

1998

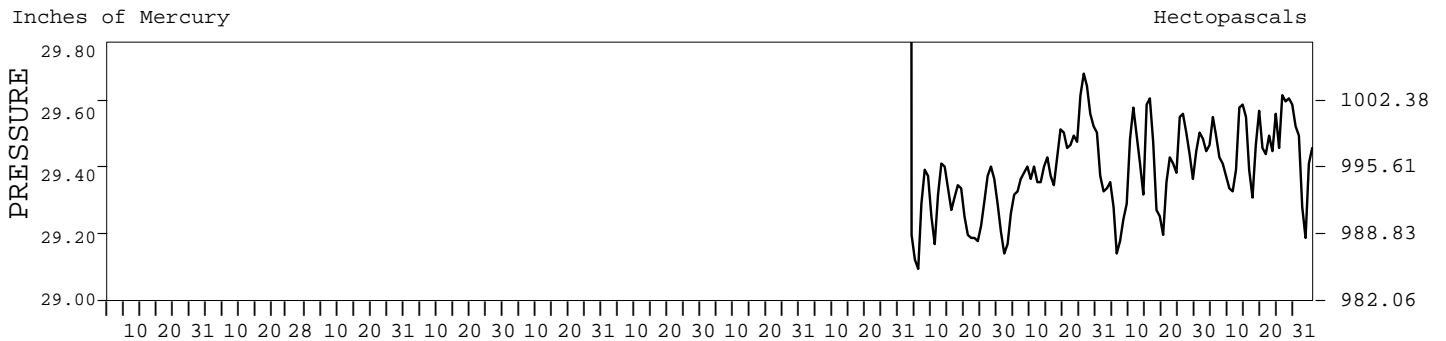
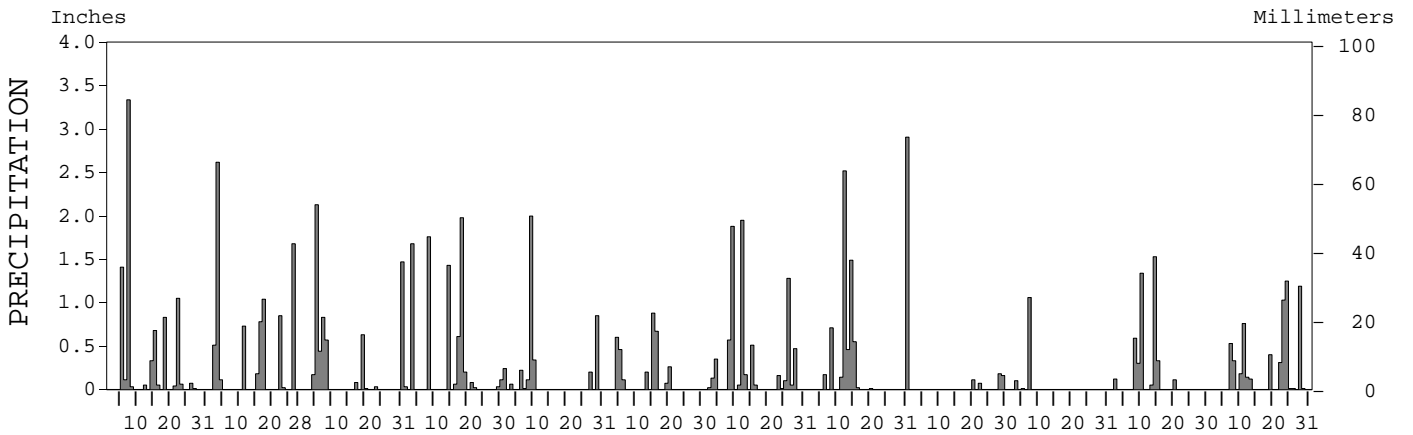
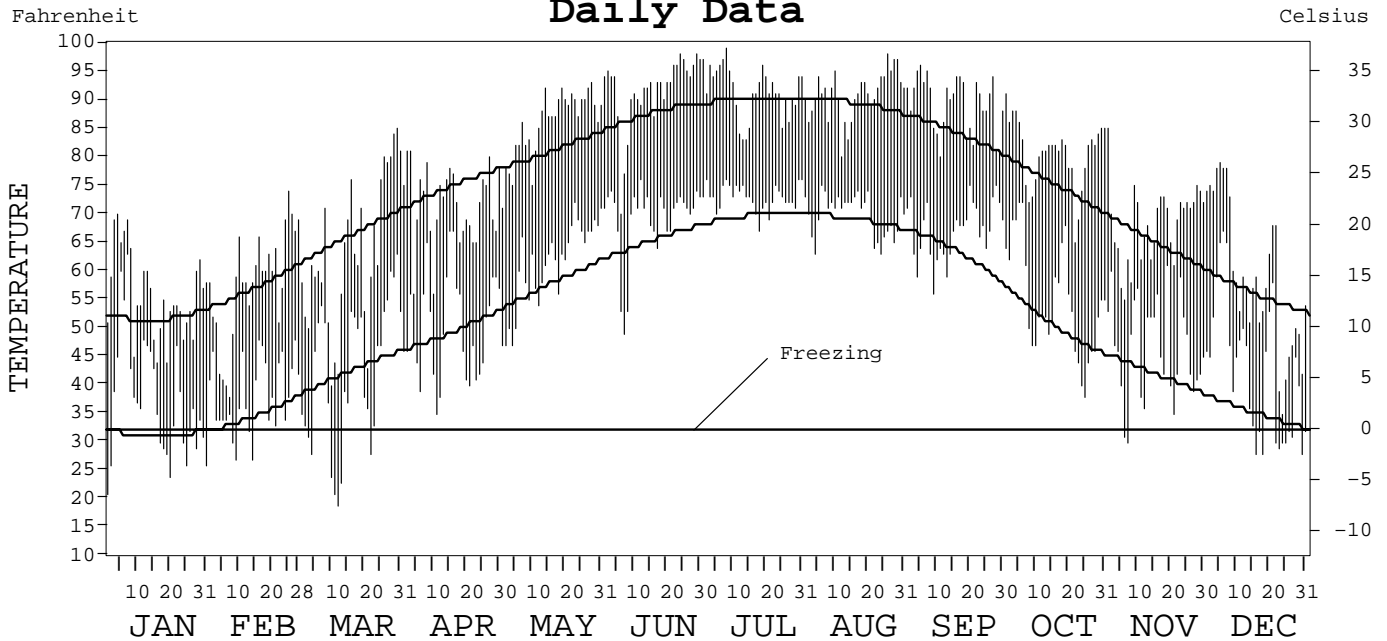
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



