

1999

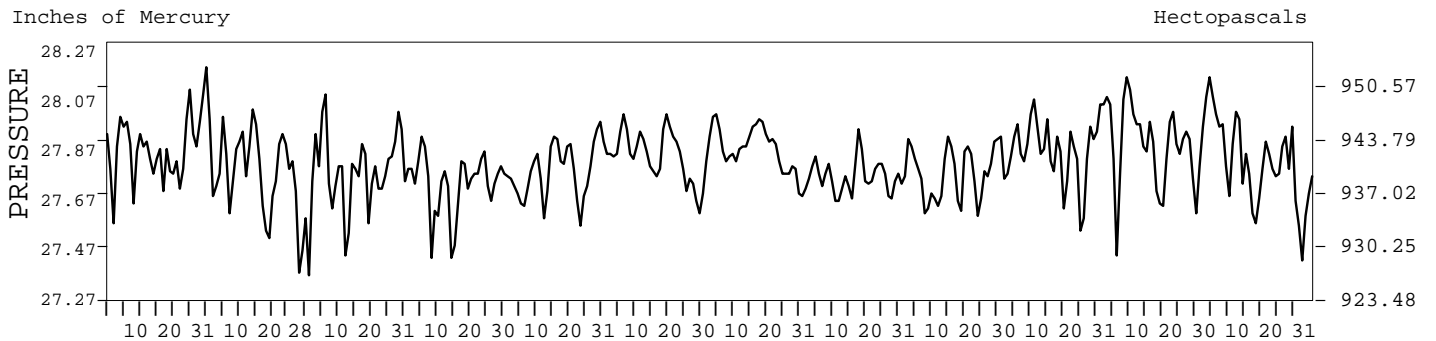
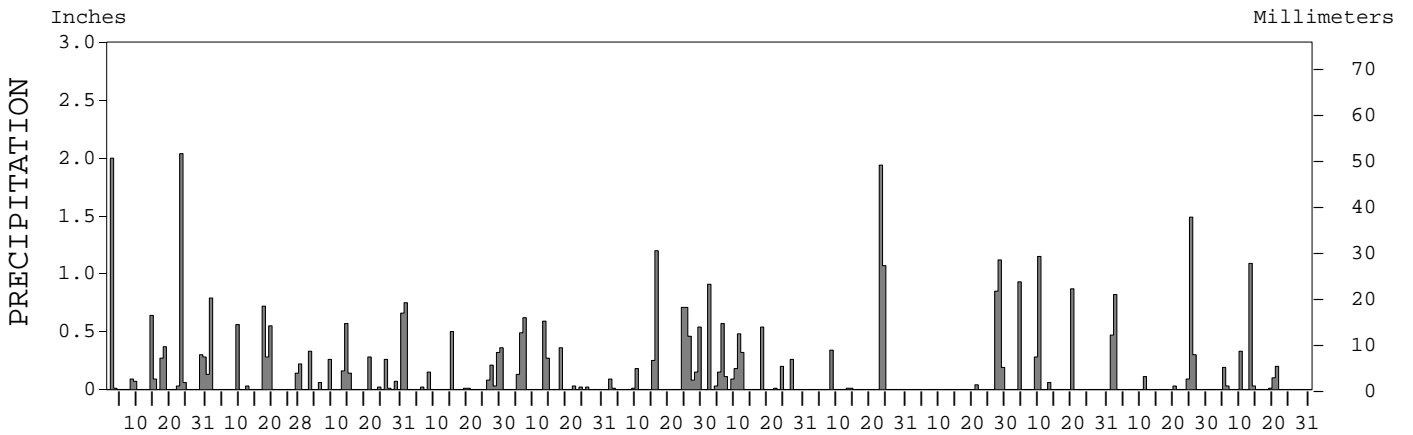
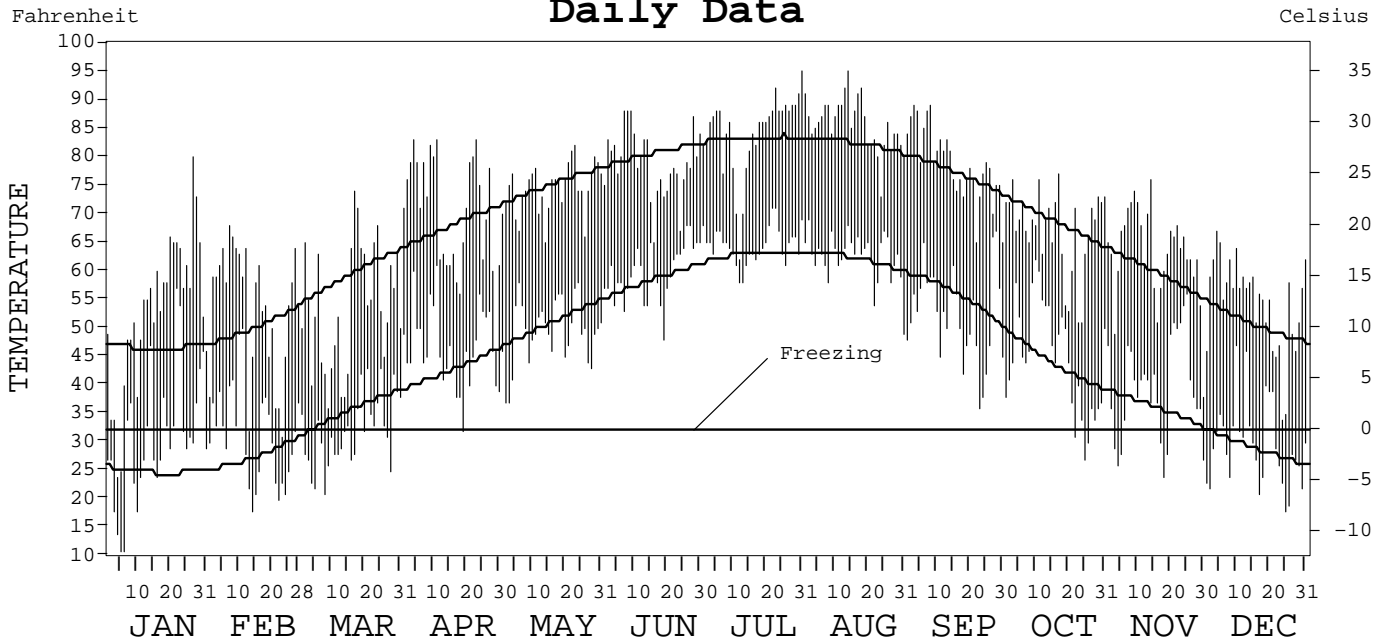
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-3695

