

2002

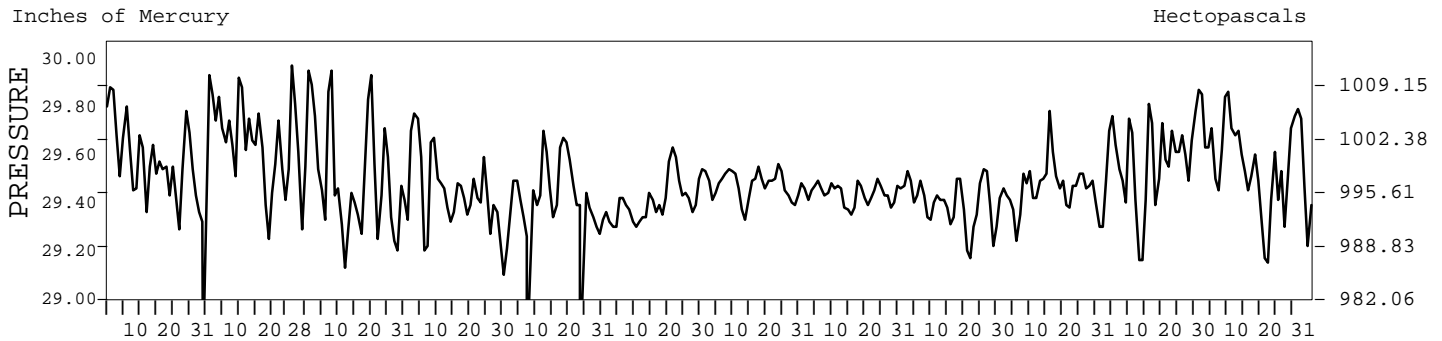
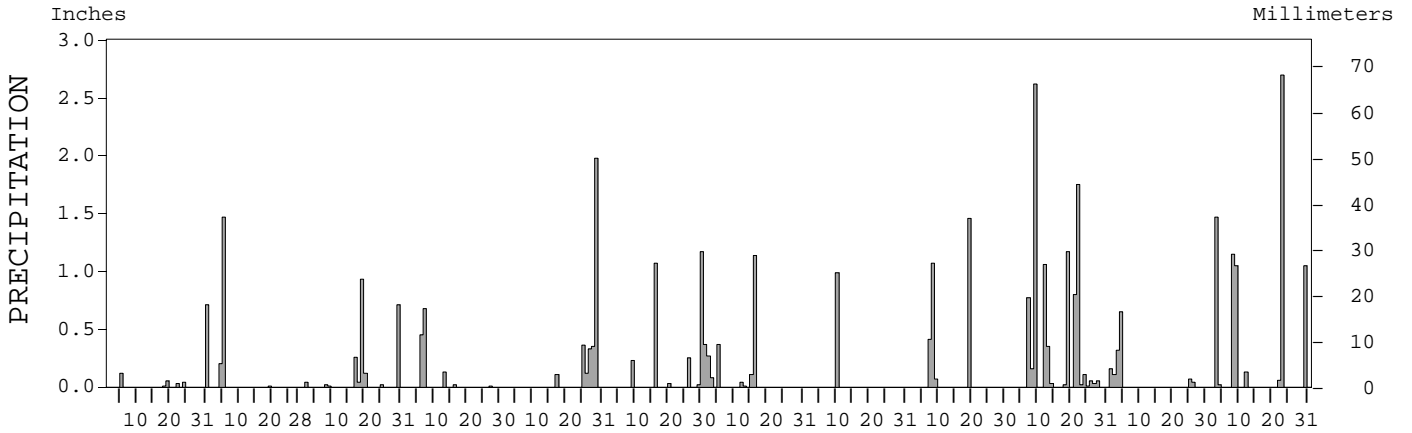
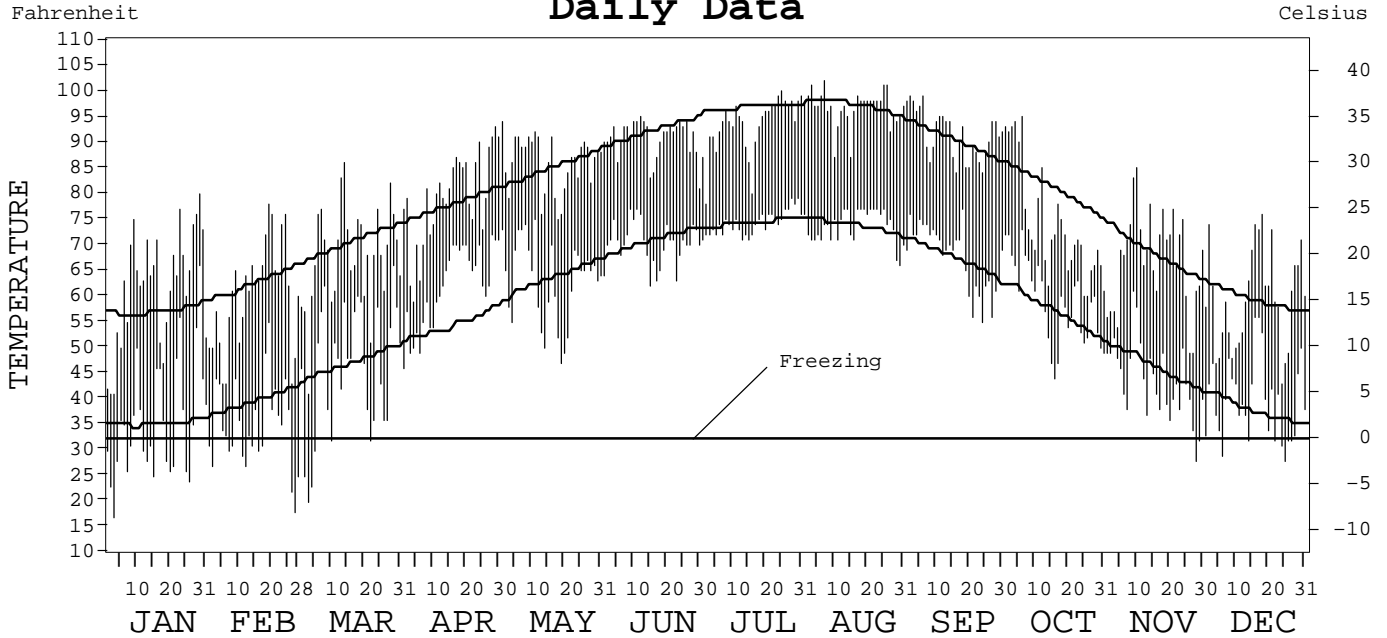
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-522

