

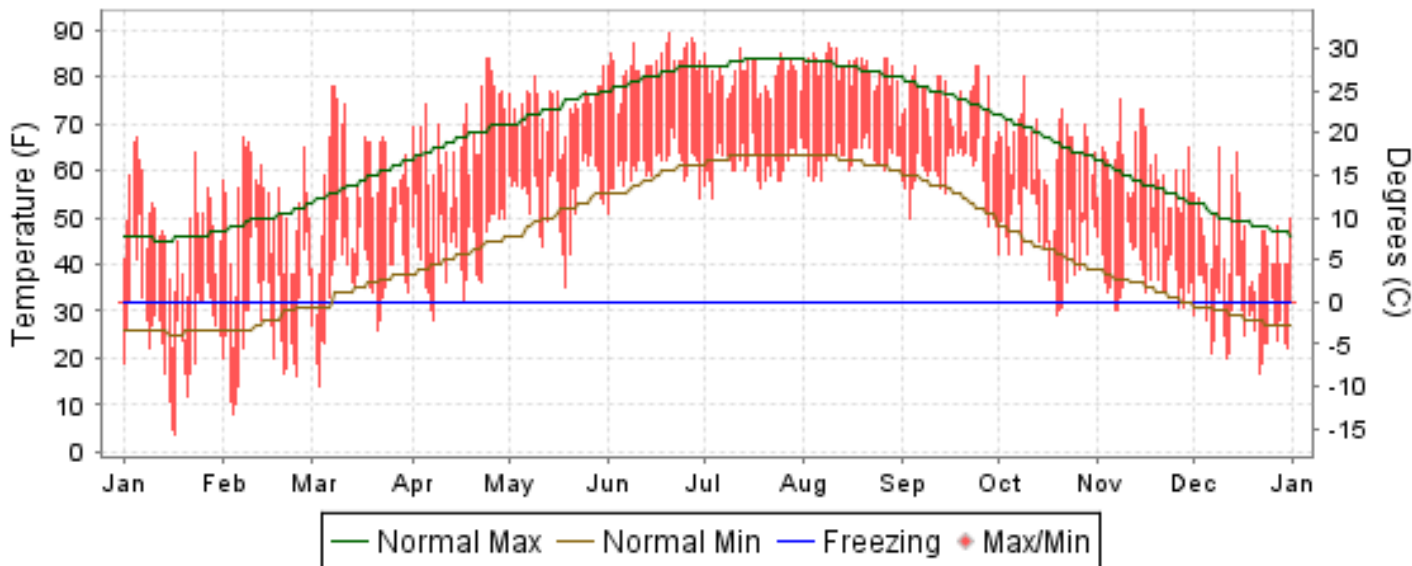


2009 LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA

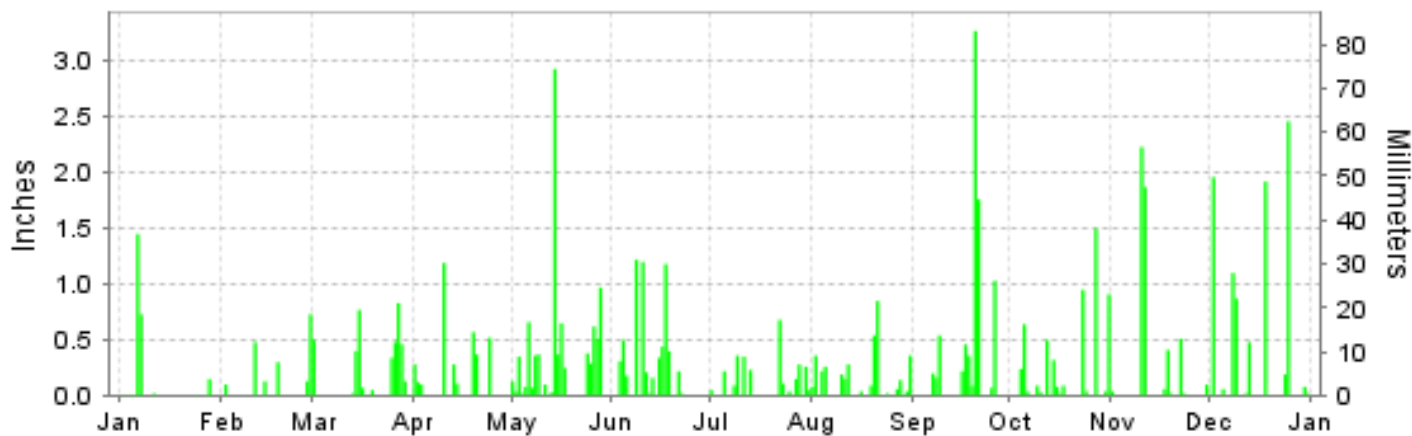
ISSN 0198-3695

ASHEVILLE, NORTH CAROLINA (KAVL)