## ASHEVILLE, NORTH CAROLINA (AVL)

### Daily Data



I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

*Thomas R. Karl*

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

# METEOROLOGICAL DATA FOR 1999

## ASHEVILLE, NC (AVL)

LATITUDE: 35° 26' 09" N      LONGITUDE: 82° 32' 21" W      ELEVATION (FT): GRND: 2200      BARO: 2200      TIME ZONE: EASTERN (UTC + 5)      WBAN: 03812

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	52.8	53.5	53.7	70.3	74.4	78.9	84.1	85.7	78.8	67.1	63.1	54.3	68.1	
	HIGHEST DAILY MAXIMUM	80	68	74	83	82	88	95	95	89	77	76	67	95	
	DATE OF OCCURRENCE	27	07	17	23+	23	09+	31	14	08+	17	14	04	AUG 14	
	MEAN DAILY MINIMUM	30.6	31.3	32.0	46.7	49.4	59.7	64.5	62.5	52.3	44.8	39.4	29.5	45.2	
	LOWEST DAILY MINIMUM	11	18	21	32	37	48	58	49	36	27	24	18	11	
	DATE OF OCCURRENCE	06+	14	08	19	03+	19	13+	31	23	25	18	25	JAN 06+	
	AVERAGE DRY BULB	41.7	42.4	42.9	58.5	61.9	69.3	74.3	74.1	65.6	56.0	51.3	41.9	56.7	
	MEAN WET BULB		37.7	36.8	51.7	55.9	64.1		67.3	58.8	51.1	46.0	36.0		
	MEAN DEW POINT		31.2	28.2	45.3	51.0	61.5		64.1	53.8	47.2	40.6	28.6		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	0	3	5	0	0	0	0	0	8
	MAXIMUM ≤ 32°	2	2	0	0	0	0	0	0	0	0	0	0	0	4
	MINIMUM ≤ 32°	19	15	17	1	0	0	0	0	0	3	7	22	84	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	718	627	680	210	100	7	6	0	56	274	405	705	3788	
	COOLING DEGREE DAYS	0	0	0	23	9	143	304	291	78	3	0	0	851	
RH	MEAN (PERCENT)	75	70	62	66	71	80	84	75	71	77	72	66	72	
	HOUR 01 LST	83	79	69	76	85	94	96	90	88	90	85	75	84	
	HOUR 07 LST	84	84	78	85	88	93	95	94	91	92	88	80	88	
	HOUR 13 LST	59	55	51	50	52	63	65	54	47	58	53	48	55	
	HOUR 19 LST	72	61	53	57	59	74	79	66	61	72	65	59	65	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	6	3	3	3	2	8	7	2	3	12	7	1	57	
	THUNDERSTORMS	2	1	2	3	4	6	7	4	1	1	0	0	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.)	27.89	27.80	27.77	27.74	27.79	27.85	27.87	27.77	27.78	27.90	27.90	27.81	27.82	
	MEAN SEA-LEVEL PRESS. (IN.)		30.08	30.05		30.02	30.07	30.08	29.97	30.00	30.15	30.17	30.13		
WINDS	RESULTANT SPEED (MPH)	1.1	3.0	4.5	1.4	0.6	0.7	2.0	1.7	3.0	1.4	2.8	2.6	1.9	
	RES. DIR. (TENS OF DEGS.)	33	33	35	32	01	11	34	35	35	35	35	34	35	
	MEAN SPEED (MPH)	6.9	6.4	9.0	7.4	5.1	4.4	4.9	4.9	6.0	5.6	6.5	6.9	6.2	
	PREVAIL. DIR. (TENS OF DEGS.)	32	32	36	36	15	16	01	36	36	16	36	36	36	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	34	30	32	34	23	22	26	23	45	25	36	30	45	
	DIR. (TENS OF DEGS.)	33	31	36	36	35	34	36	35	36	33	32	34	36	
	DATE OF OCCURRENCE	09	04	15+	12	19	29	24	14	16	24+	15	29	SEP 16	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	41	41	44	44	32	26	36	28	54	32	43	38	54	
DIR. (TENS OF DEGS.)	33	32	31	31	02	33	01	36	36	32	36	31	36		
DATE OF OCCURRENCE	09	04	15	12	01	29	24	14	16	23	15+	29	SEP 16		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	6.38	3.29	2.82	2.44	2.53	4.39	3.85	3.37	2.20	3.29	3.31	1.98	39.85	
	GREATEST 24-HOUR (IN.)	2.08	1.00	0.66	0.75	0.84	1.26	0.91	2.91	1.81	1.15	1.75	1.09	2.91	
	DATE OF OCCURRENCE	23-24	17-18	31	01	13-14	24-25	02	23-24	27-28	10	25-26	13	AUG 23-24	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	14	8	12	11	9	12	13	5	4	5	7	8	108	
PRECIPITATION ≥ 0.10	8	7	8	6	6	8	10	3	3	4	5	5	73		
PRECIPITATION ≥ 1.00	2	0	0	0	0	1	0	2	1	1	1	1	9		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	1.6	T	4.2		0.0	0.0	0.0	0.0	0.0	0.0	0.1	T		
	GREATEST 24-HOUR (IN.)	1.6	T	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	T	2.0	
	DATE OF OCCURRENCE	31	28+	26+								02	25+	MAR 26+	
	MAXIMUM SNOW DEPTH (IN.)	1	1	2	0	0	0	0	0	0	0	0	0	2	
	DATE OF OCCURRENCE	04+	01	09										MAR 09	
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	1	0	2	0	0	0	0	0	0	0	0	0	3		