WACO,
TEXAS (ACT)

Daily Data



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Thomas R. Karl

NATIONAL
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NATIONAL
ENVIRONMENTAL SATELLITE, DATA,
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2002

WACO, TX (ACT)

LATITUDE: 31° 36' 41" N LONGITUDE: 97° 13' 43" W ELEVATION (FT): GRND: 513 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	62.0	60.1	67.9	79.4	86.0	90.8	93.3	96.7	91.4	74.1	67.3	59.6	77.4	
	HIGHEST DAILY MAXIMUM	80	78	86	93	94	95	100	102	99	95	85	76	102	
	DATE OF OCCURRENCE	29	19	14	29	01	12	25	07	02+	06	10	18	AUG 07	
	MEAN DAILY MINIMUM	35.6	34.8	45.5	61.8	63.0	70.2	74.3	73.7	67.6	58.9	43.5	39.6	55.7	
	LOWEST DAILY MINIMUM	17	18	20	46	47	62	71	66	55	44	28	28	17	
	DATE OF OCCURRENCE	03	27	03	01	19	15	15+	30	24	16	28	25	JAN 03	
	AVERAGE DRY BULB	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	
	MEAN WET BULB		41.3	50.9		67.0		75.2	73.9	69.3	61.6	48.2	45.8		
	MEAN DEW POINT		33.2	44.6		62.7		71.7	68.7	64.1	58.2	41.5	41.3		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	4	9	23	25	29	18	6	0	0	0	114
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	15	12	6	0	0	0	0	0	0	0	2	7	42	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	502	483	276	39	4	0	0	0	0	81	295	468	2148	
	COOLING DEGREE DAYS	10	2	29	215	307	472	589	634	442	134	14	0	2848	
RH	MEAN (PERCENT)	65	62	68	75	70	71	71	61	64	79	65	76	69	
	HOUR 00 LST	72	70	75	80	82	81	81	72	73	84	74	81	77	
	HOUR 06 LST	80	80	80	86	90	92	92	84	84	88	83	86	85	
	HOUR 12 LST	55	49	61	67	58	55	58	48	50	71	50	68	58	
	HOUR 18 LST	54	46	59	64	53	54	55	43	47	72	54	71	56	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	0	0	1	1	0	0	0	0	2	0	2	8	
	THUNDERSTORMS	2	1	2	3	8	3	1	1	2	7	0	2	32	
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.)		29.67	29.51	29.45		29.41	29.47	29.44	29.39	29.47	29.59	29.54		
	MEAN SEA-LEVEL PRESS. (IN.)		30.22	30.05			29.99	29.96	29.91	30.00	30.13	30.08			
WINDS	RESULTANT SPEED (MPH)		0.8	1.9				3.1	4.7	0.4	2.0	1.5	2.0		
	RES. DIR. (TENS OF DEGS.)		27	17				21	15	10	05	31	24		
	MEAN SPEED (MPH)	10.2	9.9	12.9	11.2	11.5	8.1	8.6	9.0	7.9	7.6	9.2	9.5	9.6	
	PREVAIL. DIR. (TENS OF DEGS.)	18	18	19	18	18	17	19	18	36	01	01	18	18	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	29	33	41	30	30	37	24	31	32	30	28	29	41	
	DIR. (TENS OF DEGS.)	32	35	01	29	15	12	20	18	12	30	22	32	01	
	DATE OF OCCURRENCE	31	26	30	07	28+	26	28+	14	06	19	18	24+	MAR 30	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	35	40	52	37	43	47	31	35	37	33	33	37	52	
DIR. (TENS OF DEGS.)	31	36	01	28	27	11	20	18	12	29	22	21	01		
DATE OF OCCURRENCE	31+	26	30	07	25	26	28	14	06	19	18	18	MAR 30		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	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	
	GREATEST 24-HOUR (IN.)	0.71	1.52	1.03	0.68	1.98	1.17	1.23	0.99	1.48	2.74	0.65	2.74	2.74	
	DATE OF OCCURRENCE	31	04-05	19-20	07	29	30	15-16	10	07-08	08-09	04	22-23	DEC 22-23	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	6	3	9	5	6	6	8	1	4	16	6	8	78	
PRECIPITATION ≥ 0.10	2	2	4	3	6	4	5	1	3	9	4	6	49		
PRECIPITATION ≥ 1.00	0	1	0	0	1	2	1	0	2	4	0	5	16		
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

WACO, TX (ACT)