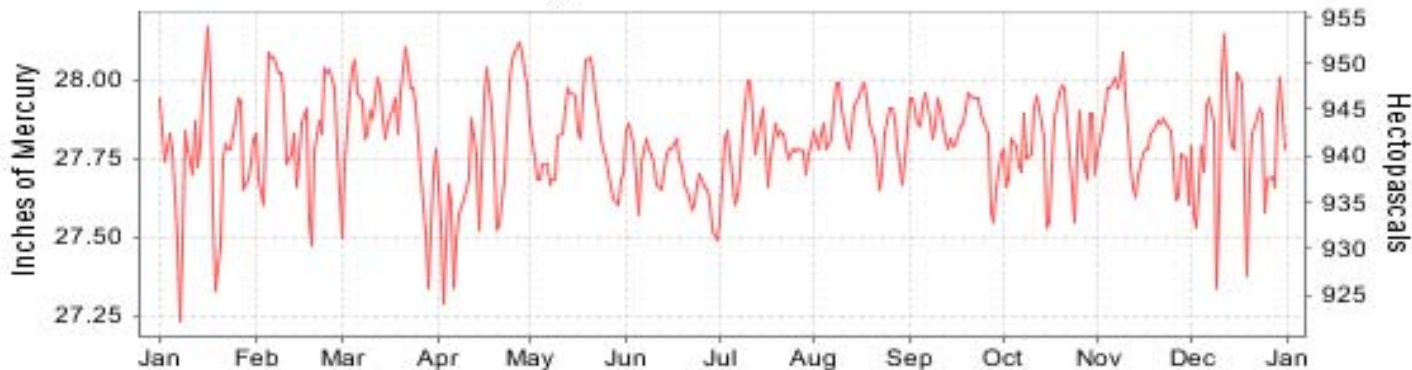
Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure



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ENVIRONMENTAL SATELLITE, DATA
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

Thomas R. Karl
DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2009

ASHEVILLE (KAVL)