# NORMALS, MEANS, AND EXTREMES

## ASHEVILLE, NC (AVL)

LATITUDE: 35° 26' 09" N      LONGITUDE: 82° 32' 21" W      ELEVATION (FT): GRND: 2200      BARO: 2200      TIME ZONE: EASTERN (UTC + 5)      WBAN: 03812

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	46.5	50.0	59.2	67.8	75.0	80.4	83.0	82.1	76.9	68.3	59.3	50.3	66.6
	MEAN DAILY MAXIMUM	42	47.8	51.1	58.8	68.2	75.2	81.6	84.5	83.2	77.4	68.6	58.3	50.6	67.1
	HIGHEST DAILY MAXIMUM	35	80	78	83	89	93	96	96	100	92	86	81	78	100
	YEAR OF OCCURRENCE		1999	1996	1985	1972	1996	1969	1988	1983	1998	1986	1974	1971	AUG 1983
	MEAN OF EXTREME MAXS.	42	65.5	69.3	76.8	83.0	85.8	90.1	92.1	90.6	87.2	80.9	73.6	67.8	80.2
	NORMAL DAILY MINIMUM	30	24.8	27.4	35.4	42.6	50.9	58.3	62.7	61.9	55.5	43.5	35.7	28.6	43.9
	MEAN DAILY MINIMUM	42	26.6	28.4	34.7	42.2	50.4	58.4	62.8	61.7	55.0	43.1	34.4	28.8	43.9
	LOWEST DAILY MINIMUM	35	-16	-2	2	22	28	35	44	42	30	21	8	-7	-16
	YEAR OF OCCURRENCE		1985	1967	1993	1987	1989	1966	1988	1986	1967	1976	1970	1983	JAN 1985
	MEAN OF EXTREME MINS.	42	8.0	11.1	19.0	27.4	35.0	45.3	54.2	52.0	40.7	27.6	19.0	11.9	29.3
	NORMAL DRY BULB	30	35.7	38.7	47.4	55.2	63.0	69.4	72.8	72.0	66.2	55.9	47.5	39.5	55.3
	MEAN DRY BULB	42	37.3	39.8	46.8	55.3	62.8	70.0	73.7	72.4	66.3	55.9	46.4	39.7	55.5
	MEAN WET BULB	14	33.0	35.7	40.9	48.1	56.8	64.4	67.9	66.8	60.9	50.8	42.2	32.9	50.0
	MEAN DEW POINT	14	27.1	29.1	33.9	40.9	52.6	61.4	65.2	64.5	58.1	46.4	36.7	27.4	45.3
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.1	2.1	4.4	2.5	0.3	0.0	0.0	0.0	9.4
MAXIMUM ≤ 32°	30	3.4	1.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	6.4	
MINIMUM ≤ 32°	30	23.9	20.8	13.3	4.3	0.3	0.0	0.0	0.0	*	4.4	13.0	20.7	100.7	
MINIMUM ≤ 0°	30	0.5	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	
H/C	NORMAL HEATING DEG. DAYS	30	908	736	546	298	117	18	5	5	64	295	525	791	4308
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	55	150	247	222	100	13	0	0	787
RH	NORMAL (PERCENT)	30	73	70	68	66	75	79	82	84	84	78	75	74	76
	HOUR 01 LST	30	80	78	79	78	89	93	95	96	96	91	86	82	87
	HOUR 07 LST	30	85	84	85	85	92	94	96	98	97	94	88	86	90
	HOUR 13 LST	30	59	56	53	50	56	59	63	64	64	57	57	59	58
	HOUR 19 LST	30	67	62	60	56	66	70	74	78	81	74	70	70	69
S	PERCENT POSSIBLE SUNSHINE	32	55	59	61	66	61	62	60	54	56	62	58	55	59
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	36	4.2	2.9	2.2	2.5	5.3	8.3	8.8	12.4	11.2	8.1	4.2	4.5	74.6
	THUNDERSTORMS	36	0.5	0.8	2.3	3.3	6.6	7.9	8.9	7.9	3.1	0.8	0.8	0.3	43.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	32	5.0	4.8	4.9	4.6	5.0	5.0	5.0	5.0	4.8	4.0	4.3	4.7	4.8
	MIDNIGHT-MIDNIGHT (OKTAS)	32	4.9	4.7	4.7	4.4	4.8	4.7	4.8	5.0	4.7	4.0	4.1	4.5	4.6
