

1999

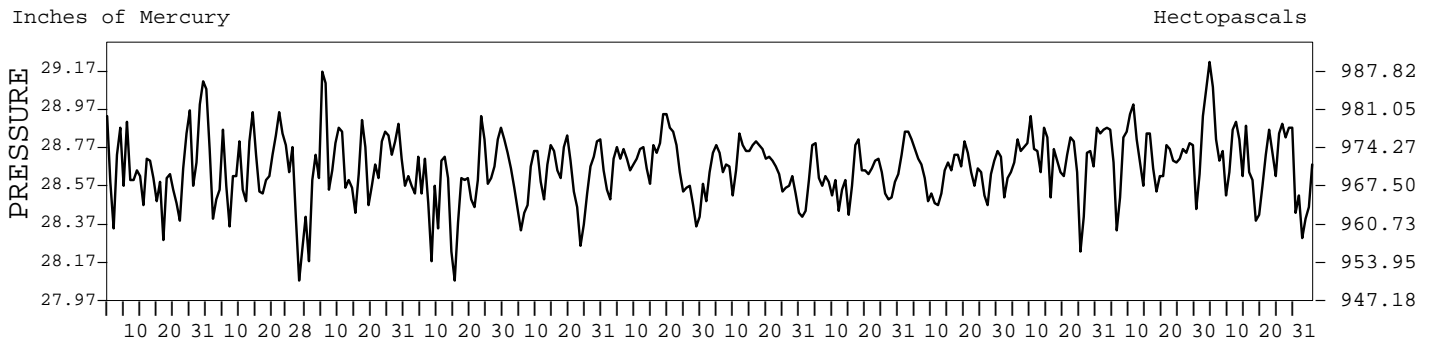
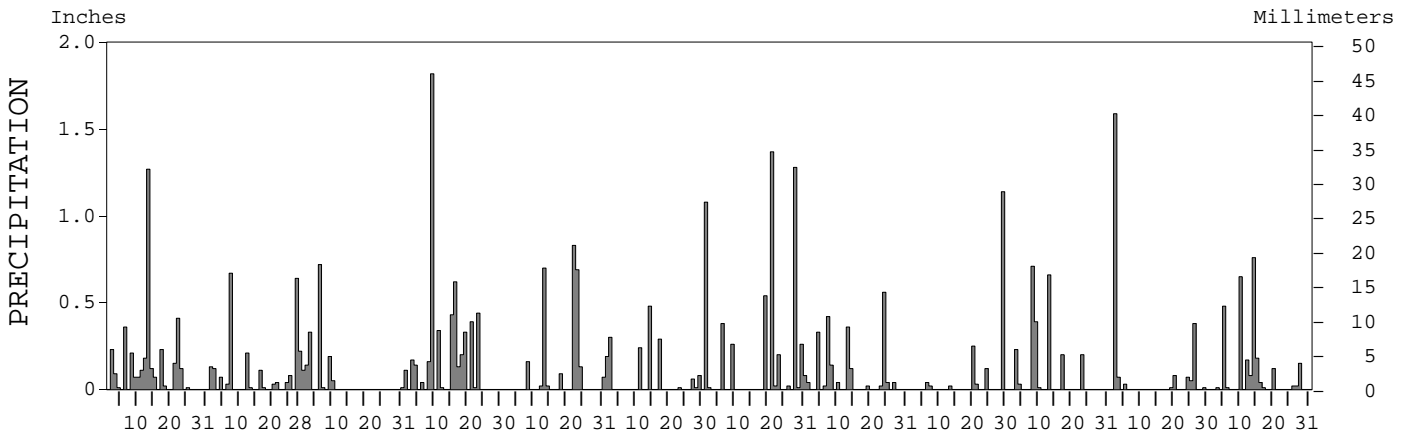
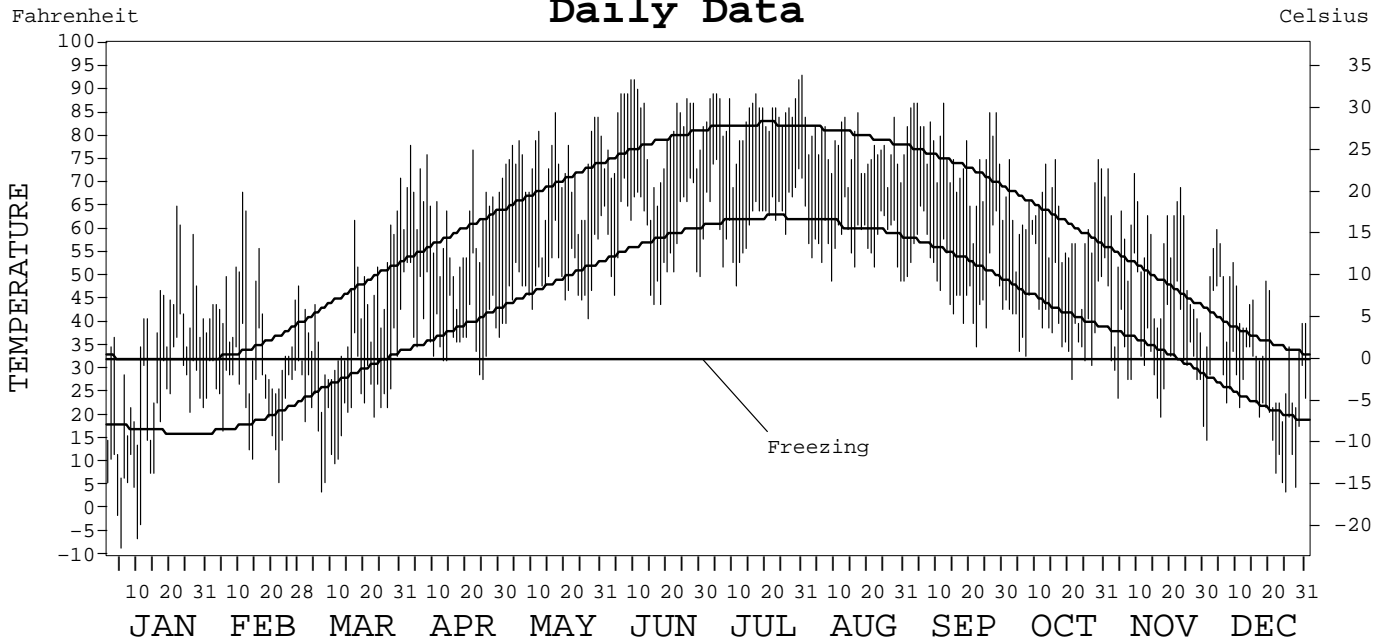
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-3997

