

1999

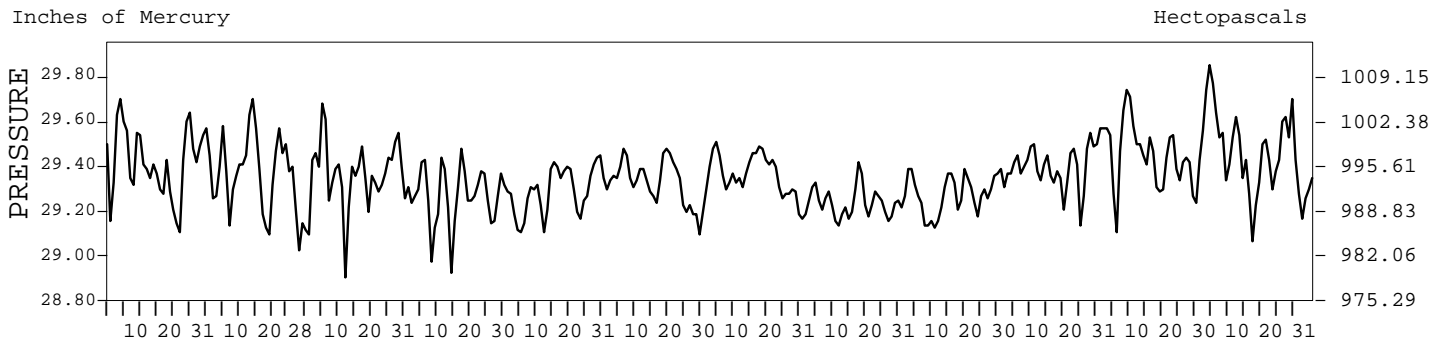
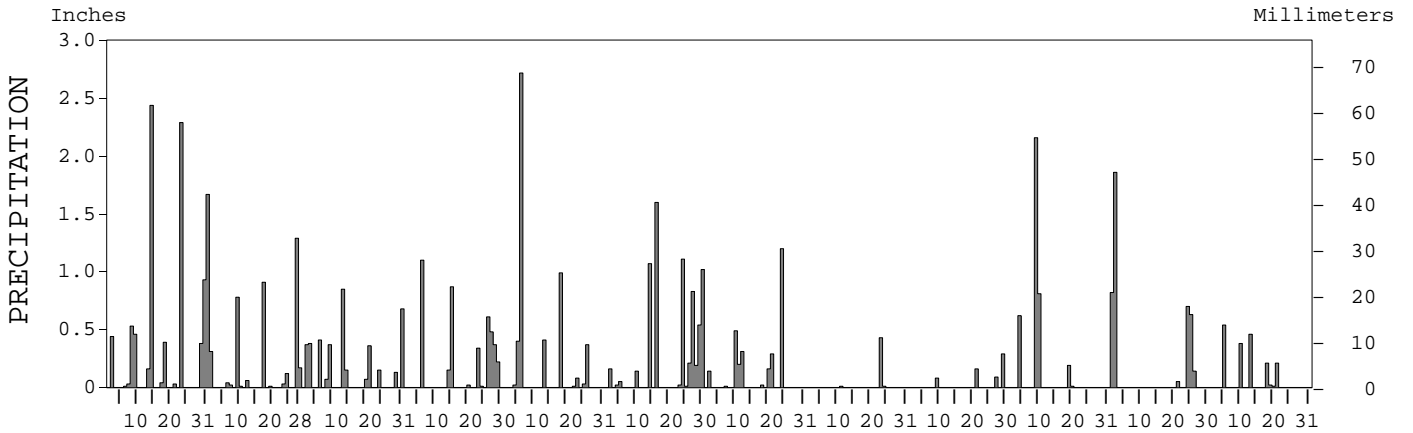
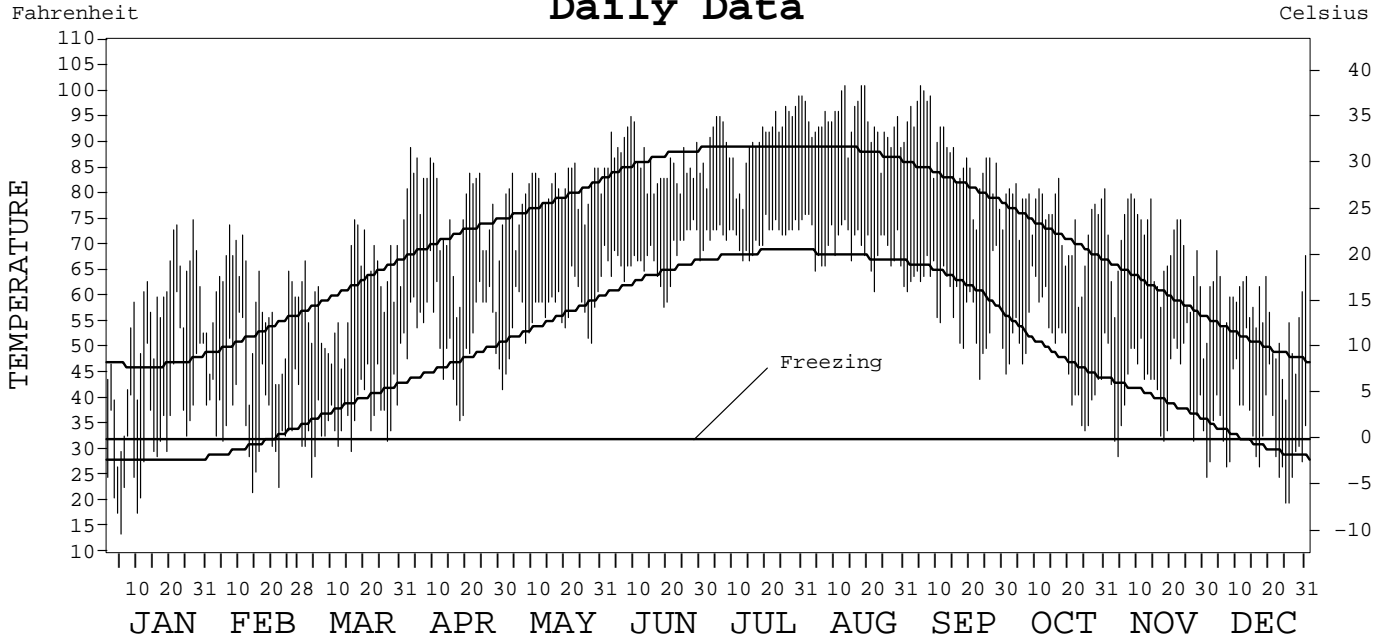
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-4780