LATITUDE: 35° 25'N LONGITUDE: -082° 32'W ELEVATION (FT): GRND: 2117 BARO: 2174 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	47.7	51.6	58.4	66.9	73.2	82.7	80.3	81.9	74.8	64.5	60.0	45.3	65.6	
	HIGHEST DAILY MAXIMUM	67	67	78	84	82	89	86	87	82	80	75	65	89	
	DATE OF OCCURRENCE	05	07	08+	25+	31	20	12	09	25+	09	08	09	JUN 20	
	MEAN DAILY MINIMUM	26.0	27.3	36.2	42.9	54.5	60.7	61.3	62.8	58.9	45.4	37.9	27.9	45.2	
	LOWEST DAILY MINIMUM	4	8	14	28	35	51	54	58	48	29	30	17	4	
	DATE OF OCCURRENCE	17	04	03	08	19	01	04	07+	30+	19	07+	21	JAN 17	
	AVERAGE DRY BULB	36.9	39.5	47.3	54.9	63.9	71.7	70.8	72.4	66.9	55.0	49.0	36.6	55.4	
	MEAN WET BULB	32.0	33.8	42.0	48.2	58.6	65.0	64.7	66.5	62.0	51.0	43.6	32.7	50.0	
	MEAN DEW POINT	24.6	25.6	35.6	41.2	55.4	61.8	61.6	64.0	59.7	47.6	38.6	26.8	45.2	
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM <= 32°	2	1	1	0	0	0	0	0	0	0	0	1	5	
MINIMUM <= 32°	24	18	7	3	0	0	0	0	0	3	4	23	82		
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	863	708	543	298	76	0	0	0	23	309	474	873	4167	
	COOLING DEGREE DAYS	0	0	0	4	50	209	186	237	84	4	0	0	774	
RH	MEAN (PERCENT)	67	62	69	65	78	76	77	81	84	80	74	73	74	
	HOUR 01 LST	75	70	79	79	91	93	90	94	94	92	86	81	85	
	HOUR 07 LST	79	77	82	77	86	83	86	91	93	90	88	84	85	
	HOUR 13 LST	49	44	53	45	63	52	58	59	64	61	53	57	55	
	HOUR 19 LST	64	60	66	61	75	75	75	83	85	83	72	72	73	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	3	1	6	1	5	7	7	8	10	5	3	6	62	
	THUNDERSTORMS	0	1	0	2	6	7	5	7	2	0	0	0	30	
CLOUDNESS	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.)	27.75	27.84	27.85	27.75	27.81	27.70	27.78	27.85	27.85	27.79	27.82	27.78	27.80	
	MEAN SEA-LEVEL PRESS. (IN.)	30.05	30.14	30.13	30.00	30.04	29.90	30.00	30.06	30.08	30.05	30.10	30.09	30.05	
WINDS	RESULTANT SPEED (MPH)	4.0	3.0	0.9	1.1	0.3	3.0	2.0	1.3	0.4	1.3	3.5	3.6	2.0	
	RES. DIR. (TENS OF DEGS.)	33	33	33	30	24	34	33	33	32	33	34	34	34	
	MEAN SPEED (MPH)	8.2	8.3	6.6	6.6	4.7	4.9	4.5	3.7	3.3	6.4	5.9	7.1	5.9	
	PREVAIL.DIR.(TENS OF DEGS.)	34	34	34	34	35	34	34	34	34	34	34	34	34	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	31	33	38	29	28	29	24	32	23	31	32	31	38	
	DIR. (TENS OF DEGS.)	33	34	33	34	31	35	33	34	34	33	33	34	33	
	DATE OF OCCURRENCE	20	04	01	22	09	18	01	11	29	18	30	05	MAR 01	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	43	40	48	39	36	39	31	43	35	39	40	40	48	
DIR. (TENS OF DEGS.)	28	34	33	33	30	35	32	35	31	34	33	33	33		
DATE OF OCCURRENCE	07	12	01	22	09	18	01	11	28	24	30	15	MAR 01		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	2.40	1.87	4.07	3.54	9.18	6.41	2.88	3.69	8.17	5.50	5.26	9.16	62.13	
	GREATEST 24-HOUR (IN.)	1.82	0.73	0.85	1.19	3.30	1.45	0.68	0.96	3.30	1.51	3.54	2.65	3.54	
	DATE OF OCCURRENCE	06-07	28	27-28	10	14-15	16-17	22	20-21	20-21	27-28	10-11	24-25	NOV 10-11	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	9	6	13	9	20	15	14	17	12	16	9	11	151	
PRECIPITATION 0.10	3	6	8	9	15	12	9	10	9	7	5	7	100		
PRECIPITATION 1.00	1	0	0	1	1	3	0	0	3	1	2	4	16		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)	1.0	T	5.1	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.4	16.5	
	GREATEST 24-HOUR (IN.)	1.0	T	5.1	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	10.1	
	DATE OF OCCURRENCE	19	22+	01	07+								18	DEC 18	
	MAXIMUM SNOW DEPTH (IN.)	1	0	2	0	0	0	0	0	0	0	0	10	10	
	DATE OF OCCURRENCE	20		02									20+	DEC 20+	
NUMBER OF DAYS WITH:															
SNOWFALL >= 1.0	1	0	1	0	0	0	0	0	0	0	0	1	3		

NORMALS, MEANS, AND EXTREMES ASHEVILLE (KAVL)