LATITUDE: 31° 36' 41" N LONGITUDE: 97° 13' 43" W ELEVATION (FT): GRND: 513 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	39	57.0	61.5	69.2	77.8	84.6	92.0	97.0	96.9	89.7	80.0	68.3	59.5	77.8
	HIGHEST DAILY MAXIMUM	60	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.	55	77.7	81.0	85.6	90.3	93.7	98.6	102.6	103.6	99.1	93.0	84.8	78.1	90.7
	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	39	35.7	39.5	46.8	55.8	64.0	71.3	74.9	74.2	67.6	57.0	46.5	38.2	56.0
	LOWEST DAILY MINIMUM	60	-5	4	15	27	37	52	60	53	40	25	17	-4	-5
	YEAR OF OCCURRENCE		1949	1985	1948	1975	1981	1964	1994	1992	1983	1993	1976	1989	JAN 1949
	MEAN OF EXTREME MINS.	55	18.7	22.9	28.6	38.0	49.7	61.0	68.1	66.3	52.6	40.4	29.3	22.1	41.5
	NORMAL DRY BULB	30	45.2	49.4	58.2	67.1	74.3	81.5	85.6	85.6	78.6	68.5	57.7	48.3	66.7
	MEAN DRY BULB	55	46.6	50.8	58.1	66.9	74.4	81.7	85.8	85.6	78.8	68.6	57.1	49.1	67.0
	MEAN WET BULB	51	41.8	45.3	51.3	59.3	67.0	72.0	73.6	73.1	69.1	60.8	51.1	43.8	59.0
	MEAN DEW POINT	51	36.3	39.7	45.0	54.0	63.1	68.1	68.8	67.8	64.2	55.6	45.6	38.3	53.9
NORMAL NO. DAYS WITH:															
MAXIMUM ≥ 90°	30	0.0	*	0.4	1.5	7.5	22.1	28.4	28.5	17.6	4.2	0.1	0.0	110.3	
MAXIMUM ≤ 32°	30	1.2	0.3	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.1	
MINIMUM ≤ 32°	30	13.6	7.5	2.1	0.2	0.0	0.0	0.0	0.0	0.0	*	1.9	9.7	35.0	
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	71	69	66	68	71	67	60	60	67	67	71	71	67
	HOUR 00 LST	30	77	76	73	75	79	75	68	67	75	75	78	77	75
	HOUR 06 LST	30	82	82	81	84	87	86	82	81	85	84	84	82	83
	HOUR 12 LST	30	63	60	58	58	60	55	48	47	54	55	59	61	56
	HOUR 18 LST	30	61	56	51	53	56	51	44	43	52	56	62	63	54
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI) THUNDERSTORMS	59	2.8	2.1	1.2	0.8	0.7	0.2	0.0	0.0	0.2	0.8	2.0	2.6	13.4
		59	1.3	2.6	3.8	5.5	7.9	5.9	3.9	3.9	3.8	3.2	2.1	1.5	45.4
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)	29	29.60	29.55	29.44	29.41	29.37	29.40	29.45	29.45	29.45	29.51	29.54	29.59	29.48
	MEAN SEA-LEVEL PRES. (IN)	51	30.14	30.09	29.99	29.95	29.91	29.92	29.96	29.96	29.97	30.04	30.09	30.12	30.01
WINDS	MEAN SPEED (MPH)	42	11.5	11.8	12.5	12.6	11.7	11.0	10.7	9.8	9.6	9.9	10.7	10.8	11.1
	PREVAIL.DIR(TENS OF DEGS)	28	18	18	18	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	9	41	43	41	55	47	48	40	37	36	48	47	35	55
	DIR. (TENS OF DEGS)		32	31	01	28	02	36	03	04	29	29	12	32	28
