



# 2009

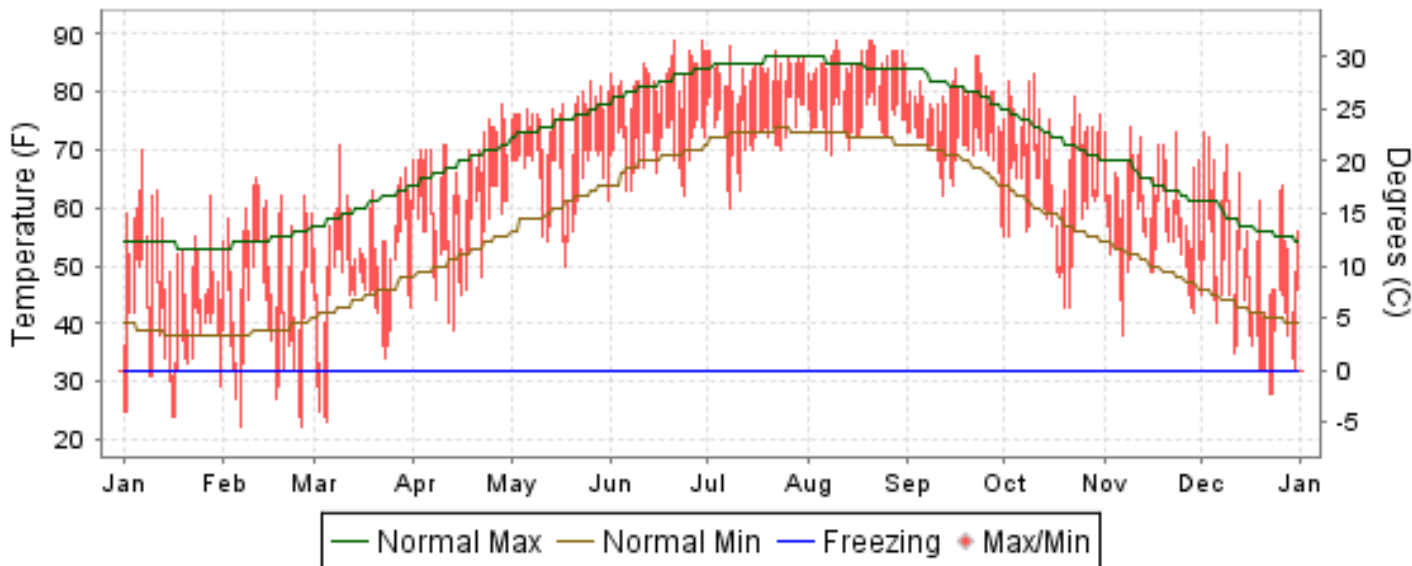
## LOCAL CLIMATOLOGICAL DATA

### ANNUAL SUMMARY WITH COMPARATIVE DATA

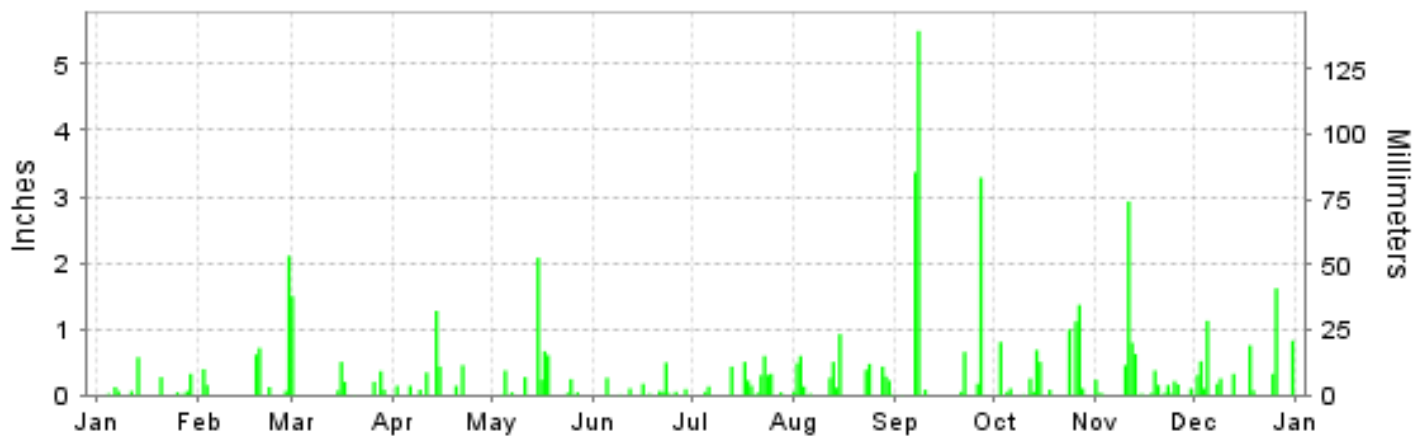
ISSN 0198-3717

## CAPE HATTERAS, NORTH CAROLINA (KHSE)

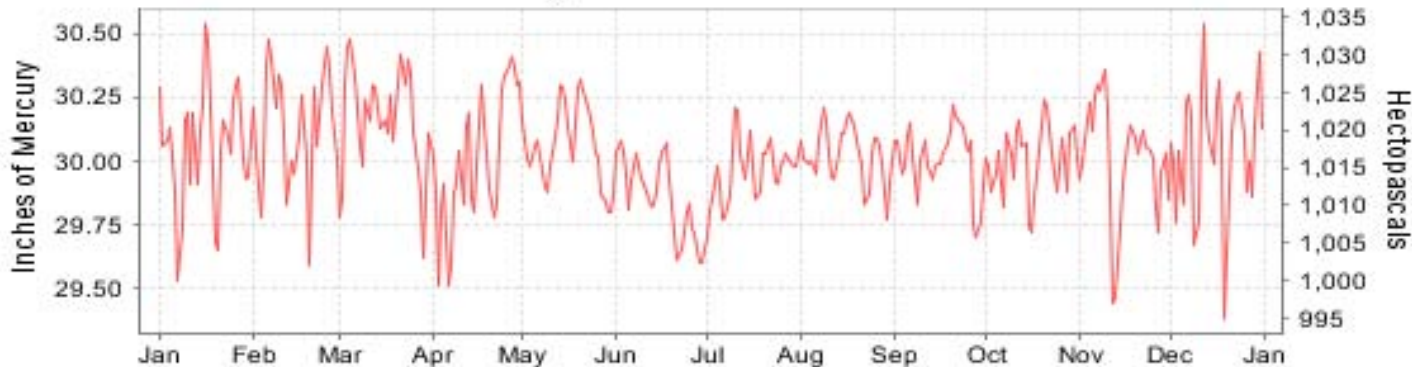
### Daily Max/Min Temperature



### Daily Precipitation



### Daily Station Pressure



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CLIMATIC DATA CENTER  
ASHEVILLE, NORTH CAROLINA

*Thomas R. Karl*  
DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 2009

## CAPE HATTERAS (KHSE)

LATITUDE: 35° 13'N      LONGITUDE: -75° 37'W      ELEVATION (FT): GRND: 10      BARO: 13      TIME ZONE: EASTERN (UTC -5)      WBAN: 93729

