

1999

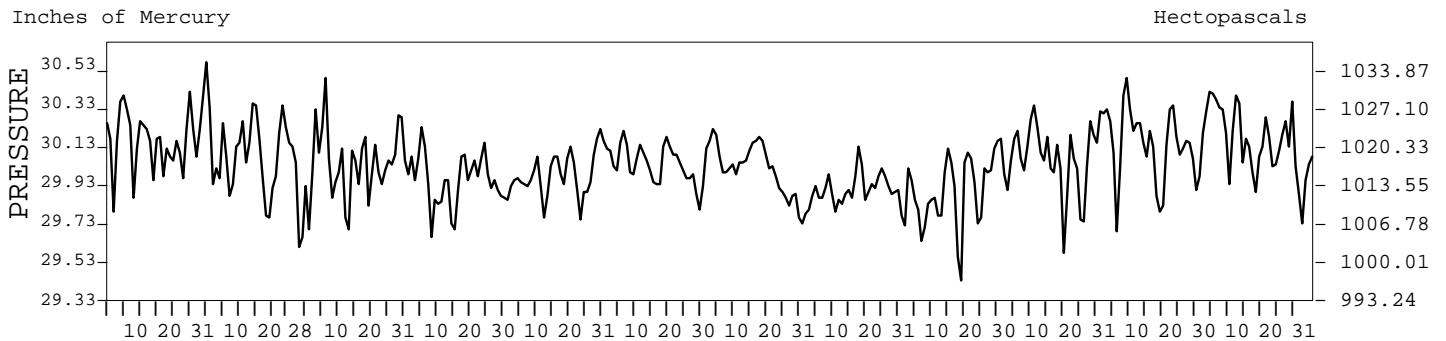
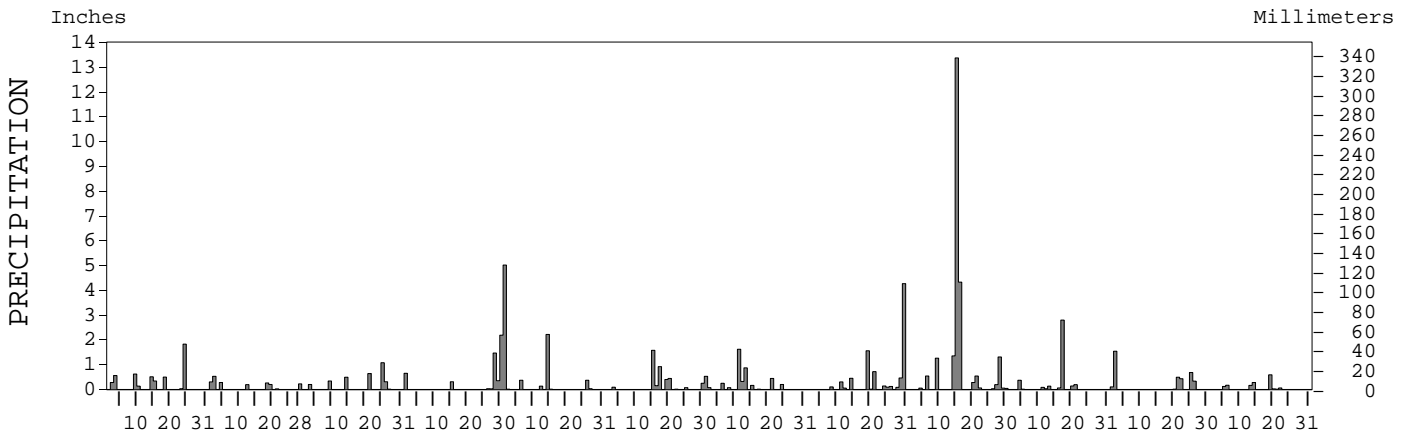
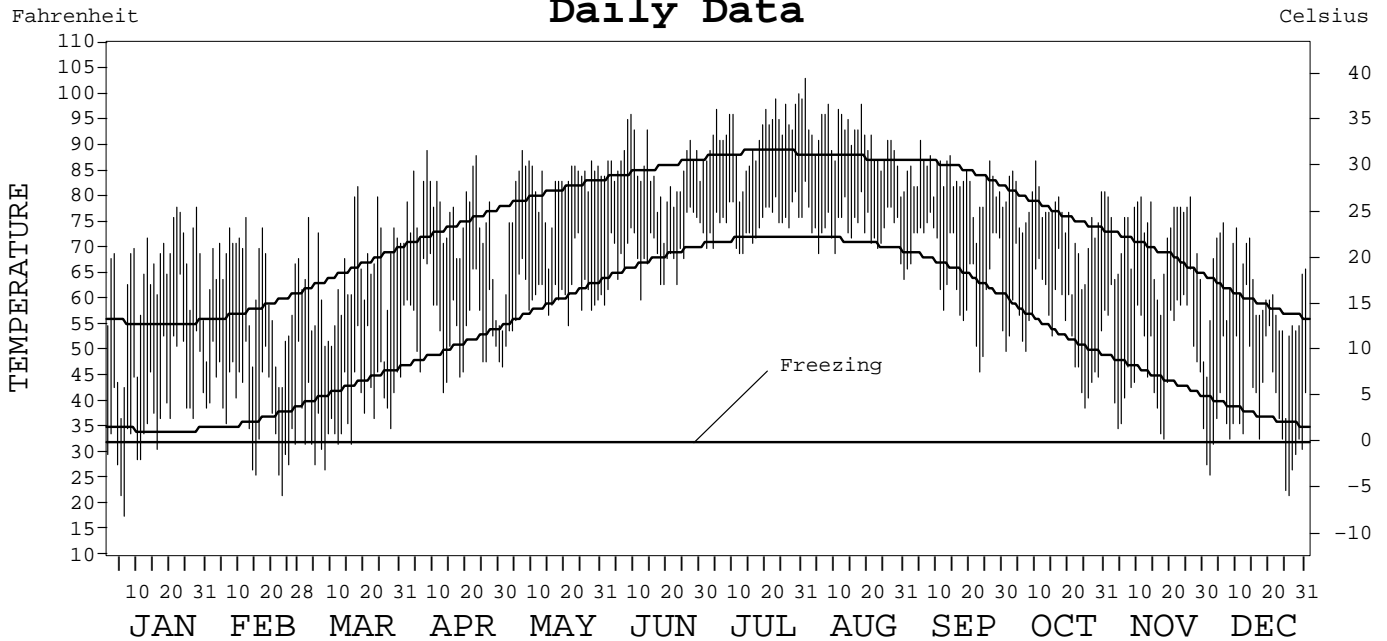
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-3792