	YEAR OF OCCURRENCE		1994	1998	2002	1999	1994	1997	1997	1999	1995	2000	2001	2000	APR 1999
	MAXIMUM 5-SECOND:														
SPEED (MPH)	9	47	52	58	69	58	63	47	45	55	60	55	43	69	
DIR. (TENS OF DEGS)		32	28	28	27	02	35	04	16	31	28	12	20	27	
YEAR OF OCCURRENCE		1994	1998	1999	1999	1994	1997	1997	1995	1995	2000	2001	2000	APR 1999	
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)	60	6.10	7.91	6.84	13.37	15.00	12.06	8.58	8.91	7.29	10.51	7.76	9.81	15.00
	YEAR OF OCCURRENCE		1998	1997	1945	1957	1965	1961	1971	1974	1970	1984	2000	1997	MAY 1965
	MINIMUM MONTHLY (IN)	60	0.03	0.07	0.04	0.12	0.55	0.27	0.00	T	0.00	0.00	0.13	0.04	0.00
	YEAR OF OCCURRENCE		1971	1999	1956	1983	1998	1953	1993	1952	1956	1952	1970	1950	JUL 1993
	MAXIMUM IN 24 HOURS (IN)	60	4.79	3.97	3.17	5.09	7.18	4.21	4.49	4.80	4.57	5.72	4.26	7.98	7.98
	YEAR OF OCCURRENCE		1998	1997	1990	1957	1953	1947	1973	1958	1957	1974	1952	1997	DEC 1997
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	6.6	6.5	7.3	7.0	8.6	6.7	4.1	5.3	6.9	6.0	6.6	6.1	77.7	
PRECIPITATION ≥ 1.00	30	0.3	0.5	0.6	1.1	1.5	1.1	0.6	0.5	1.2	1.2	0.7	0.4	9.7	
SNOWFALL	NORMAL (IN)	30	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.*	0.2	0.*	1.2	
	MAXIMUM MONTHLY (IN)	53	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 IN 24 HOURS (IN)	53	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)	47	7	5	1	0	0	0	0	0	0	0	1	1	7
	YEAR OF OCCURRENCE		1949	1966	1989								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) 2002 WACO, TX (ACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	3.48	1.52	3.04	5.41	3.16	7.10	4.89	0.36	5.24	9.36	0.66	0.76	44.98
1974	1.33	1.21	0.61	3.30	2.21	1.07	0.73	8.91	6.80	6.76	2.54	1.92	37.39
1975	1.40	2.94	1.09	4.58	13.21	2.84	2.77	0.72	2.27	2.40	0.40	1.83	36.45
1976	1.74	0.33	1.60	6.54	4.99	3.23	7.40	0.24	5.66	5.19	0.66	2.50	40.08
1977	1.83	3.67	2.90	7.38	1.71	0.78	0.21	1.96	0.26	1.50	2.43	0.15	24.78
1978	1.03	2.83	2.46	2.37	2.88	1.54	0.26	1.42	0.53	1.87	4.57	2.01	23.77
1979	1.99	1.97	4.31	1.38	9.68	4.70	5.01	4.58	2.51	1.94	0.33	3.97	42.37
1980	2.26	1.83	2.13	4.03	4.47	0.34	0.01	0.16	2.03	0.76	2.29	2.70	23.01
1981	0.85	1.80	2.97	1.21	3.69	7.23	0.16	2.14	3.61	8.41	0.99	0.50	33.56
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
POR= 117 YRS	2.05	2.37	2.69	3.78	4.54	3.04	1.97	2.15	3.00	2.90	2.59	2.69	33.77