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	50.6	53.0	55.3	67.5	75.0	82.5	83.7	85.4	79.4	71.9	64.2	55.5	68.7	
	HIGHEST DAILY MAXIMUM	70	65	71	78	82	89	88	89	86	83	74	73	89	
	DATE OF OCCURRENCE	07	11	09	28	26	29+	08	21+	23+	10	09	02	AUG 21+	
	MEAN DAILY MINIMUM	37.3	38.3	43.6	54.9	64.3	70.0	72.6	74.7	69.3	59.1	53.0	41.9	56.6	
	LOWEST DAILY MINIMUM	24	22	23	39	50	62	60	69	57	43	38	28	22	
	DATE OF OCCURRENCE	17+	25+	05	13	18	24	08	08	30	21+	07	23+	FEB 25+	
	AVERAGE DRY BULB	44.0	45.7	49.5	61.2	69.7	76.3	78.2	80.1	74.4	65.5	58.6	48.7	62.7	
	MEAN WET BULB		41.7	45.7	56.5	65.4	71.1	73.1	75.3	69.1	61.8	55.6	44.8		
	MEAN DEW POINT		34.9	41.5	52.1	62.7	68.4	70.6	73.3	66.1	58.9	52.7	40.4		
	NUMBER OF DAYS WITH:														
	MAXIMUM >= 90°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MAXIMUM <= 32°	1	0	0	0	0	0	0	0	0	0	0	0	0	1
	MINIMUM <= 32°	9	9	4	0	0	0	0	0	0	0	0	6	28	
MINIMUM <= 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	645	536	476	132	26	0	0	0	0	72	194	501	2582	
	COOLING DEGREE DAYS	0	0	0	24	179	345	416	474	288	94	9	1	1830	
RH	MEAN (PERCENT)	76	67	77	74	79	78	78	82	77	80	82	75	77	
	HOUR 01 LST	79	69	83	79	85	86	86	89	84	84	86	76	82	
	HOUR 07 LST	79	72	79	75	80	76	77	81	77	79	85	77	78	
	HOUR 13 LST	70	59	70	64	71	68	69	72	68	72	75	71	69	
	HOUR 19 LST	77	67	81	77	82	82	80	85	78	82	83	78	79	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG(VISBY <= 1/4 MI)	4	0	3	0	1	0	0	0	0	0	0	2	10	
	THUNDERSTORMS	0	0	0	0	0	0	0	0	0	0	0	0	0	
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.)	30.06	30.14	30.16	30.01	30.06	29.86	29.97	30.03	30.01	30.01	30.01	30.07	30.03	
	MEAN SEA-LEVEL PRESS. (IN.)	30.07	30.16	30.17	30.02	30.07	29.87	29.98	30.04	30.03	30.02	30.04	30.09	30.05	
WINDS	RESULTANT SPEED (MPH)	3.5	3.7	1.9	4.6	3.7	2.2	4.9	4.7	3.1	0.6	3.1	1.5	1.5	
	RES. DIR. (TENS OF DEGS.)	30	29	36	24	19	21	22	22	04	31	01	29	26	
	MEAN SPEED (MPH)	8.8	8.7	9.1	10.4	10.2	7.4	8.7	7.2	7.9	8.2	7.9	10.4	8.7	
	PREVAIL.DIR.(TENS OF DEGS.)	02	25	04	23	22	22	22	23	05	04	04	02	22	
	MAXIMUM 2-MINUTE WIND														
	SPEED (MPH)	36	31	28	32	36	18	30	26	32	35	29	40	40	
	DIR. (TENS OF DEGS.)	27	24	21	21	21	23	23	14	17	14	30	10	10	
	DATE OF OCCURRENCE	07	19	29	06	05	26	24	28	27	27	27	19	DEC 19	
	MAXIMUM 3-SECOND WIND:														
	SPEED (MPH)	55	45	37	47	52	26	45	32	45	44	46	53	55	
DIR. (TENS OF DEGS.)	28	21	20	26	21	23	22	14	17	16	30	10	28		
DATE OF OCCURRENCE	07	18	29	11	05	26	24	28	27	27	27	19	JAN 07		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	1.64	4.21	2.99	3.08	4.68	1.44	3.19	5.00	13.18	6.21	6.49	6.48	58.59	
	GREATEST 24-HOUR (IN.)	0.58	2.11	1.50	1.72	2.27	0.56	0.91	1.05	7.55	2.49	3.39	1.95	7.55	
	DATE OF OCCURRENCE	13	28	01	14-15	15-16	22-23	22-23	14-15	07-08	26-27	11-12	25-26	SEP 07-08	
	NUMBER OF DAYS WITH:														
	PRECIPITATION 0.01	10	7	9	9	12	12	13	15	10	13	19	13	142	
PRECIPITATION 0.10	4	6	5	7	7	5	9	12	5	9	11	11	91		
PRECIPITATION 1.00	0	1	1	1	1	0	0	0	3	3	1	2	13		
SNOWFALL	SNOW,ICE PELLETS,HAIL														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	NUMBER OF DAYS WITH:														
SNOWFALL >= 1.0															

# NORMALS, MEANS, AND EXTREMES

## CAPE HATTERAS (KHSE)

LATITUDE: 35° 13'N      LONGITUDE: -75° 37'W      ELEVATION (FT): GRND: 10      BARO: 13      TIME ZONE: EASTERN (UTC -5)      WBAN: 93729