	MEAN NO. DAYS WITH:														
CLEAR	33	9.1	8.7	8.8	9.6	7.2	6.2	5.0	4.8	6.7	11.6	10.2	9.3	97.2	
PARTLY CLOUDY	33	7.3	6.4	8.1	8.5	10.4	12.0	13.4	13.1	10.2	7.8	6.9	7.0	111.1	
CLOUDY	33	14.6	13.2	14.1	11.8	13.3	11.8	11.7	12.2	12.2	10.7	11.9	13.7	151.2	
PR	MEAN STATION PRESSURE (IN)	27	27.80	27.79	27.80	27.80	27.80	27.80	27.90	27.90	27.90	27.90	27.89	27.80	27.84
	MEAN SEA-LEVEL PRES. (IN)	15	30.12	30.08	30.06	30.01	30.03	30.03	30.07	30.07	30.10	30.14	30.15	30.15	30.08
WINDS	MEAN SPEED (MPH)	35	9.3	9.3	9.3	8.8	6.9	5.9	5.9	5.5	5.6	6.8	8.2	8.8	7.5
	PREVAIL. DIR (TENS OF DEGS)	28	34	34	34	34	34	34	34	34	34	34	34	34	34
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	36	32	34	38	30	32	26	31	45	33	36	31	45
	DIR. (TENS OF DEGS)		32	32	32	32	36	32	36	31	36	32	32	33	36
	YEAR OF OCCURRENCE		1998	1998	1997	1997	1997	1998	1999	1997	1999	1997	1999	1997	SEP 1999
MAXIMUM 5-SECOND:															
SPEED (MPH)	3	45	43	45	46	38	45	36	37	54	38	43	40	54	
DIR. (TENS OF DEGS)		31	32	31	32	31	03	01	32	36	33	36	32	36	
YEAR OF OCCURRENCE		1998	1998	1997	1997	1997	1998	1999	1997	1999	1997	1999	1998	SEP 1999	
PRECIPITATION	NORMAL (IN)	30	3.25	3.91	4.63	3.36	4.43	4.23	4.52	4.69	3.87	3.59	3.59	3.52	47.59
	MAXIMUM MONTHLY (IN)	35	9.96	8.07	9.86	8.70	8.83	10.73	9.92	11.28	9.12	8.82	7.76	8.48	11.28
	YEAR OF OCCURRENCE		1998	1990	1975	1998	1973	1989	1982	1967	1977	1990	1979	1973	AUG 1967
	MINIMUM MONTHLY (IN)	35	0.45	0.44	0.77	0.25	1.06	0.90	0.46	0.52	0.16	0.19	1.19	0.16	0.16
	YEAR OF OCCURRENCE		1981	1978	1985	1976	1988	1990	1986	1981	1984	1991	1981	1965	SEP 1984
	MAXIMUM IN 24 HOURS (IN)	35	4.67	3.47	5.13	3.06	4.95	4.36	4.02	5.10	3.41	4.22	4.03	2.66	5.13
	YEAR OF OCCURRENCE		1998	1982	1968	1973	1973	1997	1969	1990	1975	1995	1977	1973	MAR 1968
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	10.1	9.5	11.3	9.5	11.8	10.8	12.1	12.3	9.3	8.2	9.2	9.8	123.9	
PRECIPITATION ≥ 1.00	30	0.6	0.8	1.2	1.0	1.2	0.9	1.1	1.0	1.0	0.9	1.1	1.0	11.8	
SNOWFALL	NORMAL (IN)	30	5.0	5.3	2.5	0.7	0.0	0.0	0.0	0.0	T	0.8	1.9	16.2	
	MAXIMUM MONTHLY (IN)	35	17.6	25.5	18.2	11.5	T	T	T	T	0.0	T	9.6	16.3	25.5
	YEAR OF OCCURRENCE		1966	1969	1993	1987	1993	1995	1994	1990		1993	1968	1971	FEB 1969
	MAXIMUM IN 24 HOURS (IN)	35	14.0	11.7	16.5	11.5	T	T	T	T	0.0	T	5.7	16.3	16.5
	YEAR OF OCCURRENCE		1988	1969	1993	1987	1993	1995	1994	1990		1993	1968	1971	MAR 1993
	MAXIMUM SNOW DEPTH (IN)	40	14	13	18	12	0	0	0	0	0	0	5	14	18
YEAR OF OCCURRENCE		1988	1969	1993	1987							1968	1971	MAR 1993	
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.4	1.5	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	4.5	

