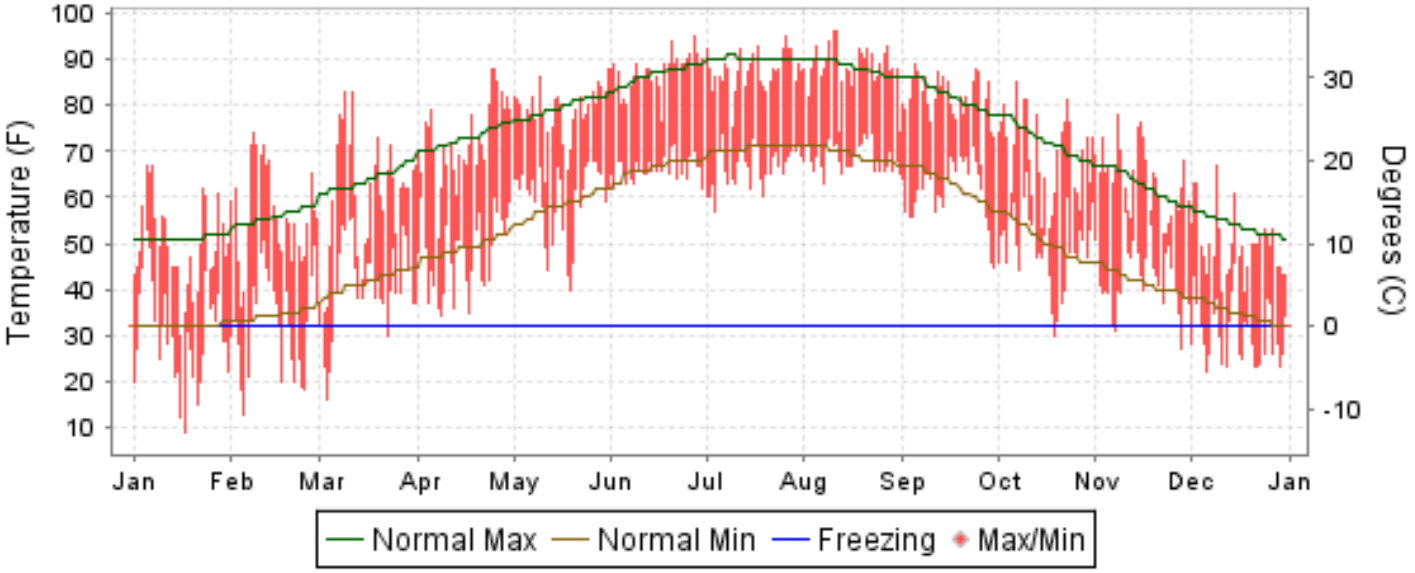
2009
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

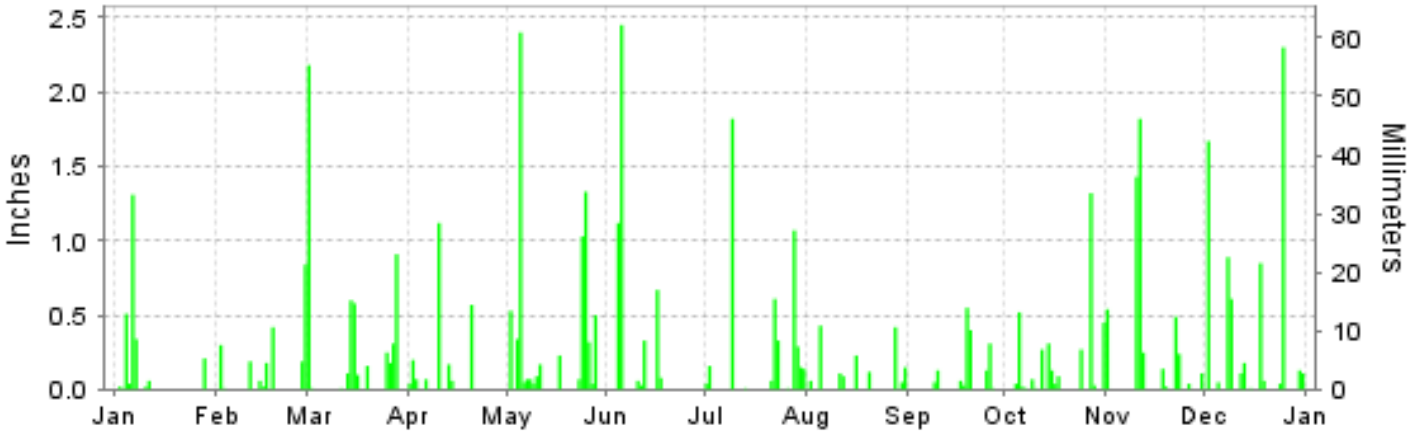
ISSN 0198-3733

CHARLOTTE,
NORTH CAROLINA (KCLT)

Daily Max/Min Temperature



Daily Precipitation



Daily Station Pressure

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

METEOROLOGICAL DATA FOR 2009
CHARLOTTE (KCLT)