MANSFIELD,
OHIO (MFD)

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 1999

MANSFIELD, OH (MFD)

LATITUDE: 40° 49' 13" N LONGITUDE: 82° 31' 04" W ELEVATION (FT): GRND: 1298 BARO: 1298 TIME ZONE: EASTERN (UTC + 5) WBAN: 14891

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	34.9	40.4	42.4	61.9	73.1	80.4	84.4	77.2	76.0	61.7	54.0	38.8	60.4	
	HIGHEST DAILY MAXIMUM	65	68	71	78	85	92	93	85	87	75	73	60	93	
	DATE OF OCCURRENCE	22	11	31	03	17	10+	31	17	12+	29+	01	04	JUL 31	
	MEAN DAILY MINIMUM	17.9	25.0	23.3	39.9	49.5	58.5	62.9	57.6	50.3	41.0	33.9	24.1	40.3	
	LOWEST DAILY MINIMUM	-8	6	4	28	40	44	48	49	35	28	18	4	-8	
	DATE OF OCCURRENCE	05	22	07	25	02+	18+	11	31+	22	21	30	25	JAN 05	
	AVERAGE DRY BULB	26.4	32.7	32.9	50.9	61.3	69.5	73.7	67.4	63.2	51.4	44.0	31.5	50.4	
	MEAN WET BULB	24.2	30.2				62.8		62.4		47.2	40.5			
	MEAN DEW POINT	20.6	25.8				57.9		59.3		42.8	35.7			
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	3	2	0	0	0	0	0	0	5
	MAXIMUM ≤ 32°	10	8	8	0	0	0	0	0	0	0	1	8	35	
	MINIMUM ≤ 32°	28	25	26	4	0	0	0	0	0	3	15	24	125	
MINIMUM ≤ 0°	4	0	0	0	0	0	0	0	0	0	0	0	4		
H/C	HEATING DEGREE DAYS	1190	897	987	416	138	51	8	13	121	415	621	1031	5888	
	COOLING DEGREE DAYS	0	0	0	2	32	191	281	97	74	0	0	0	677	
RH	MEAN (PERCENT)	81	78	69	69	62	69	76	77	68	75	74	78	73	
	HOUR 01 LST	83	77	73	79	71	81	88	89	80	84	80	82	81	
	HOUR 07 LST	85	82	83	80	72	80	89	91	88	88	85	85	84	
	HOUR 13 LST	75	72	59	56	50	55	60	61	50	60	62	70	61	
	HOUR 19 LST	81	77	64	64	58	60	71	71	62	73	72	77	69	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	6	2	1	3	1	0	4	2	4	1	3	2	29	
	THUNDERSTORMS	0	0	0	4	2	2	8	3	1	1	0	0	21	
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.)	28.66	28.63	28.67	28.56	28.61	28.67	28.65	28.62	28.63	28.72	28.73	28.67	28.65	
	MEAN SEA-LEVEL PRESS. (IN.)	30.11	30.06					30.02	30.00		30.12	30.14	30.10		
WINDS	RESULTANT SPEED (MPH)	5.6	4.2	2.9	1.0	2.6	2.1	1.0	1.1		3.8	4.8	6.1		
	RES. DIR. (TENS OF DEGS.)	22	23	31	22	24	19	25	31		23	24	22		
	MEAN SPEED (MPH)	12.1	10.6	10.3	10.3	8.5	8.0	7.4	7.1	7.4	9.2	9.9	10.6	9.3	
	PREVAIL. DIR. (TENS OF DEGS.)	25	20	22	02	17	16	24	34	17	17	18	20	17	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	34	34	32	38	34	26	39	26	26	40	29	32	40	
	DIR. (TENS OF DEGS.)	21	20	21	22	19	23	26	21	01	32	21	22	32	
	DATE OF OCCURRENCE	18	12	17	06	06	01	09	10	16	13	24+	29	OCT 13	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	44	46	40	46	45	45	51	32	36	49	37	44	51	
DIR. (TENS OF DEGS.)	25	19	21	24	24	28	32	22	35	32	21	22	32		
DATE OF OCCURRENCE	18	12	17	06	06	11	21+	10	16	13	05	29	JUL 21+		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.73	2.41	1.56	5.34	2.71	1.66	5.51	2.15	1.62	2.43	2.29	2.70	34.11	
	GREATEST 24-HOUR (IN.)	0.63	0.80	0.72	1.98	0.83	0.48	1.37	0.60	1.14	0.96	1.62	0.76	1.98	
	DATE OF OCCURRENCE	12-13	27-28	06	08-09	22	14	21	24-25	29	08-09	02-03	14	APR 08-09	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	18	15	8	16	9	9	13	13	7	8	9	14	139	
PRECIPITATION ≥ 0.10	11	7	5	13	5	5	8	6	3	6	2	7	78		
PRECIPITATION ≥ 1.00	1	0	0	1	0	0	0	0	1	0	1	0	7		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	22.0	10.3	11.9	T	0.0	0.0	0.0	0.0	0.0	T	2.3	4.7	51.2	
	GREATEST 24-HOUR (IN.)	5.6	2.4	4.8	T	0.0	0.0	0.0	0.0	0.0	T	1.5	3.0	5.6	
	DATE OF OCCURRENCE	13	25	09	17	0	0	0	0	0	22	02	28	JAN 13	
	MAXIMUM SNOW DEPTH (IN.)		1	7	0	0	0	0	0	0	0	1	4		
	DATE OF OCCURRENCE		25+	09								03+	29		
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	6	5	4	0	0	0	0	0	0	0	1	1	17		