WBAN : 13959

AVERAGE TEMPERATURE (°F) 2002 WACO, TX (ACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	42.3	47.2	60.4	61.1	71.6	77.3	83.8	84.4	79.1	69.9	63.2	50.0	65.9
1974	45.3	53.4	64.6	67.4	77.2	80.1	86.8	84.4	71.8	69.8	56.7	46.2	67.0
1975	48.5	47.0	54.5	64.1	72.0	79.7	82.0	84.6	77.2	70.5	59.8	50.5	65.9
1976	46.8	59.0	60.5	66.2	70.7	80.4	82.2	85.6	77.9	60.5	50.1	45.5	65.5
1977	38.0	52.7	59.8	67.2	76.5	84.6	89.1	87.9	85.7	71.4	60.2	51.7	68.7
1978	37.8	42.0	56.4	70.2	76.5	83.7	89.2	86.3	81.4	69.5	57.3	46.5	66.4
1979	36.4	44.5	58.4	64.9	69.5	78.9	82.3	81.8	75.5	70.4	52.4	49.3	63.7
1980	46.7	48.7	56.0	62.5	73.5	85.2	89.2	87.5	81.2	65.7	55.9	51.4	67.0
1981	46.6	50.1	55.7	69.9	72.6	81.7	85.8	83.9	77.5	68.9	58.8	48.7	66.7
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
POR= 106 YRS	47.2	50.4	58.7	66.8	74.7	82.3	85.9	85.7	79.1	68.9	57.4	49.2	67.2

HEATING DEGREE DAYS (base 65°F) 2002 WACO, TX (ACT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0	0	0	22	118	460	605	322	145	52	0	0	1724
1974-75	0	0	13	14	274	578	507	495	343	120	0	0	2344
1975-76	0	0	2	27	230	462	558	200	204	38	6	0	1727
1976-77	0	0	0	205	446	596	827	345	175	21	2	0	2617
1977-78	0	0	0	22	173	417	839	639	284	19	19	0	2412
1978-79	0	0	0	23	256	573	880	570	217	59	30	0	2608
1979-80	0	0	0	43	384	483	562	475	297	119	6	0	2369
1980-81	0	0	2	98	305	427	561	417	285	27	13	0	2135
1981-82	0	0	6	75	194	498	566	486	202	103	3	0	2133
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-	0	0	0	81	295	468							