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	53.6	54.6	60.2	67.7	74.9	81.5	85.4	84.8	81.1	72.6	64.8	57.3	69.9
	MEAN DAILY MAXIMUM	52	53.0	53.8	59.3	67.2	74.4	81.1	85.0	84.8	80.8	72.4	64.5	56.9	69.4
	HIGHEST DAILY MAXIMUM	52	75	76	81	89	91	95	96	94	92	89	81	78	96
	YEAR OF OCCURRENCE		1985	1971	1990	1990	1991	1978	1992	1968	1978	1986	2003	1991	JUL 1992
	MEAN OF EXTREME MAXS.	52	69.3	68.7	72.7	78.5	83.3	88.4	90.2	90.0	87.5	82.2	76.6	71.0	79.9
	NORMAL DAILY MINIMUM	30	38.6	39.0	44.5	51.8	60.2	68.1	72.9	72.3	68.5	58.8	50.3	42.6	55.6
	MEAN DAILY MINIMUM	52	38.1	38.5	43.8	51.8	60.0	68.0	72.7	72.4	68.4	58.9	50.0	42.0	55.4
	LOWEST DAILY MINIMUM	52	6	14	19	26	39	44	54	56	45	32	22	12	6
	YEAR OF OCCURRENCE		1985	1958	1967	1972	1971	1966	1972	1979	1970	1979	1967	1983	JAN 1985
	MEAN OF EXTREME MINS.	52	22.9	24.3	29.2	36.5	46.2	56.3	62.6	62.8	56.4	43.2	34.3	26.5	41.8
	NORMAL DRY BULB	30	46.1	46.8	52.4	59.8	67.6	74.8	79.2	78.6	74.8	65.7	57.6	50.0	62.8
	MEAN DRY BULB	52	45.6	46.2	51.6	59.5	67.3	74.8	78.9	78.6	74.6	65.6	57.3	49.5	62.5
	MEAN WET BULB	25	42.8	43.2	47.7	54.8	62.5	70.3	74.5	73.7	69.4	61.1	53.7	46.1	58.3
	MEAN DEW POINT	25	39.0	40.2	44.5	51.8	60.2	68.5	73.1	72.2	67.5	58.5	50.8	42.8	55.8
	NORMAL NO. DAYS WITH: MAXIMUM >= 90	30	0.0	0.0	0.0	0.0	0.1	0.9	2.8	1.8	0.5	0.0	0.0	0.0	6.1
	MAXIMUM <= 32	30	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3
MINIMUM <= 32	30	9.0	7.4	2.7	0.3	0.0	0.0	0.0	0.0	0.0	*	0.9	5.1	25.4	
MINIMUM <= 0	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
H/C	NORMAL HEATING DEG. DAYS	30	587	518	400	187	44	3	0	0	2	72	244	464	2521
	NORMAL COOLING DEG. DAYS	30	0	1	5	29	122	297	440	422	297	96	24	4	1737
RH	NORMAL (PERCENT)	30	75	75	74	73	77	79	81	81	79	76	75	76	77
	HOUR 01 LST	30	78	79	80	81	86	87	89	89	85	81	80	79	83
	HOUR 07 LST	30	79	81	79	78	81	83	85	86	84	82	82	81	82
	HOUR 13 LST	30	68	65	63	59	65	67	70	70	68	65	66	68	66
	HOUR 19 LST	30	78	77	76	75	78	79	81	83	81	79	78	78	79
S	PERCENT POSSIBLE SUNSHINE	33	48	52	60	67	65	65	65	65	64	60	56	48	60
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY <= 1/4 MI)	46	2.9	2.2	2.5	1.4	1.0	0.7	0.5	0.5	0.5	0.6	1.0	2.1	15.9
	THUNDERSTORMS	52	0.6	1.1	1.7	2.3	3.6	4.0	6.2	5.6	2.3	1.3	1.1	0.7	30.5
CLOUDNESS	MEAN: SUNRISE-SUNSET (OKTAS)														
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH: CLEAR														