BIRMINGHAM (MUNICIPAL AIRPORT),
ALABAMA (BHM)

ISSN 0197-9868

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE	NATIONAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 1998

BIRMINGHAM AP, AL (BHM)

LATITUDE: 33° 33' 50" N LONGITUDE: 86° 45' 16" W ELEVATION (FT): GRND: 644 BARO: 644 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 13876

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	56.0	57.7	63.1	71.7	85.7	91.5	91.5	90.9	89.2	80.5	68.3	58.9	75.4	
	HIGHEST DAILY MAXIMUM	70	74	85	81	93	98	99	98	96	91	85	79	99	
	DATE OF OCCURRENCE	04	25	30	03+	28	29+	08	26	05	01	01	05	JUL 08	
	MEAN DAILY MINIMUM	37.3	38.3	42.2	50.1	61.0	69.0	72.9	69.8	67.1	54.6	46.3	42.5	54.3	
	LOWEST DAILY MINIMUM	21	27	19	35	47	49	67	63	56	38	30	28	19	
	DATE OF OCCURRENCE	01	14+	12	11	04+	07	18	24+	09	25	07	30+	MAR 12	
	AVERAGE DRY BULB	46.7	48.0	52.7	60.9	73.4	80.3	82.2	80.4	78.2	67.6	57.3	50.7	64.9	
	MEAN WET BULB	43.6	43.0		54.8	65.9	72.4	75.6		69.6	59.1				
	MEAN DEW POINT	41.6	40.4		52.6	64.5	71.3	75.0		64.5	53.2				
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	10	24	23	23	17	1	0	0	0	98
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	12	4	7	0	0	0	0	0	0	0	2	11	36	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	562	469	400	150	13	5	0	0	0	47	231	462	2339	
	COOLING DEGREE DAYS	1	0	27	34	277	470	538	484	403	134	6	26	2400	
RH	MEAN (PERCENT)	83	78	73	78	76	76	84	74	66	66	70	77	75	
	HOUR 06 LST	93	91	88	94	96	92	98	90	84	84	84	85	90	
	HOUR 12 LST	73	66	60	64	55	62	69	56	51	44	54	68	60	
	HOUR 18 LST	77	70	62	65	62	63	73	63	56	60	67	74	66	
	HOUR 24 LST	89	85	83	88	93	87	96	87	76	80	78	83	85	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	1	1	
	THUNDERSTORMS	1	3	5	7	7	11	13	9	1	1	1	0	59	
CLOUDINESS	AVG. SKY COVER (OKTAS)														
	SUNRISE - SUNSET														
	MIDNIGHT - MIDNIGHT														
	NUMBER OF DAYS WITH:														
	CLEAR														
	PARTLY CLOUDY														
	CLOUDY														
PR	MEAN STATION PRESS. (IN.)									29.29	29.46	29.43	29.50		
	MEAN SEA-LEVEL PRESS. (IN.)	30.06	29.90	30.05	29.97	29.92	29.97	30.01		29.95					
WINDS	RESULTANT SPEED (MPH)	0.6	1.3	1.2	1.4	1.0	0.7	1.0		2.2	0.6	0.1			
	RES. DIR. (TENS OF DEGS.)	12	01	21	22	28	34	26		10	07	09			
	MEAN SPEED (MPH)	6.4	8.2	7.7	6.7	5.4	6.5	5.3		5.4	4.6	4.7	6.6		
	PREVAIL. DIR. (TENS OF DEGS.)	08	32	19	19	23	23	26	05	05	13	36	36	05	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)									21	20	21	30		
	DIR. (TENS OF DEGS.)									09	22	35	34		
	DATE OF OCCURRENCE									29	07	20+	22		
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)									29	26	29	36		
DIR. (TENS OF DEGS.)									09	01	17	33			
DATE OF OCCURRENCE									29	08	10	22			
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	8.06	8.52	6.36	7.99	4.03	3.25	7.75	8.98	0.52	1.17	4.37	6.27	67.27	
	GREATEST 24-HOUR (IN.)	3.34	2.62	2.13	1.98	2.00	0.88	1.95	2.91	0.34	1.06	1.81	2.15	3.34	
	DATE OF OCCURRENCE	07	03	05	18	09	15	12	31	28-29	07	14-15	23-24	JAN 07	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	14	10	10	12	9	8	16	10	4	3	8	14	118	
PRECIPITATION ≥ 0.10	7	9	7	7	7	7	11	8	3	2	7	11	86		
PRECIPITATION ≥ 1.00	3	3	2	4	1	0	3	3	0	1	2	3	25		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	T	T	T	T	0.0	T	T	0.0			0.0	0.0		
	GREATEST 24-HOUR (IN.)	T	T	T	T	0.0	T	T	0.0			0.0	0.0		
	DATE OF OCCURRENCE	16	04+	20+	18+		15	09							
	MAXIMUM SNOW DEPTH (IN.)	0	0	0	0	0	0	0	0	0		0	T		
	DATE OF OCCURRENCE												25		
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	0	0	0	0	0	0	0	0	0		0	0			