PRECIPITATION (inches) 1999 ASHEVILLE, NC (AVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.75	2.42	2.62	2.96	1.72	2.72	5.02	2.46	1.17	5.55	1.83	2.72	32.94
1971	2.53	4.93	3.48	2.06	3.54	5.00	5.47	3.03	3.80	7.05	2.84	4.32	48.05
1972	3.57	2.02	3.19	1.49	6.63	6.54	4.66	1.88	5.29	4.44	4.42	3.89	48.02
1973	4.26	4.23	8.91	5.71	8.83	3.87	6.95	4.57	3.12	2.41	3.57	8.48	64.91
1974	3.44	4.24	3.18	4.99	5.58	3.73	3.93	7.34	4.13	1.28	4.22	2.38	48.44
1975	3.86	4.56	9.86	0.61	8.17	2.12	3.31	3.63	7.53	3.94	4.89	4.44	56.92
1976	3.51	2.20	4.96	0.25	8.67	5.51	3.18	4.23	3.50	5.59	1.58	4.05	47.23
1977	2.09	1.02	7.29	4.05	3.96	5.11	1.03	3.68	9.12	3.79	6.88	2.43	50.45
1978	7.47	0.44	5.22	2.97	4.65	2.29	0.63	6.91	2.57	0.30	2.49	4.32	40.26
1979	6.81	5.14	5.72	7.26	5.35	2.20	5.52	3.63	5.60	1.40	7.76	1.05	57.44
1980	2.85	0.53	8.26	4.77	4.54	4.68	2.21	2.38	4.36	2.62	3.04	0.59	40.83
1981	0.45	4.80	3.24	2.07	7.50	4.41	2.06	0.52	1.36	2.19	1.19	4.79	34.58
1982	5.41	7.02	1.92	3.62	3.78	3.98	9.92	1.73	1.33	3.48	4.59	4.04	50.82
1983	3.39	5.63	6.27	5.27	3.48	3.71	1.06	0.95	5.66	4.43	4.77	8.30	52.92
1984	2.36	6.43	4.82	4.05	6.62	3.69	5.88	5.02	0.16	2.73	2.61	1.34	45.71
1985	2.95	4.74	0.77	2.74	1.59	1.47	4.37	7.04	1.25	3.41	4.91	0.70	35.94
1986	1.11	1.85	2.75	0.57	3.55	1.28	0.46	6.10	3.15	4.19	5.28	4.28	34.57
1987	3.49	6.17	2.85	3.67	1.87	8.94	1.86	1.79	6.79	0.36	3.09	2.33	43.21
1988	3.71	0.88	1.31	3.46	1.06	0.94	2.65	1.78	2.79	3.12	3.47	1.41	26.58
1989	1.65	4.61	2.91	3.17	5.54	10.73	8.33	4.98	8.17	2.98	4.27	3.29	60.63
1990	3.27	8.07	5.95	1.96	5.09	0.90	6.55	7.78	1.43	8.82	1.55	4.50	55.87
1991	3.25	1.66	6.13	5.38	2.41	5.27	6.07	3.83	1.27	0.19	3.34	4.86	43.66
1992	3.08	3.66	3.52	3.99	6.18	6.62	1.10	7.64	3.15	4.15	7.24	3.71	54.04
1993	3.82	2.03	6.16	3.21	4.59	1.12	2.07	5.29	1.56	1.21	3.32	3.59	37.97
1994	5.35	5.11	7.52	3.30	1.74	5.89	6.76	6.01	5.33	4.27	3.15	3.03	57.46
1995	7.03	2.93	2.42	0.98	6.04	8.89	3.61	9.22	1.95	7.23	3.66	1.43	55.39
1996	7.22	2.71	3.36	2.00	2.55	3.54	4.83	6.68	5.22	0.68	4.45	3.92	47.16
1997	4.44	5.29	5.48	5.26	2.91	8.29	2.97	1.37	4.89	3.90	1.60	2.98	49.38
1998	9.96	6.38	3.71	8.70	2.22	3.64	1.97	2.23	1.62	1.79	2.76	3.04	48.02
1999	6.38	3.29	2.82	2.44	2.53	4.39	3.85	3.37	2.20	3.29	3.31	1.98	39.85
POR= 35 YRS	3.83	3.83	4.51	3.37	4.40	4.32	4.20	4.56	3.59	3.37	3.54	3.36	46.88