LATITUDE: 35 ° 12'N **LONGITUDE:** -80 ° 56'W **ELEVATION (FT):** GRND: 700 BARO: 724 **TIME ZONE:** EASTERN (UTC -5) **WBAN: 13881**

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	MEAN DAILY MAXIMUM	49.7	56.4	60.8	72.6	78.6	87.3	87.4	88.2	81.6	69.4	63.8	49.6	70.5
	HIGHEST DAILY MAXIMUM	67	74	83	88	88	95	95	96	89	85	78	67	96
	DATE OF OCCURRENCE	07+	08	11+	25+	31	27	26	11+	05	07	08	09	AUG 11+
	MEAN DAILY MINIMUM	30.2	32.5	40.6	47.4	59.5	66.3	66.5	68.7	61.7	49.0	42.4	30.2	49.6
	LOWEST DAILY MINIMUM	9	13	16	34	40	62	57	63	45	30	27	22	9
	DATE OF OCCURRENCE	17	05	03	08	19	30+	04	07	30	19	28	06	JAN 17
	AVERAGE DRY BULB	40.0	44.5	50.7	60.0	69.1	76.8	77.0	78.5	71.7	59.2	53.1	39.9	60.0
	MEAN WET BULB	35.7	38.3	45.1	52.7	62.8	69.4	68.7	70.9	64.7	55.0	48.6	36.8	54.1
	MEAN DEW POINT	26.8	27.8	37.9	44.7	58.8	65.1	64.1	67.5	60.5	51.1	43.6	30.1	48.2
	NUMBER OF DAYS WITH:													
	MAXIMUM >= 90°	0	0	0	0	0	7	8	13	0	0	0	0	28
	MAXIMUM <= 32°	1	0	0	0	0	0	0	0	0	0	0	0	1
	MINIMUM <= 32°	19	13	6	0	0	0	0	0	0	1	3	20	62
	MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0
H/C	HEATING DEGREE DAYS	772	569	444	176	43	0	0	0	11	199	348	769	3331
	COOLING DEGREE DAYS	0	0	9	32	176	361	380	425	216	27	0	0	1626
RH	MEAN (PERCENT)	61	54	65	59	73	69	67	72	71	76	73	70	68
	HOUR 01 LST	67	62	73	72	84	82	80	86	82	85	82	77	78
	HOUR 07 LST	71	68	76	68	79	74	73	82	80	86	83	80	77
	HOUR 13 LST	49	40	52	42	58	52	51	55	55	59	58	55	52
	HOUR 19 LST	58	51	61	54	70	67	64	70	68	76	71	67	65
S	PERCENT POSSIBLE SUNSHINE													
W/O	NUMBER OF DAYS WITH:													
	HEAVY FOG(VISBY <= 1/4 MI)	4	1	3	0	2	0	0	2	0	2	3	4	21
	THUNDERSTORMS	1	1	1	1	7	5	10	4	1	0	0	1	32
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.)	29.23	29.33	29.33	29.19	29.23	29.08	29.17	29.23	29.25	29.23	29.26	29.26	29.23
	MEAN SEA-LEVEL PRESS. (IN.)	30.07	30.15	30.15	30.01	30.04	29.87	29.97	30.04	30.06	30.04	30.08	30.10	30.05
WINDS	RESULTANT SPEED (MPH)	2.2	2.7	0.8	3.2	1.9	0.4	1.5	0.4	3.0	0.2	3.0	1.5	0.4
	RES. DIR. (TENS OF DEGS.)	24	23	11	22	17	32	23	21	03	06	01	35	26
	MEAN SPEED (MPH)	6.9	8.2	7.7	8.1	7.9	4.8	5.7	4.6	5.6	5.4	6.2	5.4	6.4
	PREVAIL.DIR.(TENS OF DEGS.)	21	18	02	20	22	34	21	23	05	02	01	34	01
	MAXIMUM 2-MINUTE WIND													
	SPEED (MPH)	37	32	29	28	26	26	24	33	21	25	29	31	37
	DIR. (TENS OF DEGS.)	25	23	21	21	19	33	29	17	23	17	05	23	25
	DATE OF OCCURRENCE	07	11	29	21	26	10	23	05	28	24	11	09	JAN 07
	MAXIMUM 3-SECOND WIND:													
	SPEED (MPH)	48	45	37	37	35	39	35	41	28	31	41	43	48
	DIR. (TENS OF DEGS.)	25	23	01	21	24	24	29	18	23	18	05	23	25
	DATE OF OCCURRENCE	07	11	01	21	05	11	17	05	28	24	11	09	JAN 07
PRECIPITATION	WATER EQUIVALENT:													
	TOTAL (IN.)	2.52	2.21	5.40	2.30	7.28	4.74	4.69	1.66	1.67	3.58	5.08	7.01	48.14
	GREATEST 24-HOUR (IN.)	1.35	0.84	2.19	1.12	2.40	3.38	1.82	0.43	0.94	1.35	2.99	2.34	3.38
	DATE OF OCCURRENCE	05-06	28	01-02	10	05-06	04-05	09	05	19-20	27-28	10-11	24-25	JUN 04-05
	NUMBER OF DAYS WITH:													
	PRECIPITATION 0.01	9	9	12	8	16	7	12	9	9	15	10	13	129
	PRECIPITATION 0.10	4	6	10	4	9	4	8	6	5	7	8	9	80
	PRECIPITATION 1.00	1	0	1	1	3	2	2	0	0	1	2	2	15
SNOWFALL	SNOW,ICE PELLETS,HAIL													
	TOTAL (IN.)	T	T	4.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	T	4.0
	GREATEST 24-HOUR (IN.)	T	T	4.0	0.0	T	0.0	0.0	T	0.0	0.0	0.0	T	4.0
	DATE OF OCCURRENCE	20+	04+	01		05			05				18	MAR 01
	MAXIMUM SNOW DEPTH (IN.)	T	T	4	0	0	0	0	0	0	0	0	0	4
	DATE OF OCCURRENCE	20	04	02										MAR 02
	NUMBER OF DAYS WITH:													
	SNOWFALL >= 1.0	0	0	1	0	0	0	0	0	0	0	0	0	1