	PARTLY CLOUDY CLOUDY														
PR	MEAN STATION PRESSURE(IN)	26	30.10	30.09	30.06	30.00	30.01	30.00	30.01	30.02	30.03	30.07	30.10	30.11	30.05
	MEAN SEA-LEVEL PRES. (IN)	26	30.11	30.10	30.07	30.01	30.02	30.01	30.02	30.03	30.05	30.08	30.11	30.12	30.06
WINDS	MEAN SPEED (MPH)	26	10.5	10.3	10.9	10.9	10.1	9.7	9.0	8.7	9.9	9.6	9.8	10.2	10.0
	PREVAIL.DIR(TENS OF DEGS)	28	02	02	04	24	23	23	23	23	04	04	02	02	23
	MAXIMUM 2-MINUTE: SPEED (MPH)	14	44	41	52	39	40	36	52	56	66	47	41	41	66
	DIR. (TENS OF DEGS)		24	13	19	17	36	15	15	17	04	22	09	23	04
	YEAR OF OCCURRENCE		1996	2007	2001	2007	2005	2007	1996	1998	2005	1996	2005	2000	SEP 2005
	MAXIMUM 3-SECOND SPEED (MPH)	14	55	51	70	58	61	47	64	72	83	74	60	54	83
	DIR. (TENS OF DEGS)		28	18	21	24	35	15	14	18	03	18	08	23	03
YEAR OF OCCURRENCE		2009	2008	1999	2007	2005	2007	1996	1998	2005	1996	2008	2000	SEP 2005	
PRECIPITATION	NORMAL (IN)	30	5.84	3.94	4.95	3.29	3.92	3.82	4.95	6.56	5.68	5.31	4.93	4.56	57.75
	MAXIMUM MONTHLY (IN)	52	12.45	8.45	11.20	9.94	11.70	10.80	10.85	16.10	20.00	15.05	16.20	8.63	20.00
	YEAR OF OCCURRENCE		1991	1983	1989	2003	2003	1962	1998	1986	1989	1985	1985	1962	SEP 1989
	MINIMUM MONTHLY (IN)	52	1.64	1.06	0.98	0.44	0.35	0.38	0.45	0.99	0.08	0.53	0.85	0.64	0.08
	YEAR OF OCCURRENCE		2009	1991	1967	1995	1987	1978	1958	1983	1986	1984	1998	1985	SEP 1986
	MAXIMUM IN 24 HOURS (IN)	52	5.95	3.03	5.94	5.60	5.65	6.63	5.53	8.69	7.55	8.45	7.69	3.59	8.69
	YEAR OF OCCURRENCE		1991	2008	1989	1963	2005	1962	1967	1999	2009	1994	1985	1979	AUG 1999
	NORMAL NO. DAYS WITH: PRECIPITATION >= 0.01	30	11.6	10.4	10.8	8.3	9.5	9.4	11.5	10.8	9.6	8.7	9.3	10.6	120.5
PRECIPITATION >= 1.00	30	1.7	1.3	1.4	0.9	1.0	0.8	1.3	2.1	1.9	1.6	1.4	1.3	16.7	
SNOWFALL	NORMAL (IN)	30	0.4	0.4	0.3	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.7	1.8
	MAXIMUM MONTHLY (IN)	38	3.5	4.4	8.5	T	0.0	0.0	0.0	0.0	0.0	0.0	T	13.5	13.5
	YEAR OF OCCURRENCE		1962	1978	1960	1989							1987	1989	DEC 1989
	MAXIMUM IN 24 HOURS (IN)	38	3.5	4.4	7.3	T	0.0	0.0	0.0	0.0	0.0	0.0	T	8.2	8.2
	YEAR OF OCCURRENCE		1962	1978	1980	1989							1987	1989	DEC 1989
	MAXIMUM SNOW DEPTH (IN)	38	3	3	7	0	0	0	0	0	0	0	0	5	7
	YEAR OF OCCURRENCE		1981	1980	1980									1989	MAR 1980
NORMAL NO. DAYS WITH: SNOWFALL >= 1.0	30	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.5	