WBAN : 03812

AVERAGE TEMPERATURE (°F) 1999 ASHEVILLE, NC (AVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	30.9	39.1	46.8	57.6	63.7	70.1	74.4	73.1	70.7	59.0	46.0	42.8	56.2
1971	36.5	39.5	43.1	55.2	61.1	72.4	72.5	72.2	69.5	61.8	45.8	47.7	56.4
1972	42.1	37.6	46.5	55.8	61.2	66.5	72.3	72.5	69.0	55.0	45.5	45.2	55.8
1973	37.5	38.5	52.7	52.8	60.3	71.0	74.1	74.2	70.0	58.8	49.1	39.8	56.6
1974	48.2	40.5	51.1	54.9	64.2	66.7	72.9	72.3	65.7	54.6	47.4	40.3	56.6
1975	41.7	42.5	44.8	54.1	66.0	68.8	72.4	72.9	65.2	57.3	48.2	38.6	56.0
1976	33.6	45.3	50.6	54.9	59.5	68.1	71.2	70.2	63.1	51.5	41.2	36.2	53.8
1977	24.8	37.4	50.7	58.2	64.6	69.7	75.7	73.8	69.1	54.3	49.3	36.8	55.4
1978	29.3	33.4	45.9	56.8	62.0	71.1	73.4	74.1	70.0	55.7	51.8	41.0	55.4
1979	34.2	35.8	50.0	55.9	64.3	68.8	72.2	73.2	66.5	55.3	49.2	42.0	55.6
1980	40.5	35.1	46.2	56.5	64.8	71.7	77.5	74.8	70.2	54.7	47.1	39.6	56.6
1981	33.3	39.9	44.9	60.1	60.7	74.3	75.0	71.7	66.1	54.5	48.2	35.8	55.4
1982	32.3	41.2	50.0	53.6	67.3	71.5	74.6	71.7	64.5	56.3	47.1	44.9	56.3
1983	36.7	38.8	46.7	51.1	61.6	69.0	75.7	76.5	66.6	57.5	47.3	36.4	55.3
1984	34.0	40.5	44.8	51.7	59.9	70.0	70.6	71.6	62.8	62.7	43.1	46.3	54.8
1985	30.5	38.3	48.1	56.6	62.6	69.8	72.2	70.9	64.2	60.5	56.0	34.7	55.4
1986	35.0	42.2	46.0	56.0	63.3	71.7	76.1	70.9	68.0	57.4	50.7	39.8	56.4
1987	35.3	38.9	46.5	52.6	66.7	71.2	74.7	74.7	66.5	50.1	47.0	42.2	55.5
1988	32.1	37.1	47.1	54.6	61.1	69.3	73.8	74.6	66.3	50.2	46.7	38.7	54.3
1989	42.1	39.8	50.3	54.5	59.4	70.0	73.3	71.9	65.8	56.1	46.2	31.6	55.1
1990	42.8	45.6	50.4	54.2	63.3	70.9	73.8	73.9	67.6	57.8	49.9	45.5	58.0
1991	39.2	42.4	49.6	58.4	67.3	70.3	75.2	72.1	67.3	57.0	45.5	43.4	57.3
1992	40.7	44.2	46.3	55.9	59.9	68.1	74.9	70.4	67.8	54.4	46.2	39.2	55.7
1993	42.0	38.0	43.0	52.6	63.2	71.4	78.0	73.9	67.8	55.0	46.0	36.8	55.6
1994	32.4	40.6	47.3	58.5	60.2	72.6	73.1	71.4	64.6	55.9	50.1	43.6	55.9
1995	38.9	38.4	49.4	56.4	64.1	68.5	75.0	75.3	65.4	56.8	43.3	37.1	55.7
1996	35.3	39.5	41.4	53.6	66.1	69.6	72.0	71.5	64.4	55.8	42.3	40.5	54.3
1997	36.5	43.2	51.5	51.5	58.4	66.5	73.4	70.6	66.1	55.4	42.3	36.9	54.4
1998	41.3	42.2	43.9	54.1	66.5	71.7	74.9	73.4	70.3	58.3	49.2	43.9	57.5
1999	41.7	42.4	42.9	58.5	61.9	69.3	74.3	74.1	65.6	56.0	51.3	41.9	56.7
POR= 35 YRS	36.6	39.4	46.9	55.3	62.8	69.9	73.6	72.5	66.5	56.0	47.0	40.0	55.5

HEATING DEGREE DAYS (base 65°F) 1999 ASHEVILLE, NC (AVL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	29	194	565	682	875	707	672	290	137	0	4151
1971-72	0	0	6	129	576	530	704	790	569	294	116	35	3749
1972-73	3	0	8	304	578	605	846	737	374	362	158	0	3975
1973-74	0	0	7	205	473	772	516	680	423	299	83	24	3482
1974-75	0	0	65	316	519	760	715	624	619	331	46	7	4002
1975-76	0	0	77	232	498	812	966	566	439	296	168	33	4087
1976-77	2	3	83	411	706	884	1239	768	437	198	66	25	4822
1977-78	0	0	14	331	466	868	1101	878	586	241	139	0	4624
1978-79	0	0	12	283	390	741	951	810	457	268	71	18	4001
1979-80	5	0	44	299	468	707	753	861	573	258	65	2	4035
1980-81	0	0	37	315	533	778	978	696	615	152	152	0	4256
1981-82	0	1	57	326	499	897	1006	659	458	333	38	0	4274
1982-83	0	0	74	274	531	616	872	725	562	410	127	13	4204
1983-84	0	0	84	229	527	882	955	706	618	391	176	9	4577
1984-85	1	0	107	91	648	576	1064	737	520	249	109	19	4121
1985-86	0	6	111	156	266	932	923	633	581	273	91	2	3974
1986-87	0	32	16	268	419	774	913	725	567	369	40	1	4124
1987-88	0	0	47	452	532	702	1013	802	545	308	132	31	4564
1988-89	5	0	33	453	544	808	702	698	454	331	200	4	4232
1989-90	1	8	74	279	558	1028	679	535	446	321	91	3	4023
1990-91	0	0	55	229	445	601	793	627	472	204	53	16	3495
1991-92	0	1	64	242	578	663	748	596	573	274	169	25	3933
1992-93	0	0	34	324	558	794	708	751	677	365	82	9	4302
1993-94	0	0	44	310	563	866	1005	676	544	206	165	0	4379
1994-95	0	1	52	276	441	656	803	736	474	264	87	17	3807
1995-96	0	0	50	255	645	856	912	735	725	341	78	20	4617
1996-97	0	0	76	284	673	753	876	601	412	400	212	64	4351
1997-98	0	5	35	292	675	863	727	631	647	322	71	23	4291
1998-99	0	0	11	214	465	649	718	627	680	210	100	7	3681
1999-	6	0	56	274	405	705							

