3.98	5.03	34.71
1995	1.38	0.60	3.67	7.18	7.82	2.35	4.02	6.04	6.11	0.12	1.57	1.01	41.87
1996	0.86	0.20	0.93	2.74	1.20	2.28	2.64	6.27	1.82	0.89	4.93	2.51	27.27
1997	2.50	7.91	3.77	5.46	3.51	2.71	0.73	1.74	0.49	2.12	2.52	9.81	43.27
1998	6.10	4.04	2.38	1.31	0.55	1.24	0.18	0.62	4.92	6.61	3.50	4.08	35.53
1999	2.30	0.07	3.15	2.04	3.14	0.51	3.75	T	0.51	1.90	0.29	2.82	20.48
2000	2.05	4.54	1.60	2.82	4.95	7.60	0.82	0.05	1.11	4.57	7.76	2.65	40.52
2001	2.90	2.53	4.45	0.66	3.54	1.76	0.24	4.85	2.22	2.89	5.63	4.03	35.70
2002	0.96	1.68	2.15	1.29	3.25	2.77	2.39	0.99	3.01	9.00	1.35	7.63	36.47
2003	0.57	2.56	1.35	0.94	2.77	4.58	2.75	2.49	4.23	3.88	1.37	0.49	27.98
2004	4.06	5.23	2.30	8.46	3.86	7.91	4.97	0.53	0.80	10.34	9.72	1.30	59.48
2005	3.30	3.34	1.26	2.04	3.64	1.37	1.07	4.83	0.57	0.89	0.51	0.43	23.25
2006	2.02	1.83	3.27	2.46	2.20	2.52	0.33	0.06	1.24	4.04	1.07	2.82	23.86
2007	3.98	0.55	9.76	1.16	13.99	8.76	2.24	0.48	3.79	0.76	1.78	0.79	48.04
2008	0.67	1.22	5.00	5.20	4.66	0.18	0.66	10.33	0.61	3.90	0.43	0.68	33.54
2009	0.64	1.35	4.91	4.54	1.37	0.73	2.80	0.01	8.24	9.71	1.69	1.54	37.53
2010	5.29	3.47	4.63	4.03	0.89	5.72	3.35	0.42	9.49	0.99	1.05	0.77	40.10
2011	3.70	1.82	0.15	1.87	2.14	1.26	0.09	0.08	2.97	6.20	2.39	4.97	27.64
POR= 82 YRS	2.11	2.42	2.60	3.31	4.48	2.98	1.86	1.85	3.27	3.21	2.52	2.47	33.08