**PRECIPITATION (inches) 2009 CAPE HATTERAS (KHSE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	7.76	2.38	8.94	4.03	0.87	5.49	3.47	1.48	5.09	2.58	5.29	4.48	51.86
1981	1.75	1.99	2.36	1.84	4.90	3.91	9.32	11.34	1.31	2.69	2.93	7.20	51.54
1982	5.85	7.03	6.04	5.85	0.90	5.50	6.76	2.14	4.53	3.90	2.50	5.84	56.84
1983	9.27	8.45	9.29	3.40	0.81	4.87	1.75	0.99	6.15	9.46	4.58	6.10	65.12
1984	2.34	4.28	2.99	4.26	7.27	3.12	5.23	4.73	3.81	0.53	4.95	1.69	45.20
1985	3.67	6.28	2.28	0.67	3.77	3.92	3.46	7.17	4.06	15.05	16.20	0.64	67.17
1986	5.75	1.38	1.22	1.93	3.19	3.17	3.10	16.10	0.08	2.09	4.21	6.64	48.86
1987	10.56	4.32	9.56	5.33	0.35	2.94	4.80	6.91	7.61	1.19	5.16	2.23	60.96
1988	5.81	3.98	3.08	3.77	3.62	2.33	1.88	7.42	2.15	3.53	3.95	0.75	42.27
1989	4.30	2.13	11.20	9.57	5.36	4.12	5.16	9.07	20.00	8.29	5.17	6.47	90.84
1990	4.66	4.13	6.92	3.46	5.75	1.80	4.23	3.23	0.59	3.97	3.82	5.13	47.69
1991	12.45	1.06	6.57	1.96	0.49	5.33	8.58	13.19	4.41	4.86	1.15	4.46	64.51
1992	4.40	4.25	7.76	0.71	4.17	0.94	5.28	13.89	6.14	4.03	4.85	5.66	62.08
1993	5.96	5.15	6.67	3.96	0.63	3.15	2.03	9.00	2.99	11.54	4.04	4.14	59.26
1994	7.44	3.13	7.08	1.26	4.66	2.26	3.93	4.00	9.67	9.47	5.57	4.90	63.37
1995	8.90	5.87	1.81	0.44	1.85	9.14	1.08	7.39	8.25	8.47			
1996	3.89		5.06	3.28	2.43	4.99	9.54	5.04	3.80	4.79	4.96	4.28	
1997	3.83	3.66	4.52	4.23	3.17	2.74	4.94	2.30	8.16	3.29	5.89	5.63	52.36
1998	9.34	8.13	2.14	3.92	5.60	3.66	10.85	3.23	8.37	1.00	0.85	4.72	61.81
1999	4.99	1.87	5.58	4.15	5.46	3.65	2.66	13.97	6.75	4.98	3.15	4.57	61.78
2000	5.86	3.81	2.71	5.08	2.40	4.98	6.04	7.26	9.06	1.63	4.53	3.33	56.69
2001	2.45	1.42	1.39	0.97	1.24	6.65	3.26	4.31	2.34	1.93	1.16	2.34	29.46
2002	6.53	3.57	6.18	2.70	2.55	8.98	3.37	7.66	8.67	6.90	8.16	3.43	68.70
2003	2.49	3.68	8.05	9.94	11.70	5.33	8.65	8.88	8.62	7.83	3.19	5.71	84.07
2004	1.97	3.43	3.06	2.49	1.67	2.91	4.47	6.51	4.21	1.88	4.34	2.70	39.64
2005	2.58	3.65	2.43	3.75	9.30	7.88	9.11	6.54	3.98	13.11	2.10	4.80	69.23
2006	4.27	2.21	1.63	3.22	1.52	6.00	4.32	4.93	7.19	4.55	9.92	4.09	53.85
2007	4.61	2.69	1.99	3.35	2.52	2.19	1.28	1.10	3.24	8.42	1.89	3.89	37.17
2008	3.12	6.95	3.49	8.96	1.85	0.59	5.11	4.16	6.28	4.11	14.00	4.84	63.46
2009	1.64	4.21	2.99	3.08	4.68	1.44	3.19	5.00	13.18	6.21	6.49	6.48	58.59
POR= 52 YRS	5.17	3.96	4.35	3.50	3.86	4.27	5.08	6.21	5.68	5.26	4.91	4.47	56.72