WBAN : 03812

COOLING DEGREE DAYS (base 65°F) 1999 ASHEVILLE, NC (AVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	22	52	159	296	259	206	17	0	0	1011
1971	0	0	0	3	25	232	238	231	149	37	8	0	923
1972	0	0	0	24	6	84	236	237	134	0	1	0	722
1973	0	0	0	1	16	190	288	292	163	19	0	0	969
1974	0	0	0	3	65	82	254	234	92	1	0	0	731
1975	0	0	0	11	82	124	237	252	89	0	0	0	795
1976	0	0	0	0	5	135	198	170	35	2	0	0	545
1977	0	0	0	2	59	173	340	279	146	7	1	0	1007
1978	0	0	0	2	53	188	266	292	168	4	0	0	973
1979	0	0	0	1	55	141	234	261	96	4	0	0	792
1980	0	0	0	8	64	210	396	311	198	4	0	0	1191
1981	0	0	0	10	25	286	316	213	98	7	0	0	955
1982	0	0	0	0	117	206	305	215	64	16	0	0	923
1983	0	0	0	0	25	139	335	362	141	5	0	0	1007
1984	0	0	0	0	25	165	180	211	49	27	0	0	657
1985	0	0	5	2	43	170	229	194	90	25	4	0	762
1986	0	0	0	8	43	209	353	222	112	38	0	0	985
1987	0	0	0	7	97	192	310	309	97	0	0	0	1012
1988	0	0	0	0	18	168	282	304	79	3	0	0	854
1989	0	0	5	23	34	159	264	229	107	11	0	0	832
1990	0	0	0	3	48	187	279	283	141	11	0	0	952
1991	0	0	3	13	132	181	324	227	139	3	0	0	1022
1992	0	0	0	7	20	125	313	174	125	0	0	0	764
1993	0	0	0	0	37	210	411	285	133	5	0	0	1081
1994	0	0	0	15	21	233	259	205	43	2	0	0	778
1995	0	0	1	12	65	127	315	325	68	8	0	0	921
1996	0	0	0	6	120	164	224	209	64	5	0	0	792
1997	0	0	0	0	13	116	265	184	76	1	0	0	655
1998	0	0	0	1	124	230	315	269	178	14	0	0	1131
1999	0	0	0	23	9	143	304	291	78	3	0	0	851

SNOWFALL (inches) 1999 ASHEVILLE, NC (AVL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	T	6.1	0.1	0.1	8.9	0.2	0.0	0.0	15.4
1971-72	0.0	0.0	0.0	0.0	0.6	16.3	T	7.4	7.4	0.0	0.0	0.0	31.7
1972-73	0.0	0.0	0.0	0.0	0.6	T	7.1	0.5	1.0	T	0.0	0.0	9.2
1973-74	0.0	0.0	0.0	0.0	0.0	3.0	T	0.3	1.1	T	0.0	0.0	4.4
1974-75	0.0	0.0	0.0	0.0	3.1	3.0	0.4	4.3	3.7	T	0.0	0.0	14.5
1975-76	0.0	0.0	0.0	0.0	5.0	0.4	1.6	3.5	T	0.0	0.0	0.0	10.5
1976-77	0.0	0.0	0.0	0.0	0.1	0.3	11.9	0.7	0.0	0.0	0.0	0.0	13.0
1977-78	0.0	0.0	0.0	T	T	1.5	9.7	5.3	5.3	T	0.0	0.0	21.8
1978-79	0.0	0.0	0.0	0.0	0.0	T	5.2	17.8	T	0.0	T	0.0	23.0
1979-80	0.0	0.0	0.0	0.0	T	T	2.1	6.3	5.4	T	0.0	0.0	13.8
1980-81	0.0	0.0	0.0	0.0	T	T	4.7	T	9.9	0.0	0.0	0.0	14.6
1981-82	0.0	0.0	0.0	0.0	T	2.0	8.6	8.1	0.1	3.0	0.0	0.0	21.8
1982-83	0.0	0.0	0.0	0.0	0.0	0.4	10.5	9.3	4.5	2.0	0.0	0.0	26.7
1983-84	0.0	0.0	0.0	0.0	T	T	0.2	2.9	T	0.0	0.0	0.0	3.1
1984-85	0.0	0.0	0.0	0.0	0.0	T	4.5	3.1	0.1	0.4	0.0	0.0	8.1
1985-86	0.0	0.0	0.0	0.0	0.0	0.4	0.8	3.7	0.1	T	0.0	0.0	5.0
1986-87	0.0	0.0	0.0	0.0	T	T	15.0	2.7	0.3	11.5	0.0	0.0	29.5
1987-88	0.0	0.0	0.0	0.0	0.3	0.5	14.2	T	T	1.2	0.0	0.0	16.2
1988-89	0.0	0.0	0.0	0.0	0.0	T	1.2	6.0	T	1.0	0.0	0.0	8.2
1989-90	0.0	0.0	0.0	T	T	3.0	T	T	T	0.0	0.0	0.0	3.0
1990-91	0.0	T	0.0	0.0	0.0	T	T	0.4	3.1	0.0	0.0	T	3.5
1991-92	0.0	0.0	0.0	0.0	1.0	0.0	T	T	0.5	0.0	T	0.0	1.5
1992-93	0.0	0.0	0.0	0.0	T	T	T	3.0	18.2	T	T	0.0	21.2
1993-94	0.0	0.0	0.0	T	T	8.0	2.6	0.3	0.1	T	0.0	0.0	11.0
1994-95	T	0.0	0.0	0.0	0.0	T	0.2	3.2	T	0.0	0.0	T	3.4
1995-96	0.0	0.0	0.0	0.0	T	0.1	15.7	4.4	1.5	T	0.0	T	21.7
1996-97	0.0	0.0	0.0	0.0	0.1	2.5	3.8	1.9	T	T	0.0	0.0	8.3
1997-98	0.0	0.0	0.0	0.0	T	4.5	12.7	T	0.4	0.0	0.0	0.0	17.6
1998-99	0.0	0.0	0.0	0.0	0.0	0.4	1.6	T	4.2	0.0	0.0	0.0	6.2
1999-	0.0	0.0	0.0	0.0	0.1	T							
POR= 34 YRS	T	T	0.0	T	0.7	1.9	4.8	4.0	2.5	0.6	T	T	14.5