CHATTANOOGA,
TENNESSEE (CHA)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1999

CHATTANOOGA, TN (CHA)

LATITUDE: 35° 02' 00" N LONGITUDE: 85° 12' 00" W ELEVATION (FT): GRND: 689 BARO: 689 TIME ZONE: EASTERN (UTC + 5) WBAN: 13882

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	55.1	58.4	60.6	75.9	80.4	86.2	90.7	93.7	87.7	75.1	68.4	56.7	74.1	
	HIGHEST DAILY MAXIMUM	75	74	75	89	86	95	99	101	101	83	80	69	101	
	DATE OF OCCURRENCE	27	07	17	03	23	09	31+	19+	05	17	08	04	SEP 05	
	MEAN DAILY MINIMUM	35.1	37.4	36.8	53.1	56.8	67.3	71.9	69.7	59.1	49.2	42.5	33.4	51.0	
	LOWEST DAILY MINIMUM	14	22	25	36	42	58	67	61	44	34	29	20	14	
	DATE OF OCCURRENCE	05	14	04	18	01	19	15+	22	23	25	04	26+	JAN 05	
	AVERAGE DRY BULB	45.1	47.9	48.7	64.5	68.6	76.8	81.3	81.7	73.4	62.2	55.5	45.1	62.6	
	MEAN WET BULB	41.7	42.9	42.2	57.3	61.8	69.8	74.8	71.2	62.9	55.7	49.1	40.3	55.8	
	MEAN DEW POINT	37.0	36.3	34.5	51.3	57.1	66.5	72.3	66.1	55.6	50.7	43.5	34.1	50.4	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	6	21	27	11	0	0	0	0	65
	MAXIMUM ≤ 32°	2	0	0	0	0	0	0	0	0	0	0	0	0	2
	MINIMUM ≤ 32°	13	8	7	0	0	0	0	0	0	0	4	16	48	
	MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	613	470	497	96	9	0	0	0	8	121	279	611	2704	
	COOLING DEGREE DAYS	3	0	0	88	130	360	512	525	267	42	0	0	1927	
RH	MEAN (PERCENT)	76	69	64	66	70	74	78	64	59	72	71	70	69	
	HOUR 01 LST	85	80	72	76	88	87	91	80	74	86	84	80	82	
	HOUR 07 LST	85	82	85	84	88	88	93	86	82	88	90	85	86	
	HOUR 13 LST	65	57	52	53	51	60	65	44	41	51	50	52	53	
	HOUR 19 LST	70	58	47	53	54	63	70	50	42	66	66	65	59	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	1	0	4	0	1	5	0	0	2	3	0	18	
	THUNDERSTORMS	5	2	3	7	6	11	10	4	2	2	1	1	54	
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.)	29.41	29.36	29.34	29.26	29.29	29.32	29.35	29.24	29.27	29.41	29.45	29.42	29.34	
	MEAN SEA-LEVEL PRESS. (IN.)	30.16	30.10	30.08	29.98	30.01	30.03	30.06	29.99	30.14	30.19	30.17			
WINDS	RESULTANT SPEED (MPH)	1.5	1.3	2.9	2.2	0.4	0.5	0.3	1.5	2.3	1.1	1.6	1.2	0.8	
	RES. DIR. (TENS OF DEGS.)	24	29	36	24	25	18	34	01	36	34	28	28	32	
	MEAN SPEED (MPH)	5.7	5.6	6.5	6.4	4.2	4.6	3.1	4.6	4.8	4.3	4.0	4.6	4.9	
	PREVAIL. DIR. (TENS OF DEGS.)	19	20	01	19	17	19	19	01	01	01	01	18	19	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	25	29	30	26	29	29	36	26	22	24	24	36	
	DIR. (TENS OF DEGS.)	16	23	28	34	35	32	01	25	01	33	32	23	25	
	DATE OF OCCURRENCE	22	07	03	23	24	29	24	23	22+	23+	02	10	AUG 23	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	35	38	35	38	35	34	36	47	33	29	32	29	47	
DIR. (TENS OF DEGS.)	16	28	28	34	36	33	01	25	01	15	33	25	25		
DATE OF OCCURRENCE	22	28	03	23	24	29	24	23	21+	08	02	10	AUG 23		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	9.80	3.75	3.99	4.17	5.03	6.97	2.82	0.45	0.62	3.79	4.20	1.83	47.42	
	GREATEST 24-HOUR (IN.)	2.60	1.46	0.91	1.10	3.02	1.60	1.20	0.44	0.29	2.33	2.68	0.54	3.02	
	DATE OF OCCURRENCE	13-14	27-28	13-14	06	05-06	16	24	23-24	29	09-10	01-02	05	MAY 05-06	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	14	12	12	10	9	14	9	3	4	5	6	7	105	
PRECIPITATION ≥ 0.10	10	6	10	8	5	10	7	1	2	4	5	5	73		
PRECIPITATION ≥ 1.00	3	1	0	1	1	4	1	0	0	1	1	0	13		
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