NORMALS, MEANS, AND EXTREMES

MANSFIELD, OH (MFD)

LATITUDE: 40° 49' 13" N LONGITUDE: 82° 31' 04" W ELEVATION (FT): GRND: 1298 BARO: 1298 TIME ZONE: EASTERN (UTC + 5) WBAN: 14891

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	32.1	35.0	46.6	58.6	69.3	78.2	82.1	80.1	73.7	62.3	49.2	36.8	58.7
	MEAN DAILY MAXIMUM	46	33.1	35.9	45.4	58.2	69.0	78.4	82.0	79.9	73.4	62.4	48.5	36.7	58.6
	HIGHEST DAILY MAXIMUM	40	65	68	82	86	92	101	100	97	93	85	78	73	101
	YEAR OF OCCURRENCE		1999	1999	1986	1990	1962	1988	1988	1988	1964	1963	1968	1982	JUN 1988
	MEAN OF EXTREME MAXS.	46	55.4	57.3	70.5	78.4	84.0	89.8	91.2	89.2	86.5	79.0	68.7	58.5	75.7
	NORMAL DAILY MINIMUM	30	16.8	18.9	28.6	38.2	48.3	57.3	62.0	60.4	54.0	43.1	33.9	22.7	40.4
	MEAN DAILY MINIMUM	46	18.3	20.0	27.8	37.9	48.2	57.7	61.9	60.1	53.3	43.1	33.2	23.0	40.4
	LOWEST DAILY MINIMUM	40	-22	-11	-6	8	25	37	43	40	33	20	2	-17	-22
	YEAR OF OCCURRENCE		1994	1982	1980	1982	1966	1990	1988	1965	1995	1988	1976	1989	JAN 1994
	MEAN OF EXTREME MINS.	46	-4.3	-3	8.6	21.8	33.4	43.8	49.7	48.3	38.3	27.8	17.3	2.2	23.9
	NORMAL DRY BULB	30	24.5	27.0	37.6	48.4	58.8	67.8	72.1	70.3	63.9	52.7	41.6	29.8	49.5
	MEAN DRY BULB	46	25.7	27.9	36.7	48.0	58.8	68.0	71.9	70.0	63.5	52.7	40.9	29.8	49.5
	MEAN WET BULB	15	25.4	27.2	34.5	44.4	54.1	62.9	66.7	61.1	54.9	48.1	36.2	29.1	45.4
	MEAN DEW POINT	15	19.7	22.2	28.3	37.4	48.2	58.0	62.5	57.6	50.8	42.8	31.6	25.2	40.4
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.1	1.1	3.1	1.3	0.5	0.0	0.0	0.0	6.1	
MAXIMUM ≤ 32°	30	16.3	12.0	4.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.5	12.0	46.5	
MINIMUM ≤ 32°	30	28.1	24.5	20.9	9.2	0.8	0.0	0.0	0.0	0.0	4.0	14.6	25.6	127.7	
MINIMUM ≤ 0°	30	3.8	2.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	7.8	
H/C	NORMAL HEATING DEG. DAYS	30	1256	1064	849	498	229	43	0	20	110	396	702	1091	6258
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	37	127	225	185	77	15	0	0	666
RH	NORMAL (PERCENT)	30	76	74	71	65	68	71	71	75	75	70	75	78	72
	HOUR 01 LST	30	78	76	75	72	76	81	82	84	83	76	77	79	78
	HOUR 07 LST	30	80	81	80	76	78	80	83	87	87	82	81	82	81
	HOUR 13 LST	30	71	69	64	56	56	58	57	60	60	58	67	74	62
	HOUR 19 LST	30	75	72	68	60	62	64	64	69	72	68	74	77	69
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	40	2.5	3.2	3.2	1.7	2.2	1.2	1.5	2.6	2.0	2.1	2.1	3.7	28.0
	THUNDERSTORMS	40	0.2	0.4	1.8	3.5	4.5	6.4	6.1	5.6	2.9	0.9	0.8	0.1	33.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	30	6.2	6.1	5.9	5.5	5.2	4.8	4.4	4.5	4.6	4.7	6.0	6.3	5.3
	MIDNIGHT-MIDNIGHT (OKTAS)	17	5.6	5.3	5.3	4.8	4.5	4.3	4.1	4.0	4.1	4.1	5.6	5.9	4.8