LATITUDE: 35° 25'N LONGITUDE: -082° 32'W ELEVATION (FT): GRND: 2117 BARO: 2174 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	45.9	50.0	57.7	66.5	73.5	80.0	83.3	81.7	76.0	67.1	57.4	49.3	65.7
	MEAN DAILY MAXIMUM	58	47.9	50.5	58.5	68.0	75.2	81.1	84.0	83.2	77.0	68.2	58.5	50.4	66.9
	HIGHEST DAILY MAXIMUM	45	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	2004	1971	AUG 1983
	MEAN OF EXTREME MAXS.	58	66.1	69.1	76.6	82.9	85.9	90.0	91.6	90.5	86.8	80.9	73.9	67.3	80.1
	NORMAL DAILY MINIMUM	30	25.8	28.0	34.9	41.8	50.6	58.3	62.7	61.8	55.4	43.3	35.3	28.8	43.9
	MEAN DAILY MINIMUM	58	26.6	28.1	34.5	42.2	50.5	58.1	62.5	61.6	55.0	43.3	34.4	28.4	43.8
	LOWEST DAILY MINIMUM	45	-16	-2	2	20	28	35	44	42	30	21	8	-7	-16
	YEAR OF OCCURRENCE		1985	1967	1993	2007	1989	1966	1988	1986	1967	1976	1970	1983	JAN 1985
	MEAN OF EXTREME MINS.	58	8.4	12.2	19.4	27.5	35.6	45.9	54.4	52.5	41.2	27.9	19.5	12.2	29.7
	NORMAL DRY BULB	30	35.8	39.0	46.3	54.1	62.0	69.2	73.0	71.8	65.7	55.2	46.4	39.0	54.8
	MEAN DRY BULB	58	37.3	39.4	46.5	55.1	62.9	69.7	73.3	72.4	66.0	55.8	46.4	39.4	55.4
	MEAN WET BULB	26	32.1	34.2	40.2	47.2	56.1	63.5	66.9	66.4	60.5	50.3	41.4	34.3	49.4
	MEAN DEW POINT	26	28.1	29.9	35.4	42.5	53.3	61.6	65.2	64.9	58.7	47.4	37.7	30.3	46.3
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.1	1.5	5.1	2.5	0.4	0.0	0.0	0.0	9.6
	MAXIMUM <= 32	30	2.7	1.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	1.3	5.9
	MINIMUM <= 32	30	22.5	18.6	12.0	4.2	0.3	0.0	0.0	0.0	0.0	3.6	12.9	20.3	94.4
MINIMUM <= 0	30	0.4	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	
H/C	NORMAL HEATING DEG. DAYS	30	890	714	566	317	122	17	7	2	63	296	542	790	4326
	NORMAL COOLING DEG. DAYS	30	0	0	0	6	45	159	271	229	100	8	0	0	818
RH	NORMAL (PERCENT)	30	73	70	68	65	75	79	81	83	82	77	74	73	75
	HOURLY 01 LST	30	81	78	78	77	88	93	94	96	95	90	85	82	86
	HOURLY 07 LST	30	85	84	84	84	91	93	95	97	96	93	87	85	90
	HOURLY 13 LST	30	59	56	53	49	56	60	62	62	62	55	56	59	57
	HOURLY 19 LST	30	69	62	59	55	65	70	73	77	79	73	69	69	68
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 (VISIBY <= 1/4 MI)	45	4.0	2.7	2.3	2.5	5.2	7.7	8.5	12.3	11.0	8.1	3.7	4.4	72.4
	THUNDERSTORMS	51	0.4	0.8	2.1	3.0	6.0	8.1	8.7	7.7	2.8	0.6	0.6	0.3	41.1
CLOUDNESS	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	32	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	32	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	32	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)	26	27.82	27.80	27.78	27.76	27.79	27.82	27.84	27.85	27.86	27.87	27.85	27.84	27.82
	MEAN SEA-LEVEL PRES. (IN)	26	30.12	30.09	30.06	30.01	30.03	30.03	30.05	30.07	30.09	30.12	30.13	30.14	30.08
WINDS	MEAN SPEED (MPH)	26	8.8	8.5	8.4	7.9	6.4	5.3	5.1	4.7	4.9	5.9	7.3	7.8	6.8
	PREVAIL. DIR. (TENS OF DEGS)	38	35	35	35	35	35	35	35	35	35	35	35	35	35
	MAXIMUM 2-MINUTE: SPEED (MPH)	13	46	43	47	49	44	33	41	41	45	33	38	37	49
	DIR. (TENS OF DEGS)		33	33	32	34	33	32	33	30	36	33	33	33	34
	YEAR OF OCCURRENCE		2003	2001	2001	2007	2008	2002	2001	2000	1999	2008	2003	2006	APR 2007
	MAXIMUM 3-SECOND SPEED (MPH)	13	53	49	56	66	52	46	55	53	54	43	46	46	66
	DIR. (TENS OF DEGS)		33	32	31	33	33	10	16	30	36	33	33	34	33
YEAR OF OCCURRENCE		2003	2001	2001	2007	2008	2000	2007	2000	1999	2008	2003	2008	APR 2007	
PRECIPITATION	NORMAL (IN)	30	4.06	3.83	4.59	3.50	4.42	4.38	3.87	4.30	3.72	3.18	3.82	3.40	47.07
	MAXIMUM MONTHLY (IN)	45	9.96	8.07	9.86	8.70	9.18	10.73	10.88	11.28	13.71	8.82	7.76	9.16	13.71
	YEAR OF OCCURRENCE		1998	1990	1975	1998	2009	1989	2003	1967	2004	1990	1979	2009	SEP 2004
	MINIMUM MONTHLY (IN)	45	0.45	0.44	0.77	0.25	0.96	0.85	0.46	0.52	0.16	0.00	1.19	0.16	0.00
	YEAR OF OCCURRENCE		1981	1978	1985	1976	2007	2008	1986	1981	1984	2000	1981	1965	OCT 2000
	MAXIMUM IN 24 HOURS (IN)	45	4.67	3.47	5.13	3.06	4.95	4.36	4.02	5.10	4.23	4.22	4.03	2.66	5.13
	YEAR OF OCCURRENCE		1998	1982	1968	1973	1973	1997	1969	1990	2004	1995	1977	1973	MAR 1968
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	11.0	9.5	11.8	9.5	11.4	11.8	11.8	12.2	9.7	7.4	9.7	9.9	125.7
PRECIPITATION >= 1.00	30	1.0	0.9	1.2	1.0	1.0	1.0	1.0	0.9	0.9	0.8	1.4	0.9	12.0	
SNOWFALL	NORMAL (IN)	30	4.7	3.1	2.6	0.7	0.*	0.0	0.0	0.0	0.0	0.*	0.4	1.8	13.3
	MAXIMUM MONTHLY (IN)	45	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		2008	1968	1971	FEB 1969
	MAXIMUM IN 24 HOURS (IN)	45	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)	50	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	1.3	0.9	0.7	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	3.6	