NORMALS, MEANS, AND EXTREMES
CHARLOTTE (KCLT)

LATITUDE: 35 ° 12'N **LONGITUDE:** -80 ° 56'W **ELEVATION (FT):** GRND: 700 BARO: 724 **TIME ZONE:** EASTERN (UTC -5) **WBAN: 13881**

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	51.3	55.9	64.1	72.8	79.7	86.6	90.1	88.4	82.3	72.6	62.8	54.0	71.7
	MEAN DAILY MAXIMUM	62	51.1	54.9	62.7	72.3	79.5	86.0	89.0	87.8	81.7	72.1	62.4	53.2	71.1
	HIGHEST DAILY MAXIMUM	70	79	81	90	93	100	103	103	104	104	98	85	80	104
	YEAR OF OCCURRENCE		2002	1989	1945	1960	1941	1954	1986	2007	1954	1954	1961	2007	AUG 2007
	MEAN OF EXTREME MAXS.	62	69.7	72.2	80.3	86.8	90.3	94.8	96.4	95.8	91.7	85.0	77.8	70.3	84.3
	NORMAL DAILY MINIMUM	30	32.1	34.4	41.6	49.1	58.2	66.5	70.6	69.3	63.0	50.9	41.8	34.9	51.0
	MEAN DAILY MINIMUM	62	31.4	33.5	40.0	48.5	57.3	65.2	69.1	68.3	62.0	50.1	40.2	33.3	49.9
	LOWEST DAILY MINIMUM	70	-5	5	4	21	32	45	53	50	39	24	11	2	-5
	YEAR OF OCCURRENCE		1985	1958	1980	2007	1963	2000	1961	2004	1999	1962	1950	1962	JAN 1985
	MEAN OF EXTREME MINS.	62	14.2	17.7	23.4	32.7	43.0	54.5	61.4	59.9	49.0	34.1	24.5	17.2	36.0
	NORMAL DRY BULB	30	41.7	45.2	52.8	60.9	69.0	76.5	80.3	78.9	72.7	61.7	52.3	44.4	61.4
	MEAN DRY BULB	62	41.2	44.2	51.4	60.4	68.4	75.7	79.1	78.1	71.9	61.1	51.3	43.3	60.5
	MEAN WET BULB	26	35.8	38.1	44.1	51.4	60.1	67.4	70.5	70.1	64.3	54.6	45.6	38.0	53.3
	MEAN DEW POINT	26	30.4	32.6	38.0	45.9	56.4	64.5	68.1	67.8	61.6	51.0	41.3	32.8	49.2
	NORMAL NO. DAYS WITH:														
	MAXIMUM >= 90	30	0.0	0.0	0.0	0.2	1.4	8.5	15.3	11.1	3.6	0.2	0.0	0.0	40.3
	MAXIMUM <= 32	30	1.2	0.6	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.1
	MINIMUM <= 32	30	16.9	13.1	6.2	0.9	0.0	0.0	0.0	0.0	0.0	0.6	6.0	14.2	57.9
	MINIMUM <= 0	30	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
H/C	NORMAL HEATING DEG. DAYS	30	739	571	401	179	36	1	0	0	16	164	400	655	3162
	NORMAL COOLING DEG. DAYS	30	0	1	7	40	145	332	459	415	231	45	5	1	1681
RH	NORMAL (PERCENT)	30	66	62	61	59	67	69	71	73	73	70	68	67	67
	HOUR 01 LST	30	72	68	68	68	78	80	82	84	84	80	76	73	76
	HOUR 07 LST	30	78	76	77	76	81	83	85	88	89	86	83	79	82
	HOUR 13 LST	30	56	51	49	46	52	54	56	57	58	53	53	56	53
	HOUR 19 LST	30	61	54	52	49	57	61	64	66	68	66	63	62	60
S	PERCENT POSSIBLE SUNSHINE	47	54	58	61	68	67	67	67	65	64	65	58	55	62
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	46	3.8	2.5	2.3	1.2	1.0	0.8	1.1	1.2	1.7	1.7	2.9	3.9	24.1
	THUNDERSTORMS	62	0.6	1.0	2.1	3.4	5.3	7.1	9.2	6.9	2.5	1.1	0.6	0.4	40.2
CLOUDNESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	49	5.0	4.9	4.9	4.5	4.9	4.8	4.9	4.7	4.6	3.8	4.3	4.8	4.7
	MIDNIGHT-MIDNIGHT (OKTAS)	34	4.7	4.6	4.5	4.2	4.7	4.6	4.8	4.7	4.3	3.8	4.2	4.5	4.5