	MEAN NO. DAYS WITH:														
	CLEAR	30	4.0	3.8	4.8	5.6	6.9	7.3	7.8	8.4	8.7	8.8	4.0	3.5	73.6
PARTLY CLOUDY	30	6.4	6.4	7.0	8.0	9.5	11.6	13.3	11.3	8.8	7.9	5.9	4.9	101.0	
CLOUDY	30	20.6	18.0	19.2	16.4	14.6	11.2	9.9	11.3	12.5	14.3	20.1	22.6	190.7	
PR	MEAN STATION PRESSURE (IN)	2	28.64	28.61	28.62	28.55	28.57	28.60	28.62	28.65	28.62	28.71	28.65	28.63	28.62
	MEAN SEA-LEVEL PRES. (IN)	15	30.10	30.08	30.06	29.98	30.01	29.99	30.04	30.03	29.99	30.11	30.07	30.11	30.05
WINDS	MEAN SPEED (MPH)	9	13.1	12.2	12.6	11.5	10.0	9.2	8.3	7.6	8.3	9.4	11.1	11.8	10.4
	PREVAIL. DIR (TENS OF DEGS)	4	24	24	27	23	23	21	24	23	18	18	23	21	23
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	38	41	43	38	37	40	39	32	30	40	39	36	43
	DIR. (TENS OF DEGS)		22	24	22	22	25	30	26	33	24	32	23	21	22
	YEAR OF OCCURRENCE		1997	1997	1997	1999	1997	1998	1999	1997	1997	1999	1998	1998	MAR 1997
	MAXIMUM 5-SECOND:														
SPEED (MPH)	3	49	55	52	47	47	46	51	40	40	49	48	45	55	
DIR. (TENS OF DEGS)		20	25	22	26	26	31	32	33	25	32	20	21	25	
YEAR OF OCCURRENCE		1997	1997	1997	1997	1997	1998	1999	1997	1997	1999	1998	1998	FEB 1997	
PRECIPITATION	NORMAL (IN)	30	1.98	2.02	3.30	3.64	4.35	3.95	4.04	4.08	3.38	2.34	3.51	3.07	39.66
	MAXIMUM MONTHLY (IN)	40	5.69	4.74	7.04	8.68	8.83	10.00	13.23	8.65	7.76	6.45	12.82	11.19	13.23
	YEAR OF OCCURRENCE		1995	1990	1964	1996	1989	1981	1992	1995	1986	1995	1985	1990	JUL 1992
	MINIMUM MONTHLY (IN)	40	0.41	0.29	1.16	0.75	1.50	0.56	0.94	0.63	0.70	0.43	0.70	0.74	0.29
	YEAR OF OCCURRENCE		1981	1978	1960	1971	1961	1988	1975	1970	1998	1963	1976	1976	FEB 1978
	MAXIMUM IN 24 HOURS (IN)	40	2.10	2.79	2.45	2.66	2.62	3.72	5.06	3.85	4.10	3.39	3.17	3.55	5.06
	YEAR OF OCCURRENCE		1992	1961	1964	1996	1989	1978	1969	1972	1979	1995	1993	1990	JUL 1969
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	12.9	11.7	14.4	13.4	12.9	10.7	9.5	10.3	9.1	9.6	12.9	14.0	141.4	
PRECIPITATION ≥ 1.00	30	0.2	0.2	0.5	0.8	0.9	1.0	1.2	1.1	1.0	0.3	0.6	0.6	8.4	
SNOWFALL	NORMAL (IN)	30	11.4	10.1	6.7	2.0	0.1	0.0	0.0	0.0	0.1	2.4	8.7	41.5	
	MAXIMUM MONTHLY (IN)	39	42.1	19.1	17.1	13.4	1.4	T	0.0	0.0	T	10.3	7.4	23.4	
	YEAR OF OCCURRENCE		1978	1984	1993	1982	1966	1995			1970	1993	1980	1995	JAN 1978
	MAXIMUM IN 24 HOURS (IN)	39	12.0	10.0	8.0	11.8	1.4	T	0.0	0.0	T	8.6	3.2	12.3	
	YEAR OF OCCURRENCE		1968	1985	1987	1987	1966	1995			1970	1993	1966	1974	DEC 1974
	MAXIMUM SNOW DEPTH (IN)	42	22	20	13	10	0	0	0	0	0	2	13	15	
	YEAR OF OCCURRENCE		1978	1978	1984	1987						1993	1950	1995	JAN 1978
	NORMAL NO. DAYS WITH:														
SNOWFALL ≥ 1.0	30	3.7	3.3	2.3	0.5	0.1	0.0	0.0	0.0	0.0	0.*	0.9	3.0	13.8	