PRECIPITATION (inches) 2009 ASHEVILLE (KAVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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
2000	3.10	2.33	3.82	5.11	1.27	2.78	2.84	4.45	3.27	0.00	4.25	2.37	35.59
2001	2.63	2.73	5.00	1.32	2.47	2.91	5.50	3.20	4.37	0.60	1.42	2.34	34.49
2002	3.64	1.30	4.36	1.73	3.42	6.13	1.98	2.09	6.05	3.14	4.23	6.40	44.47
2003	1.19	4.47	4.34	5.25	8.36	6.16	10.88	6.80	3.01	2.33	3.89	2.78	59.46
2004	0.83	4.20	2.02	2.95	3.23	7.39	4.68	3.79	13.71	1.11	5.02	3.43	52.36
2005	2.00	2.57	3.33	2.86	1.65	10.09	10.26	5.71	0.34	1.20	3.74	3.51	47.26
2006	3.58	2.55	0.91	4.58	1.69	5.16	2.81	7.12	7.80	2.93	4.52	4.64	48.29
2007	3.35	1.45	4.29	1.77	0.96	2.91	4.85	2.84	3.40	3.02	1.49	4.06	34.39
2008	2.56	3.79	4.51	2.84	1.33	0.85	4.02	5.84	1.70	1.84	1.61	4.74	35.63
2009	2.40	1.87	4.07	3.54	9.18	6.41	2.88	3.69	8.17	5.50	5.26	9.16	62.13
POR= 58 YRS	3.56	3.56	4.41	3.48	3.96	4.31	4.49	4.47	3.75	3.16	3.54	3.60	46.29

WBAN : 03812

AVERAGE TEMPERATURE (°F) 2009 ASHEVILLE (KAVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
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	42.5	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
2000	36.0	43.3	49.9	53.0	66.2	70.6	72.8	71.7	65.2	57.2	44.6	32.5	55.3
2001	36.7	44.5	44.6	58.2	64.0	70.5	72.9	73.8	64.5	53.9	51.7	44.8	56.7
2002	41.1	40.3	47.5	59.1	62.2	70.8	74.6	73.3	68.8	59.7	44.8	38.6	56.7
2003	33.7	39.6	50.1	55.2	62.8	68.1	72.0	73.7	65.2	54.8	51.4	36.6	55.3
2004	35.9	38.3	49.5	55.2	66.3	70.5	72.9	70.8	66.5	61.0	50.3	38.5	56.3
2005	40.8	41.8	45.4	54.5	60.6	69.5	74.5	74.0	68.4	58.5	48.3	36.6	56.1
2006	43.2	39.0	47.5	58.6	61.5	69.5	73.6	74.3	64.3	54.2	47.0	42.6	56.3
2007	39.5	36.3	52.0	53.1	63.5	71.3	71.4	76.7	68.1	59.6	45.5	43.9	56.7
2008	36.4	42.5	46.1	55.3	62.9	72.5	72.9	72.8	67.1	54.1	43.0	42.0	55.6
2009	36.9	39.5	47.3	54.9	63.9	71.7	70.8	72.4	66.9	55.0	49.0	36.6	55.4
POR= 58 YRS	37.3	39.4	46.5	55.1	62.9	69.7	73.3	72.4	66.0	55.8	46.4	39.4	55.3