WBAN : 13959

AVERAGE TEMPERATURE (°F) 2011 WACO (KACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1982	46.8	47.5	61.8	64.4	75.0	80.5	86.3	88.2	80.4	68.8	57.9	50.4	67.3
1983	45.5	48.9	55.4	61.8	71.5	79.2	84.3	85.6	77.4	69.8	59.3	38.3	64.8
1984	41.8	51.5	58.8	65.5	76.2	82.4	86.0	86.6	76.6	69.1	56.0	54.9	67.1
1985	40.4	46.2	61.5	68.4	76.8	82.1	85.3	87.4	77.5	69.4	59.7	44.9	66.6
1986	50.5	53.0	60.8	69.0	73.5	81.5	87.5	84.6	83.1	67.2	55.1	47.3	67.8
1987	45.9	51.9	55.3	64.8	75.3	80.4	84.4	87.3	77.3	67.7	57.0	49.4	66.4
1988	44.2	49.4	57.9	66.6	73.6	79.8	86.0	88.2	80.2	68.5	60.8	50.8	67.2
1989	51.7	44.8	58.3	68.2	76.5	78.9	84.2	83.9	75.6	70.4	59.6	40.5	66.1
1990	54.0	54.9	60.0	66.8	75.7	86.3	84.8	87.0	80.6	67.6	61.5	47.0	68.9
1991	44.3	53.8	60.7	69.3	75.8	81.4	85.3	83.5	76.7	69.9	53.9	52.2	67.2
1992	48.6	55.0	61.2	67.3	72.4	81.4	86.3	81.5	80.2	70.9	54.2	51.2	67.5
1993	46.4	50.4	57.0	63.8	72.1	82.1	85.7	86.8	78.0	64.6	51.5	49.7	65.7
1994	46.1	50.2	59.3	66.1	72.0	83.1	85.9	84.4	76.6	68.3	59.2	50.4	66.8
1995	49.7	52.6	56.5	64.6	73.1	77.7	84.1	84.1	76.7	66.9	55.3	50.5	66.0
1996	44.6	53.8	54.0	65.3	80.6	82.3	87.1	83.4	74.8	67.4	58.1	50.8	66.9
1997	45.2	49.9	58.8	60.6	71.2	79.3	85.1	84.0	81.2	68.4	52.7	46.7	65.3
1998	51.6	51.5	56.2	65.0	78.6	86.2	90.4	86.3	82.1	70.6	59.5	48.4	68.9
1999	51.8	57.7	57.3	68.6	73.8	82.9	85.1	88.8	79.6	69.2	62.0	51.4	69.0
2000	51.4	57.8	62.0	66.5	76.7	80.2	85.9	87.7	79.7	71.1	52.5	41.8	67.8
2001	45.2	53.1	53.1	69.3	75.6	81.2	88.1	86.5	76.3	65.9	60.6	51.0	67.2
2002	48.8	47.5	56.7	70.6	74.5	80.5	83.8	85.2	79.5	66.5	55.4	49.6	66.6
2003	46.6	47.6	57.5	67.9	76.4	79.6	84.9	85.0	75.6	69.3	60.8	50.8	66.8
2004	50.2	47.2	63.0	66.7	75.0	79.4	82.6	81.6	77.8	73.8	58.0	49.8	67.1
2005	51.3	53.5	58.0	66.1	73.4	82.4	85.1	84.9	82.8	68.8	61.5	48.1	68.0
2006	55.3	50.7	62.5	72.8	75.8	81.9	86.5	88.8	79.2	69.3	58.1	50.6	69.3
2007	43.2	50.5	63.4	62.6	73.5	80.3	81.2	85.4	80.1	70.4	60.1	49.6	66.7
2008	45.9	53.9	58.8	65.8	75.4	84.0	86.3	84.4	75.4	67.1	58.5	48.6	67.0
2009	49.2	56.8	60.9	65.0	75.1	85.7	87.6	87.7	77.3	65.4	59.5	44.3	67.9
2010	44.1	43.7	56.3	66.8	77.2	85.4	86.4	89.2	80.0	68.6	59.2	51.1	67.3
2011	45.1	51.2	62.4	72.5	75.6	87.4	91.1	92.9	80.9	68.2	58.3	48.3	69.5
POR= 82 YRS	46.8	50.0	58.3	66.4	74.5	81.3	85.6	85.7	78.3	68.9	56.9	49.2	66.8