PRECIPITATION (inches) 1999 MANSFIELD, OH (MFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.02	0.93	1.27	5.27	5.17	1.86	5.67	0.63	4.65	2.69	3.24	2.39	34.79
1971	1.40	2.58	1.78	0.75	4.24	1.29	3.79	2.18	2.41	1.15	1.11	3.42	26.10
1972	0.95	1.15	2.49	5.98	3.07	3.75	3.11	5.74	6.85	1.52	4.30	2.79	41.70
1973	1.83	1.39	4.21	3.35	4.15	7.07	4.35	4.00	1.38	3.59	3.19	2.85	41.36
1974	3.59	1.59	4.14	2.47	5.65	1.90	2.93	7.60	3.41	0.79	5.15	2.64	41.86
1975	3.33	3.74	2.69	1.95	4.01	2.36	0.94	5.63	4.97	2.19	1.59	2.92	36.32
1976	2.69	2.99	3.96	1.37	2.35	4.34	2.55	3.16	3.61	2.43	0.70	0.74	30.89
1977	0.79	1.17	4.26	3.25	1.99	3.69	4.93	3.40	4.56	1.75	3.04	4.15	36.98
1978	3.76	0.29	2.29	4.70	4.20	4.98	1.70	3.20	1.10	4.89	1.96	4.78	37.85
1979	3.29	1.74	1.81	5.63	5.25	4.82	2.55	6.78	5.64	1.39	4.93	2.28	46.11
1980	1.30	1.44	5.72	3.34	4.11	6.31	5.01	4.41	2.45	1.98	2.01	2.15	40.23
1981	0.41	3.41	1.71	5.62	4.49	10.00	2.04	5.08	4.41	2.62	1.53	3.50	44.82
1982	4.53	1.76	5.18	1.93	3.73	6.09	4.08	5.09	2.52	0.99	6.82	4.68	47.40
1983	1.67	1.16	2.43	5.80	5.68	2.92	4.61	4.51	5.16	4.60	6.49	3.37	48.40
1984	1.22	2.91	4.68	5.48	6.23	1.25	3.55	4.43	3.78	3.71	4.15	4.41	45.80
1985	1.49	2.09	6.17	1.42	6.57	3.13	3.00	6.90	1.63	2.46	12.82	3.17	50.85
1986	1.62	4.34	3.92	3.51	3.72	6.67	8.56	4.00	7.76	4.57	3.94	3.71	56.32
1987	1.35	0.82	3.06	4.00	3.76	8.87	6.92	7.44	0.81	2.42	1.60	3.01	44.06
1988	2.04	3.23	2.63	3.89	2.84	0.56	4.90	5.34	2.60	2.29	5.41	2.44	38.17
1989	2.82	1.94	4.29	3.74	8.83	6.40	3.96	0.64	3.10	3.20	4.42	2.06	45.40
1990	2.39	4.74	1.74	4.58	7.79	5.21	9.59	6.95	4.94	5.66	2.44	11.19	67.22
1991	2.65	1.55	3.56	4.70	4.05	1.02	1.97	3.50	3.09	1.86	1.81	2.78	32.54
1992	3.59	2.09	3.21	4.17	3.00	3.05	13.23	2.62	4.07	2.68	7.63	2.35	51.69
1993	5.54	2.02	5.70	6.12	2.52	6.02	1.92	0.94	5.50	3.19	7.23	2.53	49.23
1994	2.52	0.84	2.10	6.96	2.95	5.91	3.67	5.01	1.99	1.01	4.09	4.01	41.06
1995	5.69	1.53	2.53	4.85	6.13	5.19	2.38	8.65	1.19	6.45	4.14	2.07	50.80
1996	5.05	3.36	5.52	8.68	3.70	5.34	3.21	2.86	6.25	2.33	2.49	4.27	53.06
1997	1.78	1.73	3.32	2.21	7.88	3.79	5.04	4.55	3.06	1.39	1.84	2.27	38.86
1998	2.96	2.50	1.97	4.81	1.95	7.29	3.41	5.96	0.70	2.84	1.55	1.55	37.49
1999	3.73	2.41	1.56	5.34	2.71	1.66	5.51	2.15	1.62	2.43	2.29	2.70	34.11
POR= 40 YRS	2.38	2.03	3.25	3.97	4.22	4.05	4.13	3.99	3.16	2.38	3.44	2.88	39.88