	MEAN NO. DAYS WITH:														
	CLEAR	50	9.0	8.2	9.2	9.8	7.7	7.3	6.6	7.3	9.1	12.9	11.2	9.8	108.1
	PARTLY CLOUDY	50	6.1	6.3	8.2	8.6	10.6	11.4	11.6	12.2	9.2	7.6	6.3	5.9	104.0
	CLOUDY	50	15.8	13.7	13.5	11.6	12.7	11.5	12.3	11.0	11.1	10.0	12.0	14.7	149.9
PR	MEAN STATION PRESSURE(IN)	26	29.30	29.28	29.24	29.19	29.21	29.20	29.22	29.24	29.26	29.29	29.31	29.32	29.26
	MEAN SEA-LEVEL PRES. (IN)	26	30.13	30.11	30.06	30.00	30.01	30.00	30.02	30.04	30.06	30.11	30.13	30.15	30.07
WINDS	MEAN SPEED (MPH)	26	6.8	7.2	7.8	7.6	6.8	6.2	5.8	5.5	6.1	5.6	6.0	6.3	6.5
	PREVAIL.DIR(TENS OF DEGS)	37	21	19	19	19	19	19	19	19	01	01	01	02	19
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	11	37	33	41	35	38	37	41	43	32	26	31	38	43
	DIR. (TENS OF DEGS)		25	32	32	36	35	26	02	31	15	15	18	16	31
	YEAR OF OCCURRENCE		2009	2001	2004	2006	2003	2008	2006	2000	2004	2006	2006	2000	AUG 2000
	MAXIMUM 3-SECOND														
	SPEED (MPH)	11	48	45	54	49	46	46	55	62	40	32	45	53	62
	DIR. (TENS OF DEGS)		25	23	31	30	01	25	01	30	15	15	20	16	30
	YEAR OF OCCURRENCE		2009	2009	2004	2007	2003	2008	2006	2003	2004	2006	2003	2000	AUG 2003
PRECIPITATION	NORMAL (IN)	30	4.00	3.55	4.39	2.95	3.66	3.42	3.79	3.72	3.83	3.66	3.36	3.18	43.51
	MAXIMUM MONTHLY (IN)	70	7.44	7.59	8.76	8.25	12.48	8.26	9.12	10.35	10.89	14.72	8.68	7.49	14.72
	YEAR OF OCCURRENCE		1962	1979	1980	2003	1975	1961	1941	2003	1945	1990	1985	1983	OCT 1990
	MINIMUM MONTHLY (IN)	70	0.45	0.74	0.58	0.30	0.11	0.15	0.53	0.41	0.02	T	0.46	0.43	T
	YEAR OF OCCURRENCE		1981	1978	1985	1976	1941	1993	1983	2007	1954	1953	1973	1965	OCT 1953
	MAXIMUM IN 24 HOURS (IN)	70	3.57	2.92	3.83	3.20	4.53	3.77	4.14	8.19	4.74	5.46	3.27	2.87	8.19
	YEAR OF OCCURRENCE		1962	1973	1977	1962	2003	1949	2004	2008	1959	1990	1985	1972	AUG 2008
	NORMAL NO. DAYS WITH:														
	PRECIPITATION >= 0.01	30	11.0	9.3	10.6	8.6	10.1	10.2	11.0	9.4	7.9	6.6	8.6	9.9	113.2
	PRECIPITATION >= 1.00	30	0.9	1.0	1.0	0.6	0.9	0.9	0.8	1.0	1.1	1.3	0.9	0.8	11.2
SNOWFALL	NORMAL (IN)	30	1.7	1.6	1.2	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	5.2
	MAXIMUM MONTHLY (IN)	70	12.1	14.9	19.3	0.1	T	T	0.0	T	0.0	T	2.5	7.5	19.3
	YEAR OF OCCURRENCE		1988	1979	1960	1982	2009	1998		2009		1994	1968	1971	MAR 1960
	MAXIMUM IN 24 HOURS (IN)	70	12.1	12.0	10.3	0.1	T	T	0.0	T	0.0	T	2.5	7.5	12.1
	YEAR OF OCCURRENCE'		1988	1969	1983	1982	2009	1998		2009		1994	1968	1971	JAN 1988
	MAXIMUM SNOW DEPTH (IN)	61	12	13	9	0	0	0	0	0	0	0	2	6	13
	YEAR OF OCCURRENCE		1988	2004	1983								1968	1971	FEB 2004
	NORMAL NO. DAYS WITH:														
	SNOWFALL >= 1.0	30	0.5	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4