HEATING DEGREE DAYS (base 65°F) 2011 WACO (KACT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	0	0	1	73	265	453	599	443	298	159	9	0	2300
1983-84	0	0	11	38	220	823	710	390	221	73	6	0	2492
1984-85	0	0	23	41	293	319	752	527	157	41	0	0	2153
1985-86	0	0	14	38	207	619	443	353	151	39	3	0	1867
1986-87	0	0	0	50	305	540	583	360	308	111	0	0	2257
1987-88	0	0	0	44	270	480	644	451	256	49	0	0	2194
1988-89	0	0	3	20	188	434	403	562	255	82	0	0	1947
1989-90	0	0	12	67	227	753	341	287	195	64	7	0	1953
1990-91	0	0	0	90	157	555	633	312	177	15	7	0	1946
1991-92	0	0	10	57	350	401	502	283	144	59	10	0	1816
1992-93	0	0	1	7	331	435	570	405	262	111	6	0	2128
1993-94	0	0	0	155	419	477	581	418	222	80	27	0	2379
1994-95	0	0	6	59	204	448	477	347	292	85	7	0	1925
1995-96	0	0	18	41	292	464	623	359	366	97	0	0	2260
1996-97	0	0	17	46	240	442	611	417	205	156	15	0	2149
1997-98	0	0	0	79	377	559	411	374	315	65	0	0	2180
1998-99	0	0	0	31	184	526	407	227	233	45	1	0	1654
1999-00	0	0	2	49	120	426	427	235	143	72	0	0	1474
2000-01	0	0	14	45	387	713	608	339	367	25	0	0	2498
2001-02	0	0	3	65	174	446	502	483	276	39	4	0	1992
2002-03	0	0	0	81	295	468	562	481	240	50	0	0	2177
2003-04	0	0	0	18	195	436	462	511	112	54	12	0	1800
2004-05	0	0	0	3	208	468	432	330	229	51	14	0	1735
2005-06	0	0	0	62	193	526	301	399	149	10	0	0	1640
2006-07	0	0	0	51	235	453	668	407	123	134	0	0	2071
2007-08	0	0	0	61	210	487	594	327	223	75	5	0	1982
2008-09	0	0	0	55	219	510	499	252	199	94	0	0	1828
2009-10	0	0	2	81	178	635	642	591	268	37	0	0	2434
2010-11	0	0	0	34	235	433	609	414	168	30	25	0	1948
2011-	0	0	0	66	249	511							

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COOLING DEGREE DAYS (base 65°F) 2011 WACO (KACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1982	8	0	112	93	321	470	666	725	471	197	62	9	3134
1983	0	0	7	68	217	431	604	648	390	193	56	3	2617
1984	0	4	39	95	360	529	658	677	379	174	28	14	2957
1985	0	7	56	150	370	518	637	699	397	177	55	3	3069
1986	1	24	27	165	273	502	703	616	551	124	16	0	3002
1987	0	0	14	112	327	469	609	697	374	134	35	3	2774
1988	5	5	43	105	273	451	655	726	465	135	68	2	2933
1989	0	2	56	186	367	427	601	594	335	244	72	0	2884
1990	6	9	49	125	344	649	619	687	474	177	59	5	3203
1991	0	4	49	150	351	500	638	581	366	219	25	11	2894
1992	0	1	33	137	247	497	666	518	465	194	14	13	2785
1993	0	0	24	82	234	519	649	681	398	149	21	5	2762
1994	2	9	50	119	248	548	652	608	362	167	37	3	2805
1995	10	7	38	83	268	391	600	601	373	111	11	22	2515
1996	0	43	32	115	488	525	690	577	318	131	41	6	2966
1997	7	0	18	27	211	434	628	596	491	189	14	0	2615
1998	3	0	49	73	427	645	790	668	521	214	25	18	3433
1999	5	30	2	159	282	545	628	745	449	187	39	12	3083
2000	9	33	57	124	370	460	658	710	459	242	20	0	3142
2001	0	9	2	161	335	496	724	673	348	100	49	19	2916
2002	10	2	29	215	307	472	589	634	442	134	14	0	2848
2003	0	1	15	143	359	446	624	627	327	157	75	3	2777
2004	11	0	57	112	328	439	554	522	390	283	5	4	2705
2005	17	14	19	89	281	528	629	621	537	187	94	9	3025
2006	9	6	80	253	343	517	677	729	433	190	36	13	3286
2007	0	6	75	67	271	467	512	641	460	236	68	15	2818
2008	9	12	39	106	336	578	672	608	320	129	32	8	2849
2009	16	27	79	102	320	629	706	711	380	98	22	0	3090
2010	0	0	7	96	386	619	669	757	456	150	66	9	3215
2011	0	32	95	262	363	677	816	871	483	171	57	0	3827