WBAN : 14891

AVERAGE TEMPERATURE (°F) 1999 MANSFIELD, OH (MFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	20.1	27.6	34.4	50.6	62.0	69.9	73.7	73.6	69.1	56.4	42.3	32.3	51.0
1971	22.4	28.9	34.1	46.0	56.4	71.3	70.3	68.6	67.8	60.0	40.7	37.6	50.3
1972	27.9	27.3	36.2	47.7	61.4	66.0	73.5	70.5	65.7	49.6	38.6	33.6	49.8
1973	30.0	27.8	47.5	50.0	57.9	71.8	73.5	73.6	67.4	58.2	45.1	32.7	53.0
1974	32.0	28.2	37.4	51.9	58.2	66.3	72.7	71.7	59.9	51.5	41.7	30.2	50.1
1975	29.8	29.7	33.9	42.2	62.4	68.5	72.9	72.6	58.7	54.1	45.8	29.9	50.0
1976	20.8	34.6	42.3	49.1	55.3	67.6	69.2	66.0	59.2	45.3	31.3	20.7	46.8
1977	8.7	23.6	42.0	51.3	63.3	63.5	74.1	70.1	65.8	50.5	43.4	27.4	48.6
1978	18.3	15.4	31.6	47.2	58.1	68.4	71.2	71.8	68.5	50.3	41.9	31.1	47.8
1979	18.6	16.4	40.8	46.2	56.6	66.6	68.6	68.2	62.8	50.8	40.9	31.9	47.4
1980	25.7	21.4	33.9	46.9	58.3	62.8	72.7	73.9	65.2	49.0	39.5	30.4	48.3
1981	22.3	32.4	37.0	51.8	57.1	69.7	72.8	70.5	62.8	51.3	43.4	28.5	50.0
1982	18.6	24.8	36.1	43.2	64.1	62.4	70.9	67.2	60.9	54.6	44.1	39.5	48.9
1983	29.2	33.1	40.6	47.5	56.5	69.7	75.6	74.9	65.5	53.9	44.4	22.3	51.1
1984	20.2	34.5	28.7	48.5	55.9	72.2	70.1	71.1	61.0	58.3	41.0	38.2	50.0
1985	21.0	25.2	42.0	54.4	60.7	63.0	70.7	68.6	64.8	54.4	45.2	23.1	49.4
1986	26.4	28.2	39.7	51.8	61.1	67.4	72.7	67.5	66.2	53.8	38.8	31.2	50.4
1987	26.2	31.1	39.6	49.0	62.8	69.7	73.9	70.1	63.7	46.7	45.1	32.8	50.9
1988	23.9	24.7	36.7	47.0	60.7	68.4	75.6	73.3	62.9	45.1	42.4	29.1	49.2
1989	34.5	24.3	38.8	45.4	55.8	67.5	72.5	69.5	62.7	52.6	38.8	17.0	48.3
1990	34.5	34.1	42.0	48.5	55.8	67.1	70.0	68.9	62.9	52.8	44.0	34.7	51.3
1991	26.2	32.3	41.1	52.8	67.5	71.1	74.1	71.8	63.4	55.2	38.0	32.5	52.2
1992	28.2	32.1	36.2	47.6	57.2	64.2	70.5	66.5	61.5	48.6	41.0	32.3	48.8
1993	30.6	24.2	33.7	47.6	59.4	67.2	73.9	71.3	61.0	49.9	40.7	29.4	49.1
1994	17.8	25.2	35.4	49.8	54.3	69.2	71.7	67.7	62.8	53.2	46.2	36.2	49.1
1995	27.3	24.5	40.4	46.7	58.6	71.0	74.1	76.2	61.6	54.8	36.1	25.7	49.8
1996	24.7	26.2	30.8	45.8	57.1	69.2	69.1	70.4	62.2	51.9	33.8	33.4	47.9
1997	23.9	32.2	38.4	44.8	52.1	67.6	70.3	66.3	61.6	51.5	37.0	31.3	48.1
1998	33.5	37.3	39.7	48.7	64.2	67.5	70.3	70.8	66.0	52.3	43.0	34.9	52.4
1999	26.4	32.7	32.9	50.9	61.3	69.5	73.7	67.4	63.2	51.4	44.0	31.5	50.4
POR= 40 YRS	24.8	27.5	37.0	48.4	58.8	67.7	71.9	70.1	63.7	52.5	41.2	29.8	49.5

HEATING DEGREE DAYS (base 65°F) 1999 MANSFIELD, OH (MFD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	6	0	53	275	674	1006	1316	1004	955	563	275	16	6143
1971-72	3	12	54	170	722	840	1143	1085	886	515	143	71	5644
1972-73	9	16	70	471	783	966	1078	1037	534	453	219	1	5637
1973-74	1	8	51	223	588	995	1017	1022	847	402	234	56	5444
1974-75	0	0	175	413	695	1073	1085	983	956	676	142	45	6243
1975-76	2	4	188	343	570	1078	1367	870	699	494	307	30	5952
1976-77	8	56	185	606	1006	1369	1743	1155	708	421	128	112	7497
1977-78	9	24	63	442	643	1159	1442	1380	1028	530	259	39	7018
1978-79	12	6	63	449	686	1044	1433	1353	744	557	290	54	6691
1979-80	38	39	118	453	719	1018	1214	1256	956	535	217	115	6678
1980-81	4	3	86	490	757	1067	1318	908	859	389	259	12	6152
1981-82	5	7	128	418	637	1127	1434	1120	887	645	79	106	6593
1982-83	8	41	161	325	624	786	1102	886	751	521	266	39	5510
1983-84	8	0	106	347	613	1319	1383	880	1123	493	298	5	6575
1984-85	9	9	172	214	713	825	1361	1108	706	344	177	88	5726
1985-86	2	11	128	323	587	1293	1191	1025	783	403	174	52	5972
1986-87	4	56	72	354	783	1043	1196	945	782	476	168	29	5908
1987-88	5	24	88	562	593	993	1266	1165	870	534	178	71	6349
1988-89	7	13	97	617	672	1111	940	1135	812	578	312	37	6331
1989-90	3	12	132	394	779	1483	939	859	716	517	282	61	6177
1990-91	13	9	135	375	623	931	1197	909	735	377	92	15	5411
1991-92	0	1	143	321	803	999	1131	948	886	524	259	82	6097
1992-93	14	42	158	501	716	1008	1060	1135	961	516	192	62	6365
1993-94	0	8	158	460	722	1096	1456	1107	910	463	341	51	6772
1994-95	7	38	115	361	558	883	1159	1125	758	542	209	10	5765
1995-96	6	0	130	313	860	1209	1242	1121	1053	571	291	26	6822
1996-97	17	0	131	402	930	973	1266	912	820	598	392	48	6489
1997-98	9	41	124	442	837	1039	967	767	788	483	93	83	5673
1998-99	5	4	64	392	655	926	1190	897	987	416	138	51	5725
1999-	8	13	121	415	621	1031							