NORMALS, MEANS, AND EXTREMES

BIRMINGHAM AP, AL (BHM)

LATITUDE: 33° 33' 50" N LONGITUDE: 86° 45' 16" W ELEVATION (FT): GRND: 644 BARO: 644 TIME ZONE: CENTRAL (UTC+ 6) WBAN: 13876

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	51.7	56.9	66.1	74.6	81.0	87.4	89.9	89.1	83.9	74.7	64.6	55.7	73.0
	MEAN DAILY MAXIMUM	51	53.2	58.0	65.6	74.6	81.7	87.9	90.5	89.9	84.6	75.0	64.1	56.0	73.4
	HIGHEST DAILY MAXIMUM	55	81	83	89	92	99	102	106	103	100	94	85	80	106
	YEAR OF OCCURRENCE		1949	1996	1982	1987	1962	1954	1980	1995	1990	1954	1998	1951	JUL 1980
	MEAN OF EXTREME MAXS.	51	70.7	75.0	81.8	86.3	90.6	95.5	97.4	96.0	93.9	86.3	78.5	72.1	85.3
	NORMAL DAILY MINIMUM	30	31.3	34.5	42.3	49.2	57.7	65.2	69.5	68.8	62.9	50.2	41.6	34.8	50.7
	MEAN DAILY MINIMUM	51	33.2	36.0	42.3	49.7	58.3	66.1	70.0	69.1	63.2	51.0	41.0	35.5	51.3
	LOWEST DAILY MINIMUM	55	-6	3	2	26	35	42	51	51	37	27	5	1	-6
	YEAR OF OCCURRENCE		1985	1958	1993	1973	1944	1966	1967	1946	1967	1956	1950	1989	JAN 1985
	MEAN OF EXTREME MINS.	51	14.1	17.8	24.5	32.8	43.2	54.1	61.6	60.3	48.5	34.2	24.2	17.5	36.1
	NORMAL DRY BULB	30	41.5	45.7	54.2	62.0	69.4	76.3	79.8	79.0	73.4	62.5	53.1	45.2	61.8
	MEAN DRY BULB	51	43.2	47.0	54.0	62.2	70.0	77.0	80.2	79.5	73.9	63.0	52.6	45.7	62.4
	MEAN WET BULB	15	39.0	42.6	48.2	54.3	63.1	69.7	67.9	66.6	66.6	56.7	45.0	38.8	54.9
	MEAN DEW POINT	15	33.1	36.4	41.0	48.3	59.0	66.4	70.0	68.6	62.9	52.2	39.9	33.5	50.9
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.1	2.5	11.1	16.6	15.5	6.7	0.1	0.0	0.0	52.6	
MAXIMUM ≤ 32°	30	1.8	0.4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.6	2.8	
MINIMUM ≤ 32°	30	17.7	13.1	5.6	1.0	0.0	0.0	0.0	0.0	0.0	0.5	6.3	14.7	58.9	
MINIMUM ≤ 0°	30	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	
H/C	NORMAL HEATING DEG. DAYS	30	729	540	350	135	31	0	0	0	7	148	364	614	2918
	NORMAL COOLING DEG. DAYS	30	0	0	15	45	168	339	459	434	259	71	7	0	1797
RH	NORMAL (PERCENT)	30	70	66	64	65	70	72	74	75	74	72	71	71	70
	HOUR 06 LST	30	76	73	72	77	83	84	86	86	84	83	80	77	80
	HOUR 12 LST	30	80	79	79	83	86	86	88	89	88	86	84	81	84
	HOUR 18 LST	30	61	56	53	50	54	56	60	59	58	53	57	60	56
	HOUR 24 LST	30	65	58	53	51	57	60	65	65	68	69	68	68	62
S	PERCENT POSSIBLE SUNSHINE	34	42	50	55	63	66	65	59	63	61	66	55	46	58
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	56	1.2	0.6	0.6	0.3	0.3	0.6	0.4	0.5	0.5	0.7	1.0	1.2	7.9
	THUNDERSTORMS	56	1.8	2.3	4.5	5.1	6.9	8.6	11.4	8.6	4.1	1.3	1.9	1.2	57.7