WBAN : 93729

**AVERAGE TEMPERATURE (°F) 2009 CAPE HATTERAS (KHSE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1980	45.8	39.0	49.3	61.1	68.6	73.1	79.3	79.1	76.0	62.2	52.0	47.1	61.1
1981	36.2	46.1	45.4	62.6	65.4	78.3	78.6	76.5	71.5	62.9	52.9	44.4	60.1
1982	41.3	47.6	52.1	57.4	68.8	73.3	78.3	77.4	72.8	63.7	59.7	54.1	62.2
1983	44.9	45.4	52.7	57.4	66.8	72.6	79.5	78.7	74.3	66.7	55.9	47.5	61.9
1984	41.7	48.8	48.5	57.7	68.2	75.5	77.8	79.4	72.9	68.8	55.4	55.7	62.5
1985	41.0	45.3	55.1	63.7	69.8	75.2	79.6	78.2	75.8	71.4	66.6	47.7	64.1
1986	44.7	49.3	51.8	60.2	68.1	75.9	80.9	77.0	75.1	68.5	62.8	51.6	63.8
1987	46.0	44.3	48.4	56.4	67.8	75.6	80.1	80.1	75.6	61.7	57.8	48.8	61.9
1988	43.4	46.0	52.3	58.0	66.7	72.2	78.3	80.8	74.5	61.5	60.9	47.9	61.9
1989	50.8	50.1	54.8	59.6	67.2	77.3	79.1	79.3	75.0	66.7	59.6	41.3	63.4
1990	52.2	54.4	56.7	61.3	68.0	74.4	79.7	79.7	74.5	69.5	57.8	56.1	65.4
1991	50.0	50.3	56.4	64.1	73.4	76.6	81.7	80.0	75.6	66.6	57.4	52.8	65.4
1992	48.3	49.3	52.6	59.4	64.3	73.5	80.3	78.0	75.9	63.4	60.2	51.1	63.0
1993	51.4	44.4	50.5	57.2	68.3	75.6	81.9	78.1	76.4	68.9	60.7	47.7	63.4
1994	45.6	48.7	53.7	65.7	67.2	77.8	81.3	78.7	73.4	66.1	62.0	56.3	64.7
1995	48.5	45.3	53.8	63.6	69.0	77.3			75.2	69.9			
1996	45.2						78.0	77.1	74.9	65.1	52.2	50.3	
1997	45.7	49.4		56.8	65.8	70.2	78.1	77.0	74.2	65.7	54.7	47.7	
1998	49.2	49.6	51.1	58.8	66.3	77.3	79.5	79.4	75.4	65.5	57.6	54.2	63.7
1999	50.6	47.3	49.4	60.7	66.2	75.5	81.4	80.3	74.2	66.8	59.2	50.4	63.5
2000	45.1	48.2	55.6	60.0	69.6	76.0	77.7	77.5	75.2	63.8	53.4	44.0	62.2
2001	43.9	48.7	50.1	59.1	67.0	76.5	77.4	79.2	73.2	64.7	60.8	56.2	63.1
2002	49.9	49.7	56.6	64.0	68.9	76.5	80.2	80.1	76.7	68.7	56.0	48.3	64.6
2003	43.1	46.9	55.1	59.7	68.0	75.5	78.4	78.1	74.8	65.4	62.2	47.9	62.9
2004	42.7	45.4	50.4	60.9	72.3	77.8	80.8	78.0	75.5	67.5	59.0	51.9	63.5
2005	46.4	44.5	48.6	57.1	63.0	75.2	80.5	82.2	78.0	67.2	59.7	47.4	62.5
2006	50.7	46.2	50.3	60.7	66.0	75.3	79.9	80.5	72.8	65.0	59.0	53.6	63.3
2007	50.8	43.4	54.3	58.4	67.7	75.6	78.9	80.9	76.8	72.9	56.9	53.7	64.2
2008	46.5	50.1	55.0	59.5	64.9	76.9	80.4	79.4	77.0	64.0	53.4	53.3	63.4
2009	44.0	45.7	49.5	61.2	69.7	76.3	78.2	80.1	74.4	65.5	58.6	48.7	62.7
POR= 52 YRS	45.6	46.2	51.6	59.5	67.3	74.8	78.9	78.6	74.6	65.6	57.3	49.5	62.4