WBAN : 14891

COOLING DEGREE DAYS (base 65°F) 1999 MANSFIELD, OH (MFD)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	17	71	181	284	271	184	16	0	0	1024
1971	0	0	0	0	16	211	175	131	147	25	0	0	705
1972	0	0	0	0	35	109	279	198	102	0	0	0	723
1973	0	0	0	11	8	210	272	282	129	19	0	0	931
1974	0	0	0	16	30	103	246	215	27	2	1	0	640
1975	0	0	0	0	68	160	254	247	8	9	0	0	746
1976	0	0	0	21	12	117	145	91	16	0	0	0	402
1977	0	0	0	18	84	72	299	190	96	0	1	0	760
1978	0	0	0	0	50	146	209	226	174	0	0	0	805
1979	0	0	0	4	38	109	157	146	60	17	0	0	531
1980	0	0	0	0	17	57	249	285	102	1	0	0	711
1981	0	0	0	2	20	159	255	186	68	3	0	0	693
1982	0	0	0	1	59	33	197	118	47	11	3	3	472
1983	0	0	0	4	12	185	344	313	127	9	0	0	994
1984	0	0	0	6	22	228	176	205	57	14	0	0	708
1985	0	0	0	36	53	36	187	129	129	0	0	0	570
1986	0	0	6	15	60	129	247	139	118	11	0	0	725
1987	0	0	0	3	108	176	287	189	56	0	2	0	821
1988	0	0	0	0	49	182	343	281	40	6	0	0	901
1989	0	0	4	0	33	116	243	160	71	15	0	0	642
1990	0	0	10	28	6	131	175	139	80	5	0	0	574
1991	0	0	0	19	177	205	287	219	104	25	0	0	1036
1992	0	0	0	7	25	66	191	94	60	0	0	0	443
1993	0	0	0	0	24	136	285	211	44	2	0	0	702
1994	0	0	0	14	16	183	220	129	51	0	0	0	613
1995	0	0	0	0	16	196	295	356	37	4	0	0	904
1996	0	0	0	0	54	156	151	175	54	0	0	0	590
1997	0	0	0	0	0	135	176	86	28	31	0	0	456
1998	0	0	14	0	72	163	174	189	99	5	0	0	716
1999	0	0	0	2	32	191	281	97	74	0	0	0	677