PRECIPITATION (inches) 2009 CHARLOTTE (KCLT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	4.67	1.31	8.76	2.31	3.59	2.27	2.63	1.94	5.37	1.67	3.77	0.83	39.12
1981	0.45	3.63	2.12	0.67	4.27	1.81	6.61	2.67	3.42	3.94	0.87	6.23	36.69
1982	4.30	4.87	1.58	3.84	4.97	4.16	4.19	2.03	0.64	3.83	3.05	4.23	41.69
1983	2.53	5.50	6.07	2.66	2.14	3.77	0.53	3.61	0.74	2.43	4.05	7.49	41.52
1984	4.09	5.90	5.89	4.50	4.78	2.95	5.96	3.95	1.74	0.75	2.08	2.40	44.99
1985	5.20	4.05	0.58	1.90	5.14	5.46	4.14	7.35	0.74	5.16	8.68	0.92	49.32
1986	1.02	1.03	3.01	1.20	1.63	0.41	2.26	5.43	0.83	3.49	3.44	3.16	26.91
1987	4.78	5.19	3.65	2.44	0.99	2.98	1.38	2.76	6.87	0.84	4.05	3.39	39.32
1988	3.43	1.11	3.29	2.27	2.20	1.55	3.56	4.56	4.45	4.12	2.11	1.62	34.27
1989	1.61	4.67	4.92	2.58	5.37	3.20	6.30	2.99	7.27	4.08	3.14	3.66	49.79
1990	3.81	5.65	3.57	2.03	4.99	0.90	2.71	3.47	1.75	14.72	2.75	3.23	49.58
1991	6.02	1.32	7.18	5.43	2.94	2.39	3.70	8.18	1.70	0.50	2.83	2.99	45.18
1992	3.28	4.31	4.93	2.51	3.59	6.83	1.78	3.46	8.18	6.21	5.84	2.81	53.73
1993	6.17	2.72	7.61	2.00	2.60	0.15	1.56	3.77	0.92	2.28	2.69	3.34	35.81
1994	3.54	2.62	4.94	2.29	1.47	4.58	2.61	5.75	1.00	3.60	2.32	1.92	36.64
1995	4.25	4.57	1.49	1.37	3.17	5.76	4.56	7.07	2.49	7.17	5.05	1.23	48.18
1996	4.13	2.52	4.73	4.41	2.13	2.56	3.05	4.74	4.12	2.32	2.83	2.61	40.15
1997	2.96	4.65	2.51	5.23	1.39	6.85	8.94	1.10	3.39	3.94	3.70	4.08	48.74
1998	5.74	3.82	3.01	6.19	1.53	3.56	3.65	2.82	3.79	1.38	2.27	3.28	41.04
1999	3.87	2.32	1.31	4.12	1.50	4.02	3.39	1.42	4.26	5.47	1.49	1.74	34.91
2000	4.07	2.59	3.59	5.48	1.17	3.48	1.47	3.26	5.81	T	2.75	1.07	34.74
2001	1.87	2.19	5.68	1.18	2.65	1.90	2.24	0.64	4.31	0.78	0.83	1.96	26.23
2002	4.69	1.53	4.48	0.43	4.18	1.24	1.20	4.32	3.54	5.43	4.38	4.96	40.38
2003	1.96	3.61	7.06	8.25	10.69	5.06	8.29	10.35	2.69	1.43	0.84	2.40	62.63
2004	0.92	3.55	1.61	1.35	2.78	8.20	6.84	5.43	6.87	0.75	3.12	2.74	44.16
2005	1.66	2.95	5.27	3.00	2.42	8.23	3.05	1.97	0.36	4.66	3.06	5.25	41.88
2006	3.23	1.17	1.32	2.36	1.24	7.40	3.65	7.20	4.38	3.80	6.30	2.37	44.42
2007	3.38	2.77	4.40	4.12	0.60	2.57	2.04	0.41	1.07	2.54	0.47	4.24	28.61
2008	1.84	2.76	4.64	3.70	2.19	2.69	3.57	9.38	3.98	1.49	2.75	3.23	42.22
2009	2.52	2.21	5.40	2.30	7.28	4.74	4.69	1.66	1.67	3.58	5.08	7.01	48.14
POR= 62 YRS	3.58	3.53	4.42	3.16	3.43	3.68	3.83	4.07	3.39	3.11	3.08	3.32	42.60