CHATTANOOGA, TN (CHA)

LATITUDE: 35° 02' 00" N LONGITUDE: 85° 12' 00" W ELEVATION (FT): GRND: 689 BARO: 689 TIME ZONE: EASTERN (UTC + 5) WBAN: 13882

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	46.8	52.4	61.8	71.4	78.5	86.4	89.0	88.2	82.1	72.0	61.1	50.8	70.0
	MEAN DAILY MAXIMUM	52	49.1	53.9	61.9	72.4	79.9	86.7	89.6	88.7	82.7	72.6	60.9	51.7	70.8
	HIGHEST DAILY MAXIMUM	60	78	79	87	93	99	104	106	105	102	94	84	78	106
	YEAR OF OCCURRENCE		1949	1989	1963	1942	1941	1952	1952	1947	1954	1954	1961	1951	JUL 1952
	MEAN OF EXTREME MAXS.	52	67.3	71.8	79.3	86.5	89.6	94.8	96.9	95.9	92.9	84.4	76.2	69.0	83.7
	NORMAL DAILY MINIMUM	30	28.0	31.1	39.0	46.8	55.4	63.9	68.3	67.7	62.6	48.9	39.9	31.2	48.6
	MEAN DAILY MINIMUM	52	30.1	32.6	39.2	47.4	56.1	64.5	68.8	67.7	61.3	48.3	38.3	32.2	48.9
	LOWEST DAILY MINIMUM	60	-10	1	8	25	34	41	51	50	36	22	4	-2	-10
	YEAR OF OCCURRENCE		1985	1958	1960	1992	1971	1972	1972	1946	1967	1952	1950	1983	JAN 1985
	MEAN OF EXTREME MINS.	52	11.4	15.2	23.0	31.6	41.4	53.2	59.8	59.0	47.5	32.5	22.8	15.7	34.4
	NORMAL DRY BULB	30	37.4	41.8	50.4	59.1	66.9	75.2	78.7	77.9	72.4	60.4	50.5	41.1	59.3
	MEAN DRY BULB	52	39.6	43.3	50.5	59.9	68.0	75.5	79.1	78.3	71.9	60.4	49.5	42.1	59.8
	MEAN WET BULB	16	36.8	40.0	45.5	53.0	61.9	69.1	72.5	66.8	65.4	55.1	46.1	39.5	54.3
	MEAN DEW POINT	16	31.2	33.7	38.4	46.2	57.5	65.7	69.2	63.8	61.9	50.8	41.1	34.2	49.5
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.2	1.8	8.3	15.1	12.7	4.1	0.1	0.0	0.0	42.3	
MAXIMUM ≤ 32°	30	3.0	1.1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	1.0	5.1	
MINIMUM ≤ 32°	30	20.9	16.0	8.1	1.7	0.0	0.0	0.0	0.0	0.0	1.1	8.6	17.7	74.1	
MINIMUM ≤ 0°	30	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	
H/C	NORMAL HEATING DEG. DAYS	30	856	650	453	196	57	0	0	0	9	190	435	741	3587
	NORMAL COOLING DEG. DAYS	30	0	0	0	19	116	306	425	400	231	47	0	0	1544
RH	NORMAL (PERCENT)	30	71	68	66	64	72	73	75	76	77	75	74	73	72
	HOUR 01 LST	30	77	76	75	76	86	87	87	89	89	88	83	79	83
	HOUR 07 LST	30	81	80	82	83	89	90	91	92	90	86	82	86	86
	HOUR 13 LST	30	62	58	54	49	55	56	59	59	60	55	58	62	57
	HOUR 19 LST	30	64	58	53	48	57	59	63	65	67	68	68	68	62
S	PERCENT POSSIBLE SUNSHINE	66	43	49	53	61	65	65	62	63	64	63	53	44	57
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	69	3.0	1.6	1.7	1.5	2.3	2.0	2.0	2.5	3.6	5.6	3.8	3.2	32.8
	THUNDERSTORMS	69	1.3	1.9	3.7	4.8	7.2	9.4	11.1	9.0	4.1	1.3	1.3	0.6	55.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1	1.0	2.0	4.0		13.0	10.0								
PARTLY CLOUDY	1		2.0	1.0		5.0	6.0								
CLOUDY	1	8.0	6.0	8.0		2.0	5.0								
PR	MEAN STATION PRESSURE (IN)	27	29.40	29.36	29.31	29.29	29.27	29.28	29.31	29.32	29.34	29.38	29.39	29.41	29.34
	MEAN SEA-LEVEL PRES. (IN)	16	30.15	30.11	30.06	30.00	30.00	29.99	30.03	30.03	30.04	30.10	30.14	30.17	30.07
WINDS	MEAN SPEED (MPH)	47	6.9	7.2	7.7	7.3	5.8	5.2	4.9	4.4	4.7	4.8	5.8	6.3	5.9
	PREVAIL. DIR (TENS OF DEGS)	31	36	36	18	18	18	18	18	18	18	18	18	18	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	30	31	44	30	32	34	44	43	26	24	24	29	44
	DIR. (TENS OF DEGS)		26	02	32	32	31	30	30	06	01	02	32	22	30
	YEAR OF OCCURRENCE		1996	1998	1997	1996	1996	1997	1997	1996	1999	1997	1999	1996	JUL 1997
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	4	44	38	54	40	39	41	53	47	33	31	32	38	54
DIR. (TENS OF DEGS)		30	15	31	32	31	29	31	25	01	02	33	21	31	
YEAR OF OCCURRENCE		1997	1998	1997	1996	1996	1997	1997	1999	1999	1997	1999	1996	MAR 1997	
PRECIPITATION	NORMAL (IN)	30	4.89	4.81	6.03	4.31	4.37	3.52	4.85	3.53	4.15	3.22	4.61	5.17	53.46
	MAXIMUM MONTHLY (IN)	60	12.28	11.03	16.32	11.92	9.21	9.40	11.93	7.54	14.18	9.91	13.59	13.68	16.32
	YEAR OF OCCURRENCE		1947	1944	1980	1964	1979	1949	1994	1975	1977	1949	1948	1961	MAR 1980
	MINIMUM MONTHLY (IN)	60	0.90	0.62	1.17	0.44	0.54	0.63	0.20	0.45	0.34	0.22	0.93	0.86	0.20
	YEAR OF OCCURRENCE		1986	1941	1967	1942	1941	1988	1957	1999	1941	1991	1953	1965	JUL 1957
	MAXIMUM IN 24 HOURS (IN)	60	4.44	4.39	6.53	3.36	3.47	4.85	5.77	3.70	6.62	4.19	4.56	5.25	6.62
	YEAR OF OCCURRENCE		1949	1995	1973	1983	1979	1949	1979	1941	1977	1995	1948	1942	SEP 1977
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	11.2	9.8	11.6	9.5	10.2	10.1	11.5	10.0	8.5	7.1	9.6	10.7	119.8	
PRECIPITATION ≥ 1.00	30	1.4	1.5	1.5	1.3	1.2	0.9	1.3	0.9	1.2	1.0	1.5	1.5	15.2	
SNOWFALL	NORMAL (IN)	30	2.6	1.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.7	4.8
	MAXIMUM MONTHLY (IN)	66	10.2	10.4	20.0	2.8	T	T	0.0	0.0	0.0	T	2.8	9.1	20.0
	YEAR OF OCCURRENCE		1988	1960	1993	1987	1944	1995				1993	1950	1963	MAR 1993
	MAXIMUM IN 24 HOURS (IN)	66	10.2	8.7	20.0	2.8	T	T	0.0	0.0	0.0	T	2.8	8.9	20.0
	YEAR OF OCCURRENCE		1988	1960	1993	1987	1944	1995				1993	1950	1963	MAR 1993
	MAXIMUM SNOW DEPTH (IN)	48	47	6	19	2	0	0	0	0	0	0	2	3	47
	YEAR OF OCCURRENCE		1948	1960	1993	1987							1950	1963	JAN 1948
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	0.7	0.3	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4	