SNOWFALL (inches) 1999 MANSFIELD, OH (MFD)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	T	0.0	1.7	5.4	7.2	15.9	13.5	T	0.0	0.0	43.7
1971-72	0.0	0.0	0.0	0.0	2.8	1.7	7.1	9.9	5.9	1.4	0.0	0.0	28.8
1972-73	0.0	0.0	0.0	T	4.4	9.1	3.2	9.0	3.3	1.3	T	0.0	30.3
1973-74	0.0	0.0	0.0	0.0	0.2	11.0	8.1	11.0	6.3	2.7	0.0	0.0	39.3
1974-75	0.0	0.0	0.0	T	5.2	16.8	10.1	12.4	8.9	0.7	0.0	0.0	54.1
1975-76	0.0	0.0	0.0	0.0	2.7	6.2	14.0	10.8	2.2	1.7	T	0.0	37.6
1976-77	0.0	0.0	0.0	T	4.7	12.8	24.8	10.0	2.0	1.4	0.0	0.0	55.7
1977-78	0.0	0.0	0.0	T	4.2	16.8	42.1	9.6	4.9	T	0.0	0.0	77.6
1978-79	0.0	0.0	0.0	T	0.3	1.3	20.5	10.9	1.3	0.3	0.0	0.0	34.6
1979-80	0.0	0.0	0.0	T	0.4	5.5	6.8	12.6	1.7	0.6	T	0.0	27.6
1980-81	0.0	0.0	0.0	T	7.4	11.5	9.9	7.1	7.5	0.0	0.0	0.0	43.4
1981-82	0.0	0.0	0.0	T	3.3	16.1	16.5	6.6	11.0	13.4	0.0	0.0	66.9
1982-83	0.0	0.0	0.0	0.0	1.0	3.3	1.6	5.9	3.9	0.9	0.0	0.0	16.6
1983-84	0.0	0.0	0.0	0.0	3.7	9.7	11.6	19.1	13.4	0.2	0.0	0.0	57.7
1984-85	0.0	0.0	0.0	0.0	0.7	7.1	20.3	18.2	0.5	2.2	0.0	0.0	49.0
1985-86	0.0	0.0	0.0	0.0	T	13.3	8.6	7.4	5.7	2.8	0.0	0.0	37.8
1986-87	0.0	0.0	0.0	0.0	5.7	0.2	10.5	2.6	10.6	13.0	0.0	0.0	42.6
1987-88	0.0	0.0	0.0	T	0.9	13.8	7.5	11.1	14.9	0.3	0.0	0.0	48.5
1988-89	0.0	0.0	0.0	0.5	2.1	8.1	3.4	6.3	6.0	0.7	1.1	0.0	28.2
1989-90	0.0	0.0	0.0	3.1	0.9	11.9	7.3	5.8	2.4	1.3	0.0	0.0	32.7
1990-91	0.0	0.0	0.0	0.0	T	6.0	7.0	9.1	2.7	T	0.0	0.0	24.8
1991-92	0.0	0.0	0.0	0.0	3.1	4.2	19.1	2.2	4.6	4.2	0.0	0.0	37.4
1992-93	0.0	0.0	0.0	1.1	2.6	7.3	5.5	15.1	17.1	0.1	0.0	0.0	48.8
1993-94	0.0	0.0	0.0	10.3	2.2	8.0	20.6	12.2	6.6	1.9	0.0	T	61.8
1994-95	0.0	0.0	0.0	0.0	T	3.0	15.1	7.8	3.9	0.3	0.0	T	30.1
1995-96	0.0	0.0	0.0	T	4.1	23.4	30.4		16.8	5.4			
1996-97													
1997-98							2.1	0.2	5.8	0.0	0.0	0.0	
1998-99	0.0	0.0	0.0	0.0	0.0	3.1	22.0	10.3	11.9	T	0.0	0.0	47.3
1999-	0.0	0.0	0.0	T	2.3	4.7							
POR= 38 YRS	0.0	0.0	T	0.4	2.3	8.6	11.6	9.5	7.1	1.8	0.1	T	41.4

WBAN : 14891

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
MANSFIELD,
OHIO (MFD)

Mansfield is in the north central highlands at the geographical and climatological junction of central Ohio, northwest Ohio, and northeast Ohio. The station is on a plateau 3 miles north of the city of Mansfield and surrounded by rolling open farmland. The general elevation ranges from around 1,300 to 1,400 feet above sea level with the 1,000-foot contour east to west some 15 miles to the north. The climate is continental, with the modifying effects of Lake Erie most pronounced in winter. Lake Erie is just 38 miles due north.

The lake influence, plus the elevation, produce cloudy skies and considerable snow shower activity from late November into April with any wind flow from northwest through northeast. Because of this, any windshift with a cold frontal passage in winter does not bring the clearing skies, indeed, more snow is often measured from the flurry activity behind the front than from the pre-frontal conditions. A frozen Lake Erie will allow clearing skies, but an open lake dictates overcast and snow flurries. Usually the lake is open enough to set off the flurries and cloudy conditions. The major snow producer will be an intense storm moving out of the southwest with the Gulf of Mexico moisture available. Snow cover is almost constant from December through March due to almost daily snow flurries, but the depth of cover is rarely more than 8 inches. Daytime winter temperatures are not above the freezing mark too often.

Spring is a short period of rapid transition from hard winter to summer conditions. April usually brings abundant shower activity and the crops and vegetation get a quick start.

Summer is a pleasant season with low humidities and no extremely high temperatures. Rarely does the temperature climb above the 90 degree point. Thunderstorms average about once every three days during the season from June through September. Highest winds are associated with the heavier thunderstorms, and while hail does not occur often, it is of major concern to the applegrowers in the area. Flooding problems are confined to the flash-flood type on the small streams in the area.

The growing season is normally about 153 days. Autumn usually produces many clear warm days and cool invigorating nights. Ground fog is at a maximum incidence during the autumn. Little rainfall occurs to interfere with harvest time and county fair time.

STATION LOCATION

MANSFIELD, OHIO

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											AUC	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL	GROUND												
							WIND	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY	EMERGENCY			
Municipal Airport Terminal Building Municipal Airport + + Changed to Lahm Municipal Airport in 1968	11/10/59	10/28/61		40°49'	82°31'	1296	20	6	6		4	4	3						
Lahm Municipal Airport	10/28/61	02/01/96	1000 ft.NE	40°49'	82°31'	b1295	20	c5	c5	NA	NA	4	3	a4	NA	a - Commissioned 2000 feet NW of thermometer site 2/6/65. b - 1297 feet to 2/6/65. c - Standby status after 2/6/65.			
Lahm Municipal Airport	02/01/96	Present	NA	40°49'	82°31'	1298									S	ASOS Commissioned 02/01/96			

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

National Climatic Data Center
151 Patton Avenue, Rm 120
Asheville NC 28801-5001

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