WBAN : 13881

AVERAGE TEMPERATURE (°F) 2009 CHARLOTTE (KCLT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	41.4	38.9	47.4	60.0	68.2	74.0	80.0	80.9	74.8	58.3	48.8	42.6	59.6
1981	36.1	44.2	48.5	64.2	65.1	78.2	78.7	75.1	70.2	58.0	51.3	39.3	59.1
1982	36.0	45.4	52.7	57.6	72.0	75.0	78.4	76.3	70.0	60.5	52.3	47.9	60.3
1983	38.8	41.8	50.6	54.8	66.7	73.9	80.7	80.2	71.1	61.0	50.0	39.6	59.1
1984	38.3	45.4	50.0	56.5	65.9	76.4	76.1	77.1	69.0	67.8	47.8	50.0	60.0
1985	35.6	43.1	54.0	61.4	68.0	75.8	77.4	75.7	70.6	64.8	58.6	39.7	60.4
1986	38.8	46.8	52.8	64.3	69.5	80.6	84.8	76.9	74.1	64.0	53.2	43.4	62.4
1987	40.0	42.9	51.1	58.9	71.6	77.8	82.3	81.4	73.5	56.2	53.5	45.5	61.2
1988	35.8	43.4	52.7	60.6	68.4	75.3	79.6	80.9	71.8	56.3	53.0	43.8	60.1
1989	46.8	45.9	53.4	60.7	66.7	78.2	79.6	77.8	71.8	63.5	52.2	36.5	61.1
1990	48.5	52.3	55.9	61.1	69.0	77.7	81.1	80.1	74.1	63.8	55.4	49.0	64.0
1991	43.1	48.4	55.2	64.4	74.0	77.6	82.2	78.4	73.8	63.5	51.4	48.2	63.4
1992	45.1	48.7	52.7	61.3	66.0	73.9	82.4	76.1	72.1	60.0	52.4	42.9	61.1
1993	45.0	43.1	49.6	58.7	70.5	78.8	85.5	80.2	74.8	62.3	52.7	42.9	62.0
1994	38.4	46.7	55.1	64.7	67.1	79.0	79.9	77.2	71.1	61.8	55.6	48.0	62.1
1995	42.2	41.8	54.3	62.3	69.3	74.0	80.4	79.9	70.4	62.8	47.1	40.9	60.5
1996	39.3	44.5	47.3	59.1	70.2	76.8	78.9	76.9	71.6	61.9	47.6	46.3	60.0
1997	42.8	48.5	58.3	58.1	66.3	73.0	81.3	78.9	73.3	62.7	48.7	43.0	61.2
1998	47.1	49.7	52.1	62.4	74.4	80.8	79.8	77.1	73.1	61.6	53.2	47.7	63.3
1999	45.7	46.2	47.8	62.1	65.9	73.3	78.8	79.4	69.1	58.9	54.2	43.6	60.4
2000	39.8	46.6	55.1	57.1	69.4	75.9	76.9	76.5	69.1	60.6	48.8	35.2	59.3
2001	40.7	47.8	48.7	61.3	68.2	75.6	76.4	79.6	69.0	58.1	56.4	48.3	60.8
2002	43.1	44.3	51.7	64.3	65.9	76.2	80.6	78.0	73.3	61.7	48.4	40.9	60.7
2003	37.3	42.6	54.1	58.6	66.4	72.8	76.6	77.7	69.8	60.2	55.7	40.5	59.4
2004	39.7	40.0	53.8	59.5	72.1	75.1	77.9	74.7	71.1	63.1	53.2	42.0	60.2
2005	44.2	45.4	49.0	58.5	64.8	74.6	79.6	79.5	74.9	62.0	51.8	40.1	60.4
2006	47.0	43.5	51.7	63.1	65.8	74.6	78.2	78.8	69.9	57.8	51.7	47.4	60.8
2007	44.1	41.1	56.8	58.6	67.6	76.0	76.7	83.7	75.0	66.1	50.1	48.8	62.1
2008	40.6	46.7	52.3	58.7	67.2	79.0	78.5	77.6	71.5	58.3	46.6	46.9	60.3
2009	40.0	44.5	50.7	60.0	69.1	76.8	77.0	78.5	71.7	59.2	53.1	39.9	60.0
POR= 62 YRS	41.2	44.2	51.4	60.4	68.4	75.7	79.1	78.1	71.9	61.1	51.3	43.3	60.5

HEATING DEGREE DAYS (base 65°F) 2009 CHARLOTTE (KCLT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0	0	26	230	482	689	890	574	508	87	74	0	3560
1981-82	0	2	18	228	405	790	891	544	376	235	6	0	3495
1982-83	0	0	20	191	380	529	806	645	441	308	46	1	3367
1983-84	0	0	44	149	445	780	820	562	459	266	74	2	3601
1984-85	0	0	47	31	517	458	905	607	358	150	32	0	3105
1985-86	0	0	28	85	198	777	799	503	381	106	24	0	2901
1986-87	0	6	2	119	357	665	767	614	426	217	9	0	3182
1987-88	0	0	1	264	339	597	899	621	378	154	23	6	3282
1988-89	0	0	1	279	354	653	558	541	378	189	77	0	3030
1989-90	0	0	27	111	382	877	503	350	307	158	23	0	2738
1990-91	0	0	15	109	282	491	671	457	313	88	11	0	2437
1991-92	0	0	9	102	410	525	608	465	375	174	83	1	2752
1992-93	0	0	20	162	372	679	612	610	469	199	16	0	3139
1993-94	0	0	12	139	384	677	819	507	311	87	58	0	2994
1994-95	0	0	0	130	279	524	699	645	331	132	27	1	2768
1995-96	0	0	27	119	529	740	788	591	544	193	45	0	3576
1996-97	0	0	6	132	517	571	683	457	219	209	46	26	2866
1997-98	0	0	5	147	483	678	552	423	421	116	4	0	2829
1998-99	0	0	7	133	348	534	592	519	526	140	35	2	2836
1999-00	5	0	30	202	321	658	773	529	309	236	13	4	3080
2000-01	0	0	43	153	483	916	748	474	499	174	14	0	3504
2001-02	0	0	42	232	258	512	668	575	410	110	88	0	2895
2002-03	0	0	0	174	489	740	850	621	336	197	33	1	3441
2003-04	0	0	18	156	298	751	778	717	349	197	27	0	3291
2004-05	0	0	7	93	360	706	643	543	489	197	64	2	3104
2005-06	0	0	0	163	394	764	551	594	416	110	75	1	3068
2006-07	0	0	22	235	396	538	640	662	272	222	45	0	3032
2007-08	0	0	0	94	441	501	753	524	390	201	25	0	2929
2008-09	0	0	5	225	544	552	772	569	444	176	43	0	3330
2009-	0	0	11	199	348	769							