**HEATING DEGREE DAYS (base 65°F) 2009 CAPE HATTERAS (KHSE)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1980-81	0	0	0	132	385	549	884	524	600	109	82	0	3265
1981-82	0	0	15	104	360	630	727	482	392	237	44	0	2991
1982-83	0	0	0	86	176	341	613	544	373	238	50	2	2423
1983-84	0	0	10	55	272	535	715	466	507	215	47	0	2822
1984-85	0	0	2	22	296	282	736	547	305	113	19	0	2322
1985-86	0	0	0	1	48	532	618	435	408	156	48	0	2246
1986-87	0	0	0	49	116	411	581	575	508	255	42	0	2537
1987-88	0	0	0	118	226	495	664	544	386	214	52	22	2721
1988-89	0	0	0	144	150	525	432	421	325	192	38	0	2227
1989-90	0	0	0	39	200	728	398	300	289	159	30	0	2143
1990-91	0	0	13	70	221	288	460	408	281	81	0	0	1822
1991-92	0	0	0	49	248	394	511	449	381	200	73	3	2308
1992-93	0	0	2	91	182	426	413	570	442	237	16	0	2379
1993-94	0	0	2	22	150	529	595	448	353	74	45	0	2218
1994-95	0	0	0	29	130	271	511	544	341	98	35	0	1959
1995-96			0	32			605		535	188	30		
1996-97	0	0	0	53	394	448	592	430		243	42	27	
1997-98	0	0	0	84	310	528	483	421	427	187	51	0	2491
1998-99	0	0	0	64	217	344	447	489	478	134	50	0	2223
1999-00	0	0	0	53	200	443	610	478	290	157	16	6	2253
2000-01	0	0	0	96	342	647	646	450	456	189	36	0	2862
2001-02	0	0	4	100	146	277	463	424	265	119	37	0	1835
2002-03	0	0	0	37	280	511	672	501	305	169	29	0	2504
2003-04	0	0	0	49	134	521	687	560	442	155	16	0	2564
2004-05	0	0	0	26	195	403	572	567	502	236	89	0	2590
2005-06	0	0	0	76	175	542	437	520	446	138	43	0	2377
2006-07	0	0	0	92	181	351	434	599	329	215	35	0	2236
2007-08	0	0	0	11	243	345	564	423	304	161	51	0	2102
2008-09	0	0	0	103	343	362	645	536	476	132	26	0	2623
2009-	0	0	0	72	194	501							

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**COOLING DEGREE DAYS (base 65°F) 2009 CAPE HATTERAS (KHSE)**

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1980	0	0	0	35	153	252	449	445	335	54	3	0	1726
1981	0	0	1	45	104	406	429	361	218	46	1	0	1611
1982	0	0	1	15	168	259	419	393	239	53	24	8	1579
1983	0	1	0	18	110	236	458	433	295	112	8	0	1671
1984	0	0	0	6	153	323	403	452	244	146	13	2	1742
1985	0	2	4	82	176	317	461	418	330	207	104	3	2104
1986	0	0	7	19	151	335	497	379	308	165	58	2	1921
1987	0	0	0	4	137	323	475	475	325	20	17	0	1776
1988	0	2	3	10	114	245	419	497	292	41	33	0	1656
1989	0	11	16	36	115	376	443	450	307	98	43	0	1895
1990	4	9	40	56	127	288	463	462	308	218	10	20	2005
1991	0	2	22	59	267	354	525	469	324	106	25	25	2178
1992	1	0	2	42	56	267	483	414	334	46	45	0	1690
1993	0	0	0	12	123	323	532	413	351	151	30	0	1935
1994	0	0	8	104	119	392	516	432	256	71	45	7	1950
1995	6	0	1	64	167	375			313	188			
1996							414	382	304	61	16	0	
1997	0	2		6	73	190	412	381	284	116	7	0	
1998	0	0	1	10	99	377	455	454	322	89	3	15	1825
1999	4	0	0	12	94	324	515	484	282	117	33	0	1865
2000	1	0	6	11	165	343	401	396	313	65	0	0	1701
2001	0	0	0	18	105	351	392	445	256	99	27	12	1705
2002	1	3	12	96	164	354	479	476	357	159	19	0	2120
2003	0	0	8	17	131	324	422	414	301	69	56	0	1742
2004	2	0	0	39	249	393	494	409	323	110	22	5	2046
2005	0	0	0	4	35	315	488	540	397	154	22	0	1955
2006	0	0	0	15	83	317	470	486	242	99	8	1	1721
2007	1	0	4	26	126	322	438	501	360	263	9	3	2053
2008	0	0	0	3	54	361	485	454	365	79	3	6	1810
2009	0	0	0	24	179	345	416	474	288	94	9	1	1830