WBAN : 03812

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>
---	---

1999  
ASHEVILLE,  
NORTH CAROLINA (AVL)

The city of Asheville is located on both banks of the French Broad River, near the center of the French Broad Basin. Upstream from Asheville, the valley runs south for 18 miles and then curves toward the south-southwest. Downstream from the city, the valley is oriented toward the north-northwest. Two miles upstream from the principal section of Asheville, the Swannanoa River joins the French Broad from the east. The entire valley is known as the Asheville Plateau, having an average elevation near 2,200 feet above sea level, and is flanked by mountain ridges to the east and west, whose peaks range from 2,000 to 4,400 feet above the valley floor. At the Carolina-Tennessee border, about 25 miles north-northwest of Asheville, a relatively high ridge of mountains blocks the northern end of the valley. Thirty miles south, the Blue Ridge Mountains form an escarpment, having a general elevation of about 2,700 feet above sea level. The tallest peaks near Asheville are Mt. Mitchell, 6,684 feet above sea level, 20 miles northeast of the city, and Big Pisgah Mountain, 5,721 feet above sea level, 16 miles to the southwest.

Asheville has a temperate, but invigorating, climate. Considerable variation in temperature often occurs from day to day in summer, as well as during the other seasons.

While the office was located in the city, the combination of roof exposure conditions and a smoke blanket, caused by inversions in temperature in the valley on quiet nights, resulted in higher early morning temperatures at City Office sites than were experienced nearer ground level in nearby rural areas. The growing season in this area is of sufficient length for commercial crops, the average length of freeze-free period being about 195 days. The average last occurrence in spring of a temperature 32 degrees or lower is mid-April and the average first occurrence in fall of 32 degrees is late October.

The orientation of the French Broad Valley appears to have a pronounced influence on the wind direction. Prevailing winds are from the northwest during all months of the year. Also, the shielding effect of the nearby mountain barriers apparently has a direct bearing on the annual amount of precipitation received in this vicinity. In an area northwest of Asheville, the average annual precipitation is the lowest in North Carolina. Precipitation increases sharply in all other directions, especially to the south and southwest.

Destructive events caused directly by meteorological conditions are infrequent. The most frequent, occurring at approximately 12-year intervals, are floods on the French Broad River. These floods are usually associated with heavy rains caused by storms moving out of the Gulf of Mexico. Snowstorms which have seriously disrupted normal life in this community are infrequent. Hailstorms that cause property damage are extremely rare.

# STATION LOCATION

ASHEVILLE, NORTH CAROLINA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE												* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						GROUND													
						SEA LEVEL	WIND	EXPOSED	OPEN	SHRUBS	TREES	RAINFALL	WETLANDS	8 INCH	RAIN	RAIN	RAIN		
<u>COOPERATIVE</u>	1857	1902	NA															Smithsonian Institute and Army Signal Corps observers. Records almost continuous, but exact locations and details as to exposure are not available.	
<u>CITY</u>																			
Drhumor Building Patton Avenue and Church Street	8/22/02	5/22/03	NA	35°36'	82°32'	2207	100	75	73		**						62	** - Elevation not on record. Notes indicate same exposure as 8-inch gage.	
Library Building South Pack Square	5/22/03	7/1/10	600 ft. ENE	35°36'	82°32'	2218	75	55	53		**						46		
Legal Building South Pack Square	7/1/10	1/1/31	60 ft. ENE	35°36'	82°32'	2218	84	72	70								61		
U.S. Post Office and Court House Building Otis and Post Streets	1/1/31	8/31/64 (X)	2000 ft. WSW	35°36'	82°32'	2203	b92	78	77		75 b	77 a75					75	a - Effective 9/1/52. (X) - Office moved to airport. Climatological observations continued at city site through May 1967. b - Removed 9/1/64.	
<u>COOPERATIVE</u>																			
Federal Building	6/1/67	Present	500 ft. NE	35°36'	82°32'	2242			110								108	108	Elevations above ground are approximate values with reference to point opposite shelter on west side of building.
<u>AIRPORT</u>																			
Administration Building Asheville Airport+ + Asheville Regional AP (Effective 7/1/80)	9/1/64	06/01/96	12 mi. S of Post Office	35°26'	82°32' c82°33'	2140	20 h20	NA g4 g4 i4	3 g3 i3	57 e21	NA	4 g4 i3	3 g3 i3	4 f4 h4	NA		NA	c - Resurvey effective 6/20/75. d - Installed 12/15/77. e - Lowered 10/5/84. f - Type change 10/18/84. g - Moved 30-35' N 3/4/87. h - Moved 600' N 11/1/89. i - Moved 50' N 11/8/89.	
Asheville Regional AP	06/01/96	Present	NA	35°26'	82°32'	2200												S	ASOS Commissioned 06/01/96

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

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300  
FORWARD AND ADDRESS CORRECTION

FIRST CLASS  
POSTAGE & FEES PAID  
United States Department of Commerce  
NOAA Permit No. G - 19