WBAN : 13881

COOLING DEGREE DAYS (base 65°F) 2009 CHARLOTTE (KCLT)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	0	0	0	28	133	275	473	497	328	26	0	0	1760
1981	0	0	2	69	87	403	431	323	182	21	0	0	1518
1982	0	0	3	22	230	308	424	357	179	59	6	5	1593
1983	0	0	1	6	107	275	494	476	234	32	0	0	1625
1984	0	0	0	18	110	350	348	381	176	124	6	0	1513
1985	0	0	24	48	132	330	395	338	204	87	11	0	1569
1986	0	0	9	94	174	474	618	381	284	93	10	0	2137
1987	0	0	0	38	222	389	542	515	264	2	1	0	1973
1988	0	0	3	28	135	323	461	500	213	18	1	0	1682
1989	0	14	25	72	138	403	458	405	237	75	1	0	1828
1990	0	1	32	50	157	389	507	475	292	81	4	3	1991
1991	0	0	17	79	300	382	542	423	280	66	8	13	2110
1992	0	0	1	71	124	274	546	351	240	12	2	0	1621
1993	0	0	0	15	195	419	643	476	313	62	21	0	2144
1994	0	4	10	86	129	428	469	384	189	36	3	2	1740
1995	0	0	9	59	167	276	481	472	196	58	0	0	1718
1996	0	1	0	21	213	361	436	376	212	41	1	0	1662
1997	0	0	17	8	96	272	512	439	262	87	0	0	1693
1998	4	0	24	43	303	483	463	383	261	34	0	5	2003
1999	0	0	0	57	65	261	441	455	161	19	1	0	1460
2000	0	0	8	6	156	338	380	365	174	23	4	0	1454
2001	0	0	0	70	119	327	360	461	174	26	8	0	1545
2002	0	0	4	95	122	344	491	411	254	78	2	0	1801
2003	0	0	8	11	84	242	365	401	171	16	27	0	1325
2004	1	0	9	41	254	310	406	307	195	40	13	0	1576
2005	2	0	0	9	62	296	457	456	305	76	2	0	1665
2006	0	0	12	59	107	294	416	435	175	20	3	0	1521
2007	0	0	22	38	132	336	371	587	303	137	0	5	1931
2008	0	0	3	17	98	428	428	397	209	23	0	0	1603
2009	0	0	9	32	176	361	380	425	216	27	0	0	1626