PRECIPITATION (inches) 1999 CHATTANOOGA, TN (CHA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	2.45	1.80	4.08	7.36	2.76	4.69	3.88	2.92	2.92	5.56	2.03	4.30	44.75
1971	5.19	8.50	6.71	2.26	2.17	2.71	7.28	1.91	3.68	2.11	1.93	6.56	51.01
1972	8.64	4.53	5.72	3.46	6.47	3.95	7.53	5.31	3.19	4.80	3.81	7.09	64.50
1973	5.09	3.76	13.80	5.17	6.37	4.58	6.93	2.58	5.38	3.69	5.87	8.34	71.56
1974	8.00	5.68	3.44	3.09	6.53	1.19	4.74	6.10	1.30	1.71	5.04	4.51	51.33
1975	5.63	6.34	10.44	1.03	4.45	3.92	2.18	7.54	10.31	6.28	5.00	4.98	68.10
1976	4.32	2.10	5.41	1.02	5.86	6.76	5.57	1.38	3.35	3.55	2.92	5.54	47.78
1977	3.14	2.98	8.39	9.10	2.55	2.44	1.01	3.53	14.18	6.21	8.66	2.37	64.56
1978	5.79	0.72	4.71	4.78	4.17	2.59	0.80	4.17	1.62	0.32	2.84	7.57	40.08
1979	5.44	3.85	4.77	7.49	9.21	2.32	11.78	4.50	7.75	2.45	7.35	1.66	68.57
1980	4.69	2.16	16.32	4.78	4.25	2.67	1.28	0.96	4.62	1.56	4.68	0.90	48.87
1981	1.91	5.07	4.44	3.81	3.38	3.70	3.99	4.21	2.74	2.80	4.85	5.02	45.92
1982	8.29	5.95	4.80	4.48	1.44	2.76	4.79	6.42	1.34	1.98	7.65	8.05	57.95
1983	2.65	4.52	3.66	6.40	6.65	3.29	2.52	1.34	1.15	2.64	9.57	8.34	52.73
1984	3.25	4.40	3.75	6.28	6.57	2.52	6.32	2.48	0.51	6.38	3.44	1.84	47.74
1985	3.45	4.95	2.27	2.81	4.36	2.22	3.10	4.93	0.93	4.83	3.34	2.36	39.55
1986	0.90	3.78	1.42	1.28	3.14	1.64	2.61	2.78	5.86	6.66	7.60	4.82	42.49
1987	6.29	7.16	5.13	1.66	4.97	5.12	1.84	3.53	4.07	1.13	2.40	3.25	46.55
1988	7.10	1.87	1.83	3.30	2.20	0.63	5.85	4.07	6.76	2.10	4.64	3.54	43.89
1989	5.30	7.16	5.86	3.99	4.56	9.19	9.93	3.46	11.22	1.77	5.45	3.71	71.60
1990	7.46	9.74	9.47	2.86	6.49	3.35	4.69	2.29	3.69	4.45	3.73	10.34	68.56
1991	2.71	8.12	6.58	6.78	4.58	4.11	3.59	4.00	2.37	0.22	4.88	8.02	55.96
1992	4.33	4.63	4.89	2.08	1.99	8.87	5.33	3.07	4.71	4.48	5.88	5.60	55.86
1993	5.16	3.69	7.40	3.34	3.37	1.64	1.30	2.12	1.68	1.80	3.33	5.26	40.09
1994	6.36	7.41	11.02	5.79	3.28	7.26	11.93	5.05	2.94	5.05	3.74	3.87	73.70
1995	5.27	6.52	3.64	2.22	3.77	3.42	4.23	4.88	5.53	7.13	4.54	3.83	54.98
1996	7.99	2.63	8.90	3.87	1.98	3.52	5.55	3.63	7.19	1.37	5.47	3.45	55.55
1997	6.14	5.28	5.11	4.22	5.82	5.99	4.16	3.50	5.56	5.24	1.97	3.30	56.29
1998	6.64	5.91	7.29	6.95	1.41	5.82	4.75	2.86	1.47	0.67	3.16	6.31	53.24
1999	9.80	3.75	3.99	4.17	5.03	6.97	2.82	0.45	0.62	3.79	4.20	1.83	47.42
POR= 121 YRS	5.26	4.99	5.92	4.55	3.96	3.99	4.60	3.66	3.41	3.00	3.78	4.96	52.08