SNOWFALL (inches) 2011 WACO (KACT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
1983-84	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T	0.0	0.0	0.0	T
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.9	0.0	0.0	0.0	0.0	2.9
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
1986-87	0.0	0.0	0.0	0.0	T	T	T	0.0	1.0	0.0	0.0	0.0	1.0
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.4	0.0	0.0	0.0	0.0	1.5
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.0	T	0.0	1.0
1989-90	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	T
1990-91	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
1991-92	0.0	T	0.0	T	0.0	0.0	T	0.0	T	T	0.0	0.0	T
1992-93	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T	T	0.0	0.0	T
1993-94	0.0	0.0	0.0	T	2.4	T	T	1.4	0.0	0.0	0.0	0.0	3.8
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	T	T	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	T	0.0	0.0	0.0	0.0	T
1996-97	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
1997-98	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1998-99	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1999-00	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2000-01	0.0	0.0	0.0	0.0	0.0	0.6	T	0.0	0.0	0.0	0.0	0.0	0.6
2001-02	0.0	0.0	0.0	0.0	T	T	T	T	T	0.0	0.0	0.0	T
2002-03	0.0	0.0	0.0	0.0	0.0	0.0	T	0.5	0.0	0.0	0.0	0.0	0.5
2003-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3
2004-05	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2005-06	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2006-07	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	3.5	0.0	0.0	3.5
2007-08	0.0	0.0	0.0	0.0	T	0.0	T	0.0	1.1	0.0	0.0	0.0	1.1
2008-09	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
2009-10	0.0	0.0	0.0	0.0	0.0	0.1	0.0	3.6	0.0	0.0	0.0	0.0	3.7
2010-11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	2.0
2011-	0.0	0.0	0.0	0.0	0.0	0.0							
POR= 79 YRS	0.0	T	0.1	T	0.1	0.1	0.6	0.4	0.1	T	T	0.0	1.4

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REFERENCE NOTES :

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD. CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.</p>	<p>GENERAL CONTINUED: WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65 F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY. ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK MEDADATA SYSTEM", URL IS: https://mi3.ncdc.noaa.gov/mi3qry/login.cfm 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 the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2011 WACO TEXAS (KACT)

One of the major cities of Texas, Waco is located in the rich agricultural region of the Brazos River Valley in North Central Texas. The city lies on the edge of the gently rolling Blackland Prairies. To the west lies the rolling to hilly Grand Prairie. Waco is a commercial hub with an economy based on industry, education and agriculture. Baylor University, founded in 1845, is located here. Regional agriculture includes chiefly cattle, poultry, sorghum, cotton and corn. Soils are black waxy, loam and sandy types. Lake Waco, a reservoir of 7,260 surface acres, lies within the Waco city limits, with the north shoreline approximately 0.8 mile south of the Municipal Airport.

The climate of Waco is humid subtropical with hot summers. It is a continental type climate characterized by extreme variations in temperature. Tropical maritime air masses predominate throughout the late spring, summer and early fall months, while Polar air masses frequent the area in winter. In an average year, April and May are the wettest months, while the July-August period is the driest. Most warm season rainfall occurs from thunderstorm activity. Consequently, considerable spatial variation in amounts occur.

Winters are mild. Cold fronts moving down from the High Plains often are accompanied by strong, gusty, northerly winds and sharp drops in temperature. Cold spells are of short duration, rarely lasting longer than 2 or 3 days before a rapid warming occurs. Winter precipitation is closely associated with frontal activity, and may fall as rain, freezing rain, sleet or snow. During most years, snowfall is of little or no consequence.

Daytime temperatures are hot in summer, particularly in July and August. The highest temperatures are associated with fair skies, light winds, and comparatively low humidities. There is little variety in the day-to-day weather during July and August. Air conditioning is recommended for maximum comfort indoors or while traveling.

The spring and fall seasons are very pleasant at Waco. Temperatures are comfortable. Cloudiness and showers are more frequent in the spring than in the fall. The average first occurrence of 32 degrees Fahrenheit is late November and the average last occurrence is in mid March.