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COOLING DEGREE DAYS (base 65°F) 2002 WACO, TX (ACT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1973	0	0	12	60	225	375	587	611	429	182	72	0	2553
1974	0	5	138	128	382	461	683	610	225	169	31	2	2834
1975	2	0	26	100	227	448	533	618	376	206	83	19	2638
1976	0	33	72	81	193	469	542	644	395	73	5	0	2507
1977	0	7	20	94	366	593	754	719	628	224	34	13	3452
1978	2	0	21	181	383	568	757	666	496	169	30	6	3279
1979	0	1	21	61	177	426	544	529	320	220	17	1	2317
1980	0	6	25	49	278	611	758	705	498	126	39	12	3107
1981	0	5	4	184	256	509	648	594	384	207	15	0	2806
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

SNOWFALL (inches) 2002 WACO, TX (ACT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1973-74	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
1974-75	0.0	0.0	0.0	0.0	0.0	T	1.0	0.8	0.0	0.0	0.0	0.0	1.8
1975-76	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1976-77	0.0	0.0	0.0	0.0	0.8	0.0	1.8	0.0	0.0	0.0	0.0	0.0	2.6
1977-78	0.0	0.0	0.0	0.0	T	0.0	2.2	0.2	T	0.0	0.0	0.0	2.4
1978-79	0.0	0.0	0.0	0.0	0.0	0.2	T	T	0.0	0.0	0.0	0.0	0.2
1979-80	0.0	0.0	0.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1980-81	0.0	0.0	0.0	0.0	0.8	0.0	T	1.0	0.0	0.0	0.0	0.0	1.8
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	6.0	T	T	0.0	0.0	0.0	6.0
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	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	0.0	0.0	0.0	0.0	0.0	T
1996-97													
1997-98													
1998-99													
1999-00													
2000-01													
2001-02													
2002-													
POR= 53 YRS	0.0	T	0.0	T	0.1	0.1	0.8	0.4	0.1	T	T	0.0	1.5

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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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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2002
WACO,
TEXAS (ACT)

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 LOCATION

WACO, TEXAS

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
						GROUND											
						SEA LEVEL	WIND INSTRUMENT	EXTREME THERMOMETER	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE	HYGROMETER			
*NOTES:																	
AIRPORT																	
3-1/2 miles West of Post Office CAA Bldg., Rich Field	3/11/29	7/26/39	3 mi. W	31°33'	97°11'	575										Climatological data are from cooperative observer's records until 3/1/40.	
Administration Building Rich Field	7/26/39	2/06/40	200 ft. NW	31°33'	97°11'	575										Observations by Weather Bureau personnel.	
Administration Building Rich Field	2/06/40	2/10/43		31°33'	97°11'	575	39	5	5			4	4				
Operations Building Blackland Field	2/10/43	4/13/51	5 mi. NNW	31°37'	97°13'	500	30	5	5			4	4				
Municipal Airport Administration Building	4/13/51	3/19/73	216 ft. N	31°37'	97°13'	b501	d23	s5	s5			c4	3	a5		a. Commissioned 3200 feet NNW 11/18/63. b. 500 feet to 11/18/63. c. 3 feet to 8/11/59. d. 78 feet to 2/18/64. s. Standby status after 11/18/63.	
Weather Service Bldg. Madison Cooper Airport	3/19/73	07/01/93	600 ft. NE	31°37'	97°13'	501	e23	NA	f3 g6	NA	5	5	5	e5 h5	NA	e. Same site as prior to f. Sling psychrometer. g. Type change 2/10/83. h. Type change 10/1/85.	
Waco Regional Airport	07/01/93	Present	NA	31°37'	97°14'	i513								S		ASOS commissioned 07/01/93 i. Ground Elevation	

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* NOTES: For earlier station history information see previous edition.