WBAN : 13882

AVERAGE TEMPERATURE (°F) 1999 CHATTANOOGA, TN (CHA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	32.0	38.9	46.8	60.2	67.6	75.1	79.7	78.1	75.6	62.4	47.0	44.2	59.0
1971	38.8	39.9	45.2	58.9	65.1	78.3	77.1	78.0	75.5	66.4	48.7	49.4	60.1
1972	43.4	40.0	48.8	59.2	63.9	70.2	74.5	75.0	71.9	56.8	46.0	43.1	57.7
1973	36.0	37.5	55.4	57.3	64.8	76.4	79.0	77.6	75.8	62.7	52.3	41.5	59.7
1974	49.3	43.3	54.5	57.1	65.8	68.4	75.7	75.8	68.3	57.0	47.6	40.7	58.6
1975	42.7	44.0	45.6	56.1	68.0	72.8	78.0	77.1	68.4	60.7	49.0	39.4	58.5
1976	34.6	48.6	53.8	59.4	63.5	72.8	75.8	76.6	69.1	56.3	42.7	37.4	57.6
1977	28.5	40.5	53.6	63.1	70.5	77.6	83.4	81.8	75.3	57.8	53.0	40.6	60.5
1978	30.3	35.5	49.7	62.6	68.1	76.5	81.2	78.7	75.6	59.0	54.9	44.3	59.7
1979	33.7	38.8	52.1	60.1	67.2	74.1	76.5	78.0	72.4	60.2	50.2	41.3	58.7
1980	40.7	36.8	47.8	57.8	67.2	73.8	82.8	82.2	74.0	57.2	49.8	41.2	59.3
1981	35.5	43.4	48.1	64.7	64.6	78.0	81.4	77.3	69.7	58.6	50.8	38.2	59.2
1982	36.0	43.4	53.4	55.9	70.2	74.2	79.6	76.7	70.0	60.5	50.9	48.0	59.9
1983	38.8	42.8	50.5	54.3	65.9	73.5	80.4	81.9	71.2	60.8	48.5	37.0	58.8
1984	35.5	43.2	48.2	56.8	64.4	77.4	76.2	76.6	68.0	66.7	46.5	49.0	59.0
1985	32.8	40.2	52.9	60.8	67.6	74.9	78.4	76.6	69.4	64.7	58.8	36.7	59.5
1986	38.4	47.1	51.8	61.0	70.2	78.4	82.8	78.0	74.0	62.0	54.8	41.5	61.7
1987	39.3	44.7	51.9	58.0	73.1	77.1	81.2	80.5	71.4	54.9	52.0	45.5	60.8
1988	35.1	41.0	52.0	60.3	67.0	76.9	79.0	80.5	72.4	55.3	51.7	42.3	59.5
1989	45.3	43.2	54.5	59.6	65.4	74.8	78.9	78.4	71.7	60.9	50.7	35.0	59.9
1990	46.8	51.5	54.6	60.5	67.5	76.9	79.4	80.2	74.6	61.3	53.4	46.4	62.8
1991	42.6	45.8	54.1	63.7	72.9	77.1	81.5	79.6	74.0	61.4	47.7	45.2	62.1
1992	42.1	46.9	49.9	59.2	64.3	71.4	78.2	73.5	71.3	58.3	49.3	42.5	58.9
1993	45.8	43.0	48.8	58.5	68.9	78.2	85.2	82.5	74.4	61.4	50.5	43.0	61.7
1994	36.2	46.0	50.7	64.0	66.1	77.7	77.6	77.1	70.5	61.4	54.4	47.3	60.8
1995	42.1	42.1	54.6	62.1	69.2	74.9	80.7	81.6	70.3	59.7	45.0	39.9	60.2
1996	38.7	41.1	46.8	57.2	70.7	75.9	79.0	76.8	69.4	60.4	47.0	44.7	59.0
1997	41.5	47.4	57.1	56.2	63.7	72.3	79.9	76.6	72.5	60.4	46.0	41.0	59.6
1998	44.5	46.4	50.7	58.9	72.5	78.4	81.4	79.2	77.2	64.9	53.2	47.8	62.9
1999	45.1	47.9	48.7	64.5	68.6	76.8	81.3	81.7	73.4	62.2	55.5	45.1	62.6
POR= 121 YRS	40.8	43.6	51.2	60.2	68.3	75.8	78.8	78.0	72.5	61.2	50.1	42.5	60.2