**SNOWFALL (inches) 2009 CAPE HATTERAS (KHSE)**

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1976-77	0.0	0.0	0.0	0.0	0.0	T	0.0	1.0	0.0	0.0	0.0	0.0	1.0
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	T	4.4	T	0.0	0.0	0.0	4.4
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	T	1.1	0.0	0.0	0.0	0.0	1.1
1979-80	0.0	0.0	0.0	0.0	0.0	0.0	3.0	T	7.3	0.0	0.0	0.0	10.3
1980-81	0.0	0.0	0.0	0.0	0.0	T	2.9	0.0	0.0	0.0	0.0	0.0	2.9
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1983-84	0.0	0.0	0.0	0.0	0.0	0.2	0.0	T	0.0	0.0	0.0	0.0	0.2
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1
1985-86	0.0	0.0	0.0	0.0	0.0	T	0.3	0.2	T	0.0	0.0	0.0	0.5
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1987-88	0.0	0.0	0.0	0.0	T	0.0	0.7	T	0.0	0.0	0.0	0.0	0.7
1988-89	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.3	0.0	T	0.0	0.0	4.7
1989-90	0.0	0.0	0.0	0.0	0.0	13.5	0.0	0.0	0.0	0.0	0.0	0.0	13.5
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
1991-92	0.0	0.0	0.0	0.0	0.0	T	0.5	0.0	T	0.0	0.0	0.0	0.5
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	T	0.0	0.0	0.0	0.1
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	T	0.3	0.0	0.0	0.0	0.0	0.3
1995-96	0.0	0.0	0.0	0.0									
1996-97													
1997-98													
1998-99													
1999-00													
2000-01													
2001-02													
2002-03													
2003-04													
2004-05													
2005-													
POR= 39 YRS	0.0	0.0	0.0	0.0	T	0.5	0.4	0.5	0.4	T	0.0	0.0	1.8

WBAN : 93729

**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 MEDADATA SYSTEM", URL IS: <a href="https://mi3.ncdc.noaa.gov/mi3qry/login.cfm">https://mi3.ncdc.noaa.gov/mi3qry/login.cfm</a></p> <p><b>NOTE:</b> 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

## CAPE HATTERAS

### NORTH CAROLINA (KHSE)

Hatteras Island is the largest and easternmost Island in North Carolina. The average elevation of the Island is less than 10 feet above mean sea level. It is separated from the mainland by the Pamlico Sound and is part of a chain of islands known as the Outer Banks. The Island is narrow, ranging from a few hundred yards wide to a few miles wide and is about 54 miles long. Much of the island is a National Park and waterfowl reserve.

The Weather Office is located in the village of Buxton about 1 mile west-northwest of the famous Cape Hatteras Lighthouse. Weather observations have been taken continuously since 1874 from locations all within 10 miles of the present stations location.

With its maritime climate, Cape Hatteras is very humid, with cooler summers and warmer winters than mainland North Carolina. Ninety degree temperatures are rare in summer, as are the teens in winter. The average first occurrence of freezing temperatures is early December, and the average last occurrence is late February.

Average rainfall is greater than any other coastal station in the state. Rainfall is rather evenly distributed throughout the year, with the maximum during July, August, and September. Snowfall is rare and generally light, usually melting as it falls.

Winter storms frequently breed offshore where the warm waters of the Gulf Stream and the southermost penetration of the Labrador Current meet some 20 to 50 miles off the coast. Late summer and fall tracks of tropical cyclones occasionally threaten the island. These storms produce strong winds, heavy rains and tidal flooding from both the ocean and Pamlico Sound. Many ships have been lost near, or wrecked on, the beaches of the island and attest to the fury of wind and wave.

More than a million tourists visit the island each year. The proximity of the gulfstream, natural beaches, excellent surf, and offshore fishing make Cape Hatteras a preferred place for vacationers, sportsmen, and campers. The surfing conditions are said to be the best on the east coast.

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