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
	CLEAR														
	PARTLY CLOUDY														
	CLOUDY														
PR	MEAN STATION PRESSURE (IN)	24	29.50	29.40	29.40	29.40	29.30	29.30	28.22	28.22	28.26	28.27	28.36	28.37	28.83
	MEAN SEA-LEVEL PRES. (IN)	15	30.15	30.11	30.06	30.01	30.00	30.00	30.04	30.03	30.04	30.10	30.13	30.17	30.07
WINDS	MEAN SPEED (MPH)	37	8.2	8.7	9.1	8.5	7.0	6.1	5.9	5.5	6.5	6.3	7.2	7.7	7.2
	PREVAIL. DIR (TENS OF DEGS)	21	36	36	18	18	18	04	04	04	09	05	36	36	36
	FASTEST MILE:														
	SPEED (MPH)	36	49	59	65	56	65	56	57	50	50	43	52	41	65
	DIR. (TENS OF DEGS)		W	SE	SW	SW	NW	SW	SW	NW	SE	W	N	SE	SW
	YEAR OF OCCURRENCE		1975	1960	1955	1956	1951	1957	1960	1956	1951	1955	1944	1954	MAR 1955
	PEAK GUST:														
	SPEED (MPH)														
	DIR. (TENS OF DEGS)														
	YEAR OF OCCURRENCE														
PRECIPITATION	NORMAL (IN)	30	5.10	4.72	6.19	4.96	4.85	3.73	5.25	3.59	3.93	2.81	4.33	5.12	54.58
	MAXIMUM MONTHLY (IN)	55	11.00	17.67	15.80	13.75	11.10	8.44	13.70	10.85	10.43	11.90	15.25	13.98	17.67
	YEAR OF OCCURRENCE		1949	1961	1980	1979	1969	1963	1950	1967	1977	1995	1948	1961	FEB 1961
	MINIMUM MONTHLY (IN)	55	1.09	1.20	1.71	0.42	1.15	0.67	0.30	0.38	T	0.07	0.42	0.81	T
	YEAR OF OCCURRENCE		1981	1968	1985	1986	1951	1968	1983	1989	1955	1991	1949	1980	SEP 1955
	MAXIMUM IN 24 HOURS (IN)	49	5.81	6.57	7.05	5.08	4.63	3.85	5.47	5.13	5.03	6.94	4.87	5.29	7.05
	YEAR OF OCCURRENCE		1949	1961	1970	1966	1969	1957	1985	1952	1977	1995	1948	1961	MAR 1970
NORMAL NO. DAYS WITH:															
PRECIPITATION ≥ 0.01	30	10.9	9.6	10.8	9.2	9.9	9.4	12.7	9.4	8.2	6.2	9.1	10.4	115.8	
PRECIPITATION ≥ 1.00	30	1.6	1.4	2.1	1.7	1.5	1.1	1.3	1.0	1.4	0.8	1.4	1.5	16.8	
SNOWFALL	NORMAL (IN)	30	0.7	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	T	0.3	1.4	
	MAXIMUM MONTHLY (IN)	55	6.6	2.3	13.0	5.0	T	T	T	0.0	T	T	1.4	8.0	13.0
	YEAR OF OCCURRENCE		1982	1960	1993	1987	1996	1992	1994	1992	1993	1950	1963	MAR 1993	
	MAXIMUM IN 24 HOURS (IN)	51	4.5	2.3	13.0	5.0	T	T	T	0.0	T	T	1.4	8.4	13.0
	YEAR OF OCCURRENCE		1948	1960	1993	1987	1996	1992	1994	1992	1993	1950	1963	MAR 1993	
	MAXIMUM SNOW DEPTH (IN)	51	8	2	13	5	0	0	0	0	0	0	1	11	13
	YEAR OF OCCURRENCE		1964	1960	1993	1987							1950	1958	MAR 1993
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	0.3	0.0	0.1	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.4	