HEATING DEGREE DAYS (base 65°F) 1999 CHATTANOOGA, TN (CHA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	13	119	535	636	807	698	606	206	73	0	3693
1971-72	0	0	0	45	496	478	661	721	496	215	62	10	3184
1972-73	0	0	10	253	567	674	890	767	294	246	80	0	3781
1973-74	0	0	3	143	374	722	480	604	322	242	65	16	2971
1974-75	0	0	28	250	517	746	686	581	593	290	14	0	3705
1975-76	0	0	53	152	474	785	934	470	340	180	87	2	3477
1976-77	0	0	11	269	661	851	1123	679	353	111	17	0	4075
1977-78	0	0	5	233	359	753	1072	821	467	114	60	0	3884
1978-79	0	0	0	192	299	637	962	725	390	152	42	0	3399
1979-80	0	0	0	167	438	728	745	813	526	215	38	0	3670
1980-81	0	0	24	246	450	736	907	600	515	70	81	0	3629
1981-82	0	0	31	211	422	823	890	597	371	275	13	0	3633
1982-83	0	0	29	202	418	528	807	616	447	321	42	0	3410
1983-84	0	0	38	146	487	863	910	626	515	246	100	2	3933
1984-85	0	0	27	40	550	488	990	687	381	158	28	4	3353
1985-86	0	0	32	67	198	869	818	497	402	148	23	0	3054
1986-87	0	1	0	148	306	722	789	562	399	238	0	0	3165
1987-88	0	0	4	309	384	597	919	688	396	164	26	1	3488
1988-89	0	0	1	312	391	697	602	608	333	220	92	0	3256
1989-90	0	0	29	164	423	924	561	371	325	171	48	0	3016
1990-91	0	0	19	154	344	571	689	534	349	75	7	0	2742
1991-92	0	0	17	142	513	610	701	520	457	207	98	3	3268
1992-93	0	0	8	202	465	689	586	612	496	197	21	0	3276
1993-94	0	0	15	155	439	675	888	526	437	116	39	0	3290
1994-95	0	0	7	121	310	544	700	636	326	128	35	1	2808
1995-96	0	0	22	192	595	772	809	687	559	237	28	1	3902
1996-97	0	0	17	167	534	623	723	488	248	271	80	7	3158
1997-98	0	0	0	194	561	738	630	516	459	193	14	2	3307
1998-99	0	0	0	74	348	535	613	470	497	96	9	0	2642
1999-	0	0	8	121	279	611							