HEATING DEGREE DAYS (base 65°F) 2009 ASHEVILLE (KAVL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1999-00	6	0	56	274	405	705	893	621	460	353	41	11	3825
2000-01	1	1	88	238	607	998	872	566	628	222	63	1	4285
2001-02	0	0	97	340	391	620	735	687	536	201	130	1	3738
2002-03	0	0	10	202	600	811	966	705	454	289	88	19	4144
2003-04	0	0	52	309	411	874	894	767	478	295	49	1	4130
2004-05	0	3	21	128	436	817	744	644	602	309	143	22	3869
2005-06	0	0	4	215	496	877	668	724	537	203	149	10	3883
2006-07	0	0	68	332	531	684	785	796	393	352	81	0	4022
2007-08	0	0	34	198	576	650	880	645	579	288	97	0	3947
2008-09	1	0	35	330	653	706	863	708	543	298	76	0	4213
2009-	0	0	23	309	474	873							

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COOLING DEGREE DAYS (base 65°F) 2009 ASHEVILLE (KAVL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
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
2000	0	0	0	0	83	187	251	215	103	4	1	0	844
2001	0	0	0	24	42	172	249	282	87	1	0	0	857
2002	0	0	0	32	50	181	305	267	130	47	0	0	1012
2003	0	0	0	0	29	117	223	281	65	0	9	0	724
2004	0	0	0	8	96	173	254	189	71	9	4	0	804
2005	0	0	0	0	14	167	302	285	112	20	0	0	900
2006	0	0	0	18	45	153	274	297	54	4	0	0	845
2007	0	0	0	1	42	192	208	370	133	38	0	0	984
2008	0	0	0	0	39	232	253	245	104	2	0	0	875
2009	0	0	0	4	50	209	186	237	84	4	0	0	774

SNOWFALL (inches) 2009 ASHEVILLE (KAVL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
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
1999-00	0.0	0.0	0.0	0.0	0.1	T	6.2	T	T	0.1	0.0	0.0	6.4
2000-01	0.0	0.0	0.0	0.0	2.0	6.1	T	0.8	6.4	0.2	0.0	0.0	15.5
2001-02	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.3	T	0.0	0.0	0.0	1.6
2002-03	0.0	0.0	0.0	0.0	T	4.0	4.2	3.7	2.0	4.0	T	0.0	17.9
2003-04	T	0.0	0.0	0.0	T	3.5	4.0	6.8	T	T	0.0	0.0	14.3
2004-05	0.0	0.0	0.0	0.0	0.0	0.6	1.6	4.0	0.3	0.1	0.0	0.0	6.6
2005-06	0.0	0.0	0.0	0.0	T	T	T	1.4	T	0.0	0.0	0.0	1.4
2006-07	0.0	0.0	0.0	0.0	T	T	0.9	1.0	T	1.3	0.0	0.0	3.2
2007-08	0.0	0.0	0.0	0.0	T	0.1	3.7	T	0.0	0.0	0.0	0.0	3.8
2008-09	0.0	0.0	0.0	T	T	T	1.0	T	5.1	T	0.0	0.0	6.1
2009-	0.0	0.0	0.0	0.0	0.0	10.4							
POR= 58 YRS	T	T	0.0	T	0.6	1.7	3.8	3.1	1.9	0.4	T	T	11.5

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REFERENCE NOTES :

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1971 - 2000). 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. 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.</p>	<p>GENERAL CONTINUED: 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. ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER. STATION HISTORY STOPPED WITH THE 2009 ANNUAL. IF YOU NEED HISTORY GO TO "MULTI-NETWORK METADATA SYSTEM", URL IS: https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</p> <p>NOTE: The "Period of Record:(POR) for all "averages" is based on the "Summary of the Day First Order Station" and "Cooperative Summary of the Day" archives.</p>
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2009

ASHEVILLE

NORTH CAROLINA (KAVL)

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.

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