PRECIPITATION (inches) 1998 BIRMINGHAM (MUNICIPAL AIRPORT), AL (BHM)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	7.78	3.17	5.19	5.32	11.10	3.75	2.91	1.76	6.85	2.51	2.66	6.07	59.07
1970	2.47	2.35	11.36	5.56	2.27	3.55	3.37	7.01	1.05	7.04	2.31	3.32	51.66
1971	3.58	9.28	6.65	4.25	2.64	6.57	8.90	3.68	3.35	1.21	1.76	5.92	57.79
1972	9.30	2.15	4.79	2.56	3.82	2.70	3.55	2.01	8.09	3.35	4.47	5.76	52.55
1973	6.85	2.33	9.71	5.33	8.29	3.74	8.36	5.41	2.64	0.96	4.91	7.58	66.11
1974	6.85	4.94	2.43	5.43	5.43	1.42	4.69	8.28	4.94	1.49	4.13	5.97	56.00
1975	7.23	4.96	7.57	3.19	4.15	2.44	7.33	3.33	3.69	3.74	4.15	3.49	55.27
1976	4.12	1.80	14.15	1.99	9.00	2.75	4.92	3.34	4.91	1.59	2.23	4.35	55.15
1977	5.08	3.89	8.70	6.73	3.51	0.96	6.24	0.87	10.43	7.52	4.10	2.01	60.04
1978	4.54	1.31	3.07	2.64	8.51	5.04	5.09	2.09	1.14	0.22	2.71	5.43	41.79
1979	5.94	4.70	5.69	13.75	6.64	1.19	9.98	2.30	10.40	2.05	5.51	1.55	69.70
1980	6.63	2.36	15.80	9.10	7.30	3.01	2.11	2.84	5.26	3.21	3.04	0.81	61.47
1981	1.09	4.87	7.23	2.45	2.81	2.49	3.88	5.30	0.93	3.34	1.67	5.82	41.88
1982	5.19	6.29	2.71	7.86	3.19	5.39	3.53	2.68	0.66	3.73	7.11	9.51	57.85
1983	3.26	6.42	5.06	8.28	9.57	3.81	0.30	0.99	2.83	3.67	9.14	12.63	65.96
1984	3.96	2.79	4.07	8.61	6.07	1.41	5.06	3.86	0.16	3.91	5.42	2.30	47.62
1985	5.22	5.79	1.71	2.86	4.36	5.34	10.07	4.07	1.97	4.12	2.62	2.54	50.67
1986	1.21	1.79	2.45	0.42	3.66	3.87	1.61	5.56	2.52	5.24	9.66	3.08	41.07
1987	5.89	5.82	4.77	1.03	6.03	4.59	2.30	3.96	3.52	1.16	3.17	3.08	45.32
1988	5.55	2.52	3.18	3.18	1.22	0.79	2.95	3.43	8.57	3.41	6.33	2.84	43.97
1989	4.76	4.31	5.70	3.40	3.82	8.00	6.42	0.38	7.38	1.52	4.63	3.39	53.71
1990	7.38	7.43	5.81	2.38	4.12	2.08	3.16	0.59	2.04	2.98	4.02	5.47	47.46
1991	3.19	4.27	5.42	4.87	8.90	7.52	4.00	4.59	3.02	0.07	4.00	3.64	53.49
1992	3.22	3.96	3.36	2.61	1.18	5.34	7.41	7.43	5.70	2.18	7.94	5.27	55.60
1993	6.11	2.35	4.40	2.99	3.93	1.47	1.16	2.72	4.62	3.22	2.22	4.01	39.20
1994	5.10	4.78	7.56	3.77	3.74	5.41	7.75	4.05	4.67	5.39	3.93	4.10	60.25
1995	3.85	4.37	3.63	4.42	3.15	3.07	1.81	1.51	5.53	11.90	6.97	4.91	55.12
1996	9.59	3.09	10.59	2.70	5.16	2.17	8.50	4.45	5.83	3.55	4.00	3.28	62.91
1997	6.31	4.82	3.23	5.08	4.41	5.55	5.99	2.74	4.00	5.49	3.74	4.13	55.49
1998	8.06	8.52	6.36	7.99	4.03	3.25	7.75	8.98	0.52	1.17	4.37	6.27	67.27
POR= 103 YRS	5.01	4.83	5.98	4.70	4.24	3.95	5.26	4.14	3.49	2.82	3.81	4.98	53.21