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COOLING DEGREE DAYS (base 65°F) 1999 CHATTANOOGA, TN (CHA)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	57	133	313	462	412	337	44	0	0	1758
1971	0	0	0	27	81	406	384	411	324	96	16	2	1747
1972	0	0	0	51	35	177	303	316	224	8	4	0	1118
1973	0	0	1	22	79	350	443	400	334	79	1	0	1709
1974	0	0	3	11	97	124	338	343	132	8	2	0	1058
1975	0	0	0	29	115	238	411	382	162	27	1	0	1365
1976	0	0	1	19	49	241	342	363	142	8	0	0	1165
1977	0	0	9	60	194	384	578	532	320	15	3	0	2095
1978	0	0	0	48	164	350	507	432	325	14	2	5	1847
1979	0	0	0	12	119	279	361	410	227	24	0	0	1432
1980	0	0	0	8	111	272	562	540	300	10	1	0	1804
1981	0	0	0	68	77	400	513	385	178	21	2	0	1644
1982	0	0	19	9	184	283	460	368	187	68	1	7	1586
1983	0	0	2	6	78	264	485	529	230	22	0	0	1616
1984	0	0	0	8	86	379	356	367	124	102	0	0	1422
1985	0	0	12	38	118	310	422	366	171	64	16	0	1517
1986	0	0	0	33	192	409	558	414	276	63	7	0	1952
1987	0	0	0	34	261	372	508	488	202	0	0	0	1865
1988	0	0	2	27	95	364	442	486	230	17	0	0	1663
1989	0	2	16	68	109	300	437	424	236	43	0	0	1635
1990	0	0	13	42	133	363	455	480	312	45	3	0	1846
1991	0	0	20	43	258	370	518	460	295	37	0	2	2003
1992	0	0	0	40	81	202	414	273	202	0	0	0	1212
1993	0	0	4	12	152	401	632	547	305	49	10	0	2112
1994	0	0	0	93	79	389	397	383	177	16	2	0	1536
1995	0	0	10	47	174	304	491	521	187	35	0	0	1769
1996	0	0	0	12	211	334	440	373	156	29	2	0	1557
1997	1	0	7	12	48	232	470	365	231	60	0	0	1426
1998	1	0	22	16	252	409	511	448	373	76	0	7	2115
1999	3	0	0	88	130	360	512	525	267	42	0	0	1927

SNOWFALL (inches) 1999 CHATTANOOGA, TN (CHA)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	0.0	3.4	0.6	0.6	4.5	1.0	0.0	0.0	10.1
1971-72	0.0	0.0	0.0	0.0	T	T	T	T	1.0	0.0	0.0	0.0	1.0
1972-73	0.0	0.0	0.0	0.0	T	0.0	2.3	T	T	T	0.0	0.0	2.3
1973-74	0.0	0.0	0.0	0.0	0.0	0.2	0.0	T	T	0.0	0.0	0.0	0.2
1974-75	0.0	0.0	0.0	0.0	0.0	T	T	T	T	0.0	0.0	0.0	T
1975-76	0.0	0.0	0.0	0.0	T	T	0.1	T	0.0	0.0	0.0	0.0	0.1
1976-77	0.0	0.0	0.0	0.0	T	T	3.7	T	0.0	0.0	0.0	0.0	3.7
1977-78	0.0	0.0	0.0	0.0	T	T	2.5	0.7	0.4	0.0	0.0	0.0	3.6
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	0.5	8.7	T	0.0	0.0	0.0	9.2
1979-80	0.0	0.0	0.0	0.0	T	0.0	T	7.4	0.4	0.0	0.0	0.0	7.8
1980-81	0.0	0.0	0.0	0.0	T	0.0	T	T	0.0	0.0	0.0	0.0	T
1981-82	0.0	0.0	0.0	0.0	0.0	0.1	2.9	2.3	T	0.0	0.0	0.0	5.3
1982-83	0.0	0.0	0.0	0.0	0.0	T	1.0	0.9	0.6	0.0	0.0	0.0	2.5
1983-84	0.0	0.0	0.0	0.0	0.0	T	0.6	1.8	T	0.0	0.0	0.0	2.4
1984-85	0.0	0.0	0.0	0.0	0.0	T	3.8	1.1	0.0	0.0	0.0	0.0	4.9
1985-86	0.0	0.0	0.0	0.0	0.0	0.3	2.0	T	0.0	0.0	0.0	0.0	2.3
1986-87	0.0	0.0	0.0	0.0	T	T	6.5	0.0	0.9	2.8	0.0	0.0	10.2
1987-88	0.0	0.0	0.0	0.0	0.0	T	10.2	T	T	0.0	0.0	0.0	10.2
1988-89	0.0	0.0	0.0	0.0	0.0	0.8	1.5	0.1	0.0	0.0	0.0	0.0	2.4
1989-90	0.0	0.0	0.0	0.0	0.3	0.3	T	0.0	0.0	0.0	0.0	0.0	0.6
1990-91	0.0	0.0	0.0	0.0	0.0	T	T	0.2	2.0	0.0	0.0	0.0	2.2
1991-92	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T	0.0	0.0	0.0	T
1992-93	0.0	0.0	0.0	0.0	0.0	T	T	2.7	20.0	T	0.0	0.0	22.7
1993-94	0.0	0.0	0.0	T	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	0.0	T	1.1
1995-96	0.0	0.0	0.0	0.0			4.5						
1996-97													
1997-98						1.9				0.0			
1998-99													
1999-													
POR= 65 YRS	0.0	0.0	0.0	T	0.0	0.6	1.8	1.2	0.7	0.1	T	T	4.4

WBAN : 13882

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
CHATTANOOGA,
TENNESSEE (CHA)

Chattanooga is located in the southern portion of the Great Valley of Tennessee, an area of the Tennessee River between the Cumberland Mountains to the west and the Appalachian Mountains to the east. Local topography is complex with a number of minor valleys and ridges giving a local relief of as much as 500 feet. The Tennessee River approaches Chattanooga from the northeast and forms a loop southwest to west to northwest of the city at an elevation of about 630 feet above mean sea level. Most of the city lies on the south side of the river. On the north and southwest sides, the terrain rises abruptly to about 1,200 feet above the river. This complex topography results in marked variations in air drainage, wind, and minimum temperatures within short distances. In winter the Cumberland Mountains have a moderating influence on the local climate by retarding the flow of cold air from the north and west.