Station History

WACO, TX

NAME	Begin Date	End Date	Latitude	Longitude	Elevation Feet	Relocation	Platform
WACO BLACKLAND FIELD	1943-02-10	1945-01-01	31° 37'	-97° 13'			AIRWAYS
WACO MUNICIPAL AP	1953-05-31	1973-01-01	31° 37'	-97° 13'	515		AIRWAYS, COOP
WACO RICH FIELD	1943-01-01	1943-02-10	31° 37'	-97° 13'			AIRWAYS
WACO BLACKLAND FIELD	1945-01-01	1946-09-01	31° 37'	-97° 13'			AIRWAYS, UPPERAIR
WACO BLACKLAND FIELD	1946-09-01	1951-01-01	31° 37'	-97° 13'	509		AIRWAYS, COOP, UPPERAIR
WACO MADISON COOPER AP	1973-03-19	1989-04-25	31° 37'	-97° 13'	501		COOP, WXSVC
WACO MUNICIPAL AP	1951-04-13	1952-03-01	31° 37'	-97° 13'	515		AIRWAYS, COOP, UPPERAIR
WACO MUNICIPAL AP	1952-04-30	1953-05-31	31° 37'	-97° 13'	515		AIRWAYS, COOP, UPPERAIR
WACO MUNICIPAL AP	1973-01-01	1973-03-19	31° 37'	-97° 13'	501		COOP, WXSVC
WACO REGIONAL AP	1993-07-01	2003-10-31	31° 36'	-97° 13'	500		ASOS, COOP
WACO MUNICIPAL AP	1952-03-01	1952-04-30	31° 37'	-97° 13'	515		AIRWAYS, COOP, MILITARY, UPPERAIR
WACO RICH FIELD	1929-03-01	1943-01-01	31° 33'	-97° 10'			AIRWAYS
WACO REGIONAL AP	2003-10-31	Present	31° 37'	-97° 13'	500		ASOS, COOP
WACO MADISON COOPER AP	1989-04-25	1993-07-01	31° 37'	-97° 13'	500		COOP, WXSVC
WACO BLACKLAND FIELD	1951-01-01	1951-04-13	31° 37'	-97° 13'	515		AIRWAYS, COOP, UPPERAIR

Element History

Element	Begin Date	End Date	Frequency	Time Of Observation	Equipment *	Equipment * Modifications	Equipment Exposure
PRECIP	1993-07-01	Present	HOURLY	2400	TB	RCRD	
TEMP	1929-03-01	1963-09-01	DAILY	2400			
TEMP	1989-04-25	1993-07-01	DAILY	2400	HYGR		
PRECIP	1993-07-01	Present	DAILY	2400	TB	RCRD	
PRECIP	1989-04-25	1993-07-01	HOURLY	2400	UNIV	RCRD	
PRECIP	1963-09-01	1989-04-25	HOURLY	2400	UNIV	RCRD	
TEMP	1963-09-01	1989-04-25	DAILY	2400			
TEMP	1993-07-01	Present	DAILY	2400	HYGR		
MAX/MINTEM	1963-09-01	1989-04-25	ONCE DAILY	2400	PALMER		
PRECIP	1989-04-25	1993-07-01	DAILY	2400	UNIV	RCRD	
MAX/MINTEM	1993-07-01	2003-10-31	ONCE DAILY	0700	PALMER		
MAX/MINTEM	1929-03-01	1963-09-01	ONCE DAILY	2400	PALMER		
PRECIP	1929-03-01	1963-09-01	DAILY	2400	UNIV	RCRD	
PRECIP	1963-09-01	1989-04-25	DAILY	2400	UNIV	RCRD	
MAX/MINTEM	1989-04-25	1993-07-01	ONCE DAILY	2400	PALMER		

* 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

TDD : (828) 271-4010

Email : ncdc.info@noaa.gov

NOAA/National Climatic Data Center

Attn: User Engagement & Services Branch

151 Patton Avenue

Asheville, NC 28801-5001

Visit our Web Site for other weather data: www.ncdc.noaa.gov