WBAN : 13876

AVERAGE TEMPERATURE (°F) 1998 BIRMINGHAM (MUNICIPAL AIRPORT), AL (BHM)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	42.6	44.5	46.6	62.7	69.0	76.2	81.7	77.8	70.9	63.9	50.1	43.3	60.8
1970	37.9	44.5	52.6	65.6	71.3	75.7	80.6	78.7	77.0	63.3	48.4	47.9	62.0
1971	43.6	44.2	48.5	60.2	65.3	77.9	77.5	77.8	75.0	67.2	50.7	54.8	61.9
1972	47.2	46.9	53.7	63.1	67.2	74.2	76.9	78.8	75.1	61.7	48.9	47.7	61.8
1973	40.7	42.3	58.6	58.1	67.5	75.9	79.4	77.2	77.2	66.6	56.2	45.0	62.1
1974	52.8	47.3	61.2	61.5	71.0	72.7	79.2	78.4	70.1	60.6	52.7	47.3	62.9
1975	49.1	50.1	53.9	60.5	72.4	76.4	78.1	79.1	70.2	63.5	54.1	44.6	62.7
1976	39.1	54.3	58.7	61.5	64.2	74.4	78.3	77.0	71.9	57.4	45.5	41.2	60.3
1977	31.6	44.8	57.3	65.2	72.4	79.8	83.4	82.1	75.7	59.9	55.0	44.1	62.6
1978	33.5	37.4	50.2	62.9	68.2	77.1	81.5	79.8	76.9	60.6	57.9	46.1	61.0
1979	37.7	44.0	55.2	63.4	69.8	75.1	79.9	78.4	71.4	63.9	52.8	45.9	61.5
1980	45.2	42.3	51.4	60.9	70.0	77.6	84.4	83.0	78.4	60.3	52.4	44.0	62.5
1981	39.2	48.2	51.3	67.1	67.8	80.6	82.2	79.2	71.9	61.8	54.6	42.7	62.2
1982	41.9	47.3	58.9	59.1	72.6	75.7	80.7	79.6	73.1	64.2	54.1	51.2	63.2
1983	40.6	44.8	50.8	56.6	67.3	74.1	80.3	81.7	71.7	63.0	51.9	39.8	60.2
1984	38.5	46.8	52.4	59.0	67.5	77.1	78.2	77.5	72.1	71.1	51.4	54.3	62.2
1985	35.5	43.2	56.7	63.7	69.5	76.2	78.1	78.2	72.0	67.3	61.0	40.2	61.8
1986	41.9	49.9	55.5	61.8	71.2	78.6	82.5	77.8	76.9	63.9	57.4	44.0	63.5
1987	42.1	46.9	54.6	59.5	73.8	76.7	80.5	82.0	73.1	56.8	54.5	49.1	62.5
1988	39.7	43.5	54.1	61.2	67.6	77.5	79.8	81.5	74.4	57.7	55.2	45.8	61.5
1989	48.9	45.7	56.4	60.3	67.7	75.5	79.2	79.5	72.5	61.9	52.9	38.0	61.5
1990	49.0	54.5	57.0	60.7	68.9	77.8	79.8	82.3	77.5	63.9	55.7	49.7	64.7
1991	44.8	49.7	55.8	65.7	73.1	76.9	81.4	80.8	75.4	65.1	50.0	49.3	64.0
1992	43.4	50.6	53.8	61.0	67.4	74.7	80.4	75.6	73.4	61.5	51.7	45.8	61.6
1993	47.0	44.9	50.4	58.8	68.7	78.5	83.8	81.2	73.2	61.9	51.7	44.4	62.0
1994	39.6	49.3	54.6	65.3	67.5	78.5	78.0	78.0	72.1	64.1	57.0	49.2	62.8
1995	44.4	46.2	57.4	63.7	72.0	75.6	83.2	84.8	74.5	62.5	48.0	43.6	63.0
1996	42.6	46.0	50.9	59.1	73.3	77.2	79.9	78.6	71.8	62.6	52.0	48.7	61.9
1997	44.7	50.5	59.5	58.2	66.0	74.4	80.3	77.9	74.9	62.7	49.7	43.0	61.8
1998	46.7	48.0	52.7	60.9	73.4	80.3	82.2	80.4	78.2	67.6	57.3	50.7	64.9
POR= 103 YRS	44.7	47.0	54.9	62.6	70.4	77.6	80.1	79.6	74.9	64.1	53.4	46.1	63.0

HEATING DEGREE DAYS (base 65°F) 1998 BIRMINGHAM (MUNICIPAL AIRPORT), AL (BHM)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0	0	4	110	443	663	830	568	377	91	23	0	3109
1970-71	0	0	10	104	493	523	657	578	500	171	74	0	3110
1971-72	0	0	0	28	437	320	548	526	348	138	21	7	2373
1972-73	0	0	9	135	486	534	749	629	217	228	48	0	3035
1973-74	0	0	3	73	285	615	374	491	161	147	9	0	2158
1974-75	0	0	19	159	378	542	493	412	361	190	2	0	2556
1975-76	0	0	49	105	349	626	795	314	213	129	65	0	2645
1976-77	0	0	7	241	580	732	1026	566	252	73	5	0	3482
1977-78	0	0	0	176	292	640	967	768	452	120	42	0	3457
1978-79	0	0	0	160	220	578	839	584	303	83	33	0	2800
1979-80	0	0	0	101	365	588	604	655	417	144	14	0	2888
1980-81	0	0	7	181	372	642	795	464	428	46	51	0	2986
1981-82	0	0	19	138	314	682	711	490	250	199	4	0	2807
1982-83	0	0	16	134	331	449	751	558	437	262	39	0	2977
1983-84	0	0	26	108	388	774	817	519	392	202	68	2	3296
1984-85	0	0	10	27	410	330	907	604	278	123	16	3	2708
1985-86	0	0	14	62	165	761	711	415	305	132	21	0	2586
1986-87	0	1	0	112	239	644	705	500	320	201	0	0	2722
1987-88	0	0	5	248	315	488	777	616	347	134	18	0	2948
1988-89	0	0	0	234	289	589	492	545	289	200	65	0	2703
1989-90	0	0	27	140	363	834	491	299	265	172	32	0	2623
1990-91	0	0	16	138	282	474	620	421	304	46	7	0	2308
1991-92	0	0	12	97	455	492	663	409	344	173	46	0	2691
1992-93	0	0	6	116	398	587	550	559	452	196	20	0	2884
1993-94	0	0	16	153	411	633	780	433	328	90	31	0	2875
1994-95	0	0	3	82	241	483	632	520	250	101	24	0	2336
1995-96	0	0	12	137	509	662	686	560	440	203	12	0	3221
1996-97	0	0	10	121	390	498	628	399	188	209	46	0	2489
1997-98	0	0	1	162	450	676	562	469	400	150	13	5	2888
1998-	0	0	0	47	231	462							