Chattanooga enjoys a moderate climate, characterized by cool winters and quite warm summers. Because of the sheltering effect of the mountains, winter temperatures average about 3.0 degrees warmer than at stations on the southern Cumberland Plateau section of the state. Winter weather is changeable and alternates between cool spells with an occasional cold period, but extreme cold is rare. Temperatures fall as low as the freezing point on a little over one-half of the winter days, but temperatures below zero rarely occur. Snowfall from year to year is highly variable with some winters having little or none. Heavy snowfalls have occurred, but any accumulation of snow seldom remains on the ground more than a few days. Ice storms of freezing rain or glaze are not uncommon, occasionally midwinter icing becomes severe enough to do some damage in the area.

Summer temperatures are either in the high 80s or low 90s and temperatures over 100 degrees are unusual. Most afternoon temperatures are modified by thunderstorms. Temperatures frequently plunge 10 to 15 degrees in a matter of minutes during one of these showers.

Precipitation in the Chattanooga area is well distributed throughout the year with the greater amounts in wintertime when cyclonic storms from the Gulf of Mexico reach the area with greater intensity and frequency. A second peak rainfall period generally occurs in July, principally from thunderstorms that move into the area from the south and southwest. During any year there are usually a few of these storms that can be classified as severe, with hail and damaging winds.

The growing season averages 228 days. The average occurrence of last freezing temperature in spring is early April and the average first freezing temperature in the fall is early November.

Spring and autumn are very enjoyable seasons in Chattanooga, with many days being nearly ideal in temperature. To many, the fall months of September, October, and November are the most pleasant. Rainfall is at a minimum, sunshine at a relative maximum and the temperature range is comfortable.

STATION LOCATION

CHATTANOOGA, TENNESSEE

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE												AUCI T O M P A T H O R I T Y * *	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND													
							G M D M E T E R S	W I N D I N S T R U M E N T	E M E R S O N S E N S I T I V E	E M E R S O N S E N S I T I V E	P R E S S U R E	S U R F A C E	T E R R A I N	R A I N G A G E	W E I G H T I N G	8 I N C H R A N G E	H I G H W A T E R			
CITY																				
SW corner 9th & Market Streets	1/8/79	3/21/79	NA	35° 04'	85° 14'	675														
Hamilton County Court House, 7th & Georgia	3/22/79	6/30/93	2 blocks N	35° 04'	85° 14'	Unk														
U. S. Custom House 11th & "A" Streets	7/1/93	9/30/09	4 blocks S	35° 04'	85° 14'	700	112	106	106			98			98					
James Building, West 8th & Broad Streets	10/1/09	12/31/33	3 blocks NNW	35° 04'	85° 14'	672	213	189	189	a	Unk	167			167		a - Installed 1930.			
New Post Office Bldg. 10th & Georgia	1/1/34	6/30/40	2 blocks ESE	35° 04'	85° 14'	738	214	71	71	Unk		64			64		Consolidation of City Office and Airport Station on 6/30/40.			
AIRPORT																				
Administration Bldg, 3rd Floor, Lovell Field	8/7/30	6/30/40	NA	35° 02'	85° 12'	672	54	21	21	NA	3	NA			3	NA	CAA operation.			
Administration Bldg, 2nd Floor, Lovell Field	7/1/40	8/26/75	No change	35° 02'	85° 12'	672 670 665	57 520	6 f31	6 f31	Unk b31	3 f28	NA			3 f28	NA c5 e6	Wea. Bur. operation b - Effective 10/18/56; c - Telepsychrometer (6); 10/15/56-4/12/61. Hygro. comm. near thermometer site 4/12/61 d - Effective 4/12/61 e - Moved 1100' WSW 5/31/64. f - Moved to roof 5/31/64. g - Moved to field 5/31/64. h - Effective 5/31/64. i - Not moved 8/26/75. j - Relocated 9/11/75. k - Minor adjustment 12/3/80. m - Minor adjustment 12/4/80. n - Installed 9/1/84. p - Minor relocation 9/1/84. q - Minor move & type change 10/16/85.			
100 Cedar Lane Lovell Field	8/26/75	2/24/87	0.5 mi. SSW	35° 02'	85° 12'	665	i20	NA Unk	5 p5	i31 j18 ml8	4	4			4	i6 K5 q4	NA			
521 Pine Grove Trail Municipal Airport Lovell Field	2/24/87	09/01/95	0.2 mi. SSW	35° 02'	85° 12'	665	s30	Unk	5	67	4	4			4	r4	NA	r - Not moved 2/24/87. s - Not moved, but raised 2/24/87.		
Lovell Field	09/01/95	Present	NA	35°02'	85°12'	689											S	ASOS Commissioned 09/01/95		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
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