SNOWFALL (inches) 2009 CHARLOTTE (KCLT)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0.0	0.0	0.0	0.0	0.0	0.3	1.8	T	T	0.0	0.0	0.0	2.1
1981-82	0.0	0.0	0.0	0.0	0.0	T	4.8	5.9	0.0	0.1	0.0	0.0	10.8
1982-83	0.0	0.0	0.0	0.0	0.0	T	0.8	1.5	10.3	0.0	0.0	0.0	12.6
1983-84	0.0	0.0	0.0	0.0	T	T	T	5.9	0.0	0.0	0.0	0.0	5.9
1984-85	0.0	0.0	0.0	0.0	0.0	T	1.7	T	0.0	0.0	0.0	0.0	1.7
1985-86	0.0	0.0	0.0	0.0	0.0	T	T	0.3	T	0.0	0.0	0.0	0.3
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	5.6	2.1	0.3	T	0.0	0.0	8.0
1987-88	0.0	0.0	0.0	0.0	T	0.0	12.1	0.0	0.0	0.0	0.0	0.0	12.1
1988-89	0.0	0.0	0.0	0.0	0.0	T	0.0	3.5	T	0.0	0.0	0.0	3.5
1989-90	0.0	0.0	0.0	0.0	T	0.6	0.0	0.0	T	T	0.0	0.0	0.6
1990-91	0.0	0.0	0.0	0.0	0.0	T	1.0	T	T	0.0	0.0	0.0	1.0
1991-92	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1992-93	0.0	0.0	0.0	0.0	0.0	T	0.0	T	1.6	0.0	T	0.0	1.6
1993-94	0.0	0.0	0.0	0.0	0.0	2.6	T	T	0.0	0.0	0.0	0.0	2.6
1994-95	0.0	0.0	0.0	T	0.0	T	T	T	0.0	0.0	T	0.0	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	3.0	T	T	0.0	0.0	0.0	3.0
1996-97	0.0	0.0	0.0	0.0	0.0	T	0.1	0.4	0.0	0.0	0.0	0.0	0.5
1997-98	0.0	0.0	0.0	0.0	0.0	2.9	1.5	0.0	0.5	T	0.0	T	4.9
1998-99	0.0	0.0	0.0	0.0	0.0	T	T	1.4	0.5	0.0	0.0	0.0	1.9
1999-00	0.0	0.0	0.0	0.0	0.0	T	9.2	0.0	0.0	0.0	T	0.0	9.2
2000-01	0.0	0.0	0.0	0.0	2.5	0.2	T	0.0	T	0.0	0.0	0.0	2.7
2001-02	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	4.4
2002-03	0.0	0.0	0.0	0.0	0.0	T	9.5	0.6	0.0	0.0	T	0.0	10.1
2003-04	0.0	0.0	0.0	0.0	0.0	T	1.3	13.2	0.0	0.0	0.0	0.0	14.5
2004-05	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	T	0.0	0.0	0.0	0.8
2005-06	0.0	0.0	0.0	0.0	0.0	T	0.0	T	T	0.0	T	0.0	T
2006-07	0.0	0.0	0.0	0.0	T	0.0	T	1.0	0.0	0.0	0.0	0.0	1.0
2007-08	0.0	0.0	0.0	0.0	0.0	T	1.4	0.0	0.0	0.0	0.0	0.0	1.4
2008-09	0.0	0.0	0.0	0.0	0.0	0.0	T	T	4.0	0.0	T	0.0	4.0
2009-	0.0	T	0.0	0.0	0.0	T							
POR= 62 YRS	0.0	T	0.0	T	0.1	0.4	2.1	1.7	1.0	T	T	T	5.3

WBAN : 13881

REFERENCE NOTES :

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).

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).

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.

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.

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.

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.

2009
CHARLOTTE
NORTH CAROLINA (KCLT)

Charlotte is located in the Piedmont of the Carolinas, a transitional area of rolling country between the mountains to the west and the Coastal Plain to the east. The mountains are to the northwest about 80 miles from Charlotte. The general elevation of the area around Charlotte is about 730 feet. The Atlantic ocean is about l60 miles southeast.

The mountains have a moderating effect on winter temperatures, causing appreciable warming of cold air from the northwest winds. The ocean is too far away to have any immediate effect on summer temperatures but in winter an occasional general and sustained flow of air from the warm ocean waters results in considerable warming.

Charlotte enjoys a moderate climate, characterized by cool winters and quite warm summers. Temperatures fall as low as the freezing point on a little over one-half of the days in the winter months. Winter weather is changeable, with occasional cold periods, but extreme cold is rare. Snow is infrequent, and the first snowfall of the season usually comes in late November or December. Heavy snowfalls have occurred, but any appreciable accumulation of snow on the ground for more than a day or two is rare.

Summers are long and quite warm, with afternoon temperatures frequently in the low 90s. The growing season is also long, the average length of the freeze-free period being 2l6 days. On the average, the last occurrence in spring with a temperature of 32 degrees is early April. In the fall the average first occurrence of 32 degrees is early November.

Rainfall is generally rather evenly distributed throughout the year, the driest weather usually coming in the fall. Summer rainfall comes principally from thunderstorms with occasional dry spells of one to three weeks duration.

Hurricanes which strike the Carolina coast may produce heavy rain but seldom cause dangerous winds.

Station Location CHARLOTTE

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	Latitude NORTH	Longitude WEST	ELEVATION ABOVE SEA LEVEL: GROUND TEMPERATURE SITE	ELEVATION ABOVE GROUND: WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING BUCKET RAIN GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE	HYGROTHERMOMETER	AUTOMATIC OBSERVING EQUIPMENT *	REMARKS
*NOTE:																
AIRPORT																
5304 Morris Field Drive Douglas Municipal AP	9/4/79	11/17/82	1650 ft. E	35° 13'	80° 56'	736 u737 x720	n20 u33 x33	n34 r28 t28	n33 r28 t28	30 v28 w12	n31 p27	28	n32 p27	n4 q5 u5 x5		n. Not moved 9/4/79. p. Relocated 9/6/79. q. Moved app. 300' W and type change 11/2/79. r. Relocated 12/17/79. t. Moved 10' NNW 10/25/82. u. Minor relocation 11/16-17/82. v. Minor relocation 10/16/82. w. Moved 225' NNW to field 3/17/86. x. Moved 4500' ESE, also Hygro type change 3/17/86.
5304 Morris Field Drive Douglas International AP	11/17/82	07/01/98														
Douglas Int'l Airport	07/01/98	Present	NA	35° 13'	80° 57'	y721									S	ASOS Commissioned 07/01/98 y. Ground Elevation

* TYPE
M = AMOS
T = AUTOB
S = ASOS
W = AWOS

* NOTES: For earlier station history see previous editions.

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