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COOLING DEGREE DAYS (base 65°F) 1998 BIRMINGHAM (MUNICIPAL AIRPORT), AL (B)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	33	156	346	523	402	188	84	2	0	1734
1970	0	0	2	115	227	330	492	432	377	58	0	0	2033
1971	1	0	0	35	90	394	393	403	309	105	10	13	1753
1972	4	6	7	88	93	291	379	434	318	40	8	2	1670
1973	0	0	24	28	132	333	452	385	376	129	28	0	1887
1974	4	3	52	48	204	238	450	418	180	28	15	0	1640
1975	8	0	26	61	241	351	416	447	211	66	29	2	1858
1976	0	8	25	27	48	290	418	376	219	15	1	0	1427
1977	0	5	21	85	241	450	578	537	329	25	0	1	2272
1978	0	0	0	64	151	370	515	463	365	34	12	1	1975
1979	0	1	8	43	188	308	466	424	198	74	7	2	1719
1980	0	4	6	25	176	386	607	563	413	43	2	0	2225
1981	0	1	9	113	145	475	539	448	231	46	9	0	2016
1982	1	0	65	28	247	327	495	459	265	118	12	27	2044
1983	0	0	7	17	115	281	481	528	233	53	2	0	1717
1984	0	0	11	30	151	373	421	395	230	221	6	6	1844
1985	0	1	27	90	163	349	413	417	233	139	51	1	1884
1986	0	0	16	43	222	413	547	406	364	84	18	0	2113
1987	0	0	5	46	280	357	487	532	254	1	7	3	1972
1988	0	0	13	26	105	382	467	516	292	14	1	0	1816
1989	0	14	27	65	155	323	447	459	257	51	3	0	1801
1990	1	14	21	49	160	393	466	543	398	110	9	4	2168
1991	0	0	28	74	266	364	515	496	333	106	9	10	2201
1992	0	0	2	59	129	298	484	333	265	14	5	0	1589
1993	0	0	5	19	140	410	591	511	271	63	18	0	2028
1994	0	0	10	109	115	408	410	411	221	58	8	0	1750
1995	2	0	23	67	247	323	571	620	301	67	3	3	2227
1996	0	16	10	34	280	374	470	428	219	54	8	1	1894
1997	6	1	23	14	82	287	481	404	303	99	0	0	1700
1998	1	0	27	34	277	470	538	484	403	134	6	26	2400

SNOWFALL (inches) 1998 BIRMINGHAM (MUNICIPAL AIRPORT), AL (BHM)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1969-70	0.0	0.0	0.0	0.0	T	T	1.7	0.1	T	0.0	0.0	0.0	1.8
1970-71	0.0	0.0	0.0	0.0	T	0.0	T	0.8	T	T	0.0	0.0	0.8
1971-72	0.0	0.0	0.0	0.0	T	0.0	T	T	T	0.0	0.0	0.0	T
1972-73	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1973-74	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	T
1974-75	0.0	0.0	0.0	0.0	T	0.4	T	T	T	0.0	0.0	0.0	0.4
1975-76	0.0	0.0	0.0	0.0	T	T	T	0.0	0.0	0.0	0.0	0.0	T
1976-77	0.0	0.0	0.0	0.0	T	T	1.4	T	0.0	0.0	0.0	0.0	1.4
1977-78	0.0	0.0	0.0	0.0	0.0	T	1.9	T	T	0.0	0.0	0.0	1.9
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
1979-80	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.3	0.0	0.0	0.0	0.3
1980-81	0.0	0.0	0.0	0.0	T	T	0.0	T	0.0	0.0	0.0	0.0	T
1981-82	0.0	0.0	0.0	0.0	0.0	T	2.1	0.0	T	0.0	0.0	0.0	2.1
1982-83	0.0	0.0	0.0	0.0	0.0	T	1.0	T	1.5	0.0	0.0	0.0	2.5
1983-84	0.0	0.0	0.0	0.0	0.0	T	T	T	2.0	0.0	0.0	0.0	2.0
1984-85	0.0	0.0	0.0	0.0	0.0	T	T	0.3	0.0	0.0	0.0	0.0	0.3
1985-86	0.0	0.0	0.0	0.0	0.0	T	T	T	0.0	0.0	0.0	0.0	T
1986-87	0.0	0.0	0.0	0.0	0.0	T	2.6	0.0	T	5.0	0.0	0.0	7.6
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	1.0	T	0.0	0.0	0.0	0.0	1.0
1988-89	0.0	0.0	0.0	0.0	0.0	T	0.0	T	T	T	0.0	0.0	T
1989-90	0.0	0.0	0.0	0.0	T	0.4	0.0	T	0.0	0.0	T	T	0.4
1990-91	T	0.0	0.0	0.0	0.0	T	T	T	T	T	0.0	T	T
1991-92	0.0	0.0	0.0	0.0	T	0.0	4.4	0.0	T	0.0	T	T	4.4
1992-93	0.0	0.0	T	T	0.0	0.0	0.0	T	13.0	0.0	T	0.0	13.0
1993-94	0.0	0.0	0.0	T	0.0	T	T	0.0	T	0.0	0.0	0.0	T
1994-95	T	0.0	0.0	0.0	0.0	0.0	T	1.0	T	0.0	T	0.0	1.0
1995-96	0.0	0.0	0.0	0.0	T	T	0.3	1.2	T	0.0	T	0.0	1.5
1996-97	0.0	0.0	0.0	0.0	0.0	T	T	T	0.0	0.0	T	0.0	T
1997-98	0.0	0.0	0.0	0.0	T	1.7	T	T	T	T	0.0	T	1.7
1998-	T	0.0			0.0	0.0							
POR= 54 YRS	T	0.0	T	T	0.0	0.3	0.6	0.2	0.3	0.1	T	T	1.5

WBAN : 13876

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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1998
BIRMINGHAM (MUNICIPAL AIRPORT),
ALABAMA (BHM)

Birmingham is located in a hilly area of north-central Alabama in the foothills of the Appalachians about 300 miles inland from the Gulf of Mexico. There is a series of southwest to northeast valleys and ridges in the area.

The city is far enough inland to be protected from destructive tropical hurricanes, yet close enough that the Gulf has a pronounced modifying effect on the climate.

Although summers are long and hot, they are not generally excessively hot. On a typical mid-summer day, the temperature will be nearly 70 degrees at daybreak, approach 90 degrees at mid-day, and level off in the low 90s during the afternoon. It is not unusual for the temperature to remain below 100 degrees for several years in a row. However, every few years an extended heat wave will bring temperatures over 100 degrees. July is normally the hottest month but there is little difference from mid-June to mid-August. Rather persistent high humidity adds to the summer discomfort.

January is normally the coldest month but there is not much difference from mid-December to mid-February. Overall, winters are relatively mild. Even in cold spells, it is unusual for the temperature to remain below freezing all day. Sub-zero cold is extremely rare, occurring only a very few times this century. Extremely low temperatures almost always occur under clear skies after a snowfall.

Snowfall is erratic. Sometimes there is a two- or three-year span with no measurable snow. On rare occasions, there may be a 2 to 4 inch snowstorm. The snow usually melts quickly. Even 1 or 2 inches of snow can effectively shut down this sunbelt city because of the hilly terrain, the wetness of the snow and the unfamiliarity of motorists driving on snow and ice.

Birmingham is blessed with abundant rainfall. It is fairly well distributed throughout the year. However, some of the wetter winter months, plus March and July, have twice the rainfall of October, the driest month. Summer rainfall is almost entirely from scattered afternoon and early evening thunderstorms. Serious droughts are rare and most dry spells are not severe.

The stormiest time of the year with the greatest risk of severe thunderstorms and tornadoes is in spring, especially in March and April.

In a normal year, the last 32 degree minimum temperature in the spring is in mid to late March and the first in autumn is in early November.

STATION LOCATION

BIRMINGHAM, ALABAMA
MUNICIPAL AIRPORT

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE												* Type	REMARKS
						SEA LEVEL	GROUND												
							G	W	E	D	S	T	W	8	H	M	A		
COOPERATIVE																			
See Remarks	4/1882	4/14/93															Several locations. Records continuous.		
2001 First Avenue North	4/14/93	9/14/95	NA	33° 31'	86° 48'	608	70	70								65	Daily observations (excluding Sundays).		
CITY																			
2001 First Avenue North	9/14/95	9/1/03	NA	33° 31'	86° 48'	608	70	70								65	Weather Bureau Agency with daily observations.		
Title Guarantee Building 21st Street at 3rd Avenue N	9/1/03	11/30/07	0.16 mi. N	33° 31'	86° 48'	608	144	136	136			128					First Order Weather Bureau Office.		
Weather Bureau Building 1221 North 13th Street	11/30/07	12/1/45	1.1 mi. WNW	33° 31'	86° 50'	694	48	11	11			3					WBO & WBAS consolidated at airport.		
NWS Forecast Office 11 West Oxmoor Road	7/24/72	12/31/89	8.75 mi. SW of airport	33° 28'	86° 50'	NA 678	NA #85	NA \$6	NA \$6	NA \$70	NA \$68		NA	NA	NA	NA	WSFO moved from airport with no instrumentation. \$ Instruments installed 10/5/78 # Installed 10/16/78.		
AIRPORT																			
Roberts Field	7/9/30	6/22/31	2 mi. WSW of city office	33° 31'	86° 51'	560	Wind Sock	NA	NA	NA	NA	NA	NA	NA	NA	NA	Airway observations.		
Airport Terminal Bldg. Municipal airport	6/22/31	8/26/65	2 mi. WSW of city office 4.9 mi. NE	33° 34'	86° 45'	610 e620	63 f20	5	NA	NA a53	NA b3	NA c5	3	NA d4	NA	Second Order to 10/16/34 Observations by CAA 10/16/34-1/28/39. a - Installed 7/1/43. b - Installed 12/1/45. c - Installed 10/17/53. d - Telepsychrometer (5') 6/19/54-4/1/61. Hygro. comm. 4/1/61 near Telepsychrometer site and moved 220' NNE 4/22/63. e - Effective 6/2/63 f - Moved to field 6/3/63.			
FSS/Wea. Bur. Bldg.+ Municipal Airport	8/26/65	Present	0.5 mi. ENE	33° 34'	86° 45'	620	22	NA	NA	19 h	4	5 h j3	3	g4 14	NA	g - Not moved 8/26/65. h - Removed 10/1/78. Station type changed from WBAS to WBO in 1968, to WBFO 10/6/69, to WSFO in 1970, to WSMO 10/19/72, & to FSS 10/1/78. i - Type change 10/16/85 Station type changed from FSS to FCWOS 4/15/86. j - Installed 7/26/87. s - ASOS Commissioned 09/25/98			

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801.
INQUIRIES/COMMENTS CALL: (828) 271-4800 USCOMM-NOAA-ASHEVILLE, N.C. - 475

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