WILMINGTON,
NORTH CAROLINA (ILM)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 1999

WILMINGTON, NC (ILM)

LATITUDE: 34° 16' 06" N LONGITUDE: 77° 54' 22" W ELEVATION (FT): GRND: 31 BARO: 31 TIME ZONE: EASTERN (UTC + 5) WBAN: 13748

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	63.7	62.6	64.4	75.5	80.7	85.1	92.0	91.1	83.1	75.9	71.5	61.0	75.5	
	HIGHEST DAILY MAXIMUM	78	76	82	89	89	96	100	103	91	87	80	75	103	
	DATE OF OCCURRENCE	28+	12	18	08	07	09	30	01	05	10	26+	06	AUG 01	
	MEAN DAILY MINIMUM	39.4	39.2	39.2	55.5	60.3	69.1	74.8	74.1	65.5	54.9	48.8	38.6	54.9	
	LOWEST DAILY MINIMUM	18	22	27	42	47	59	69	64	46	39	33	22	18	
	DATE OF OCCURRENCE	06	23	08	13	01	01	13+	31	23	25	18	26	JAN 06	
	AVERAGE DRY BULB	51.6	50.9	51.8	65.5	70.5	77.1	83.4	82.6	74.3	65.4	60.2	49.8	65.3	
	MEAN WET BULB	46.9	45.6	45.7	58.7	63.7	71.1	76.4	75.6	69.0	59.9	54.0	45.1	59.3	
	MEAN DEW POINT	41.4	38.6	37.6	53.1	59.5	68.0	73.6	72.7	66.1	56.0	48.7	39.1	54.5	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	0	5	21	19	1	0	0	0	46	
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	
	MINIMUM ≤ 32°	7	7	7	0	0	0	0	0	0	0	0	8	29	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	416	389	408	79	26	0	0	0	8	77	184	465	2052	
	COOLING DEGREE DAYS	7	0	4	101	205	369	577	555	298	97	45	2	2260	
RH	MEAN (PERCENT)	71	66	62	68	71	76	75	75	78	75	70	70	71	
	HOUR 01 LST	80	75	75	78	87	85	87	84	87	86	84	81	82	
	HOUR 07 LST	82	81	76	77	81	82	84	84	86	88	83	82	82	
	HOUR 13 LST	52	47	42	52	53	63	59	62	64	56	48	49	54	
	HOUR 19 LST	70	63	59	66	67	74	73	72	80	77	75	71	71	
S	PERCENT POSSIBLE SUNSHINE	67	70	79	73	77	74	75	67	44	70	78	55	69	
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	2	1	1	2	1	1	1	2	1	0	3	3	18	
	THUNDERSTORMS	4	2	4	4	6	7	9	11	5	1	1	0	54	
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.)	30.16	30.06	30.01	29.95	29.96	30.02	29.99	29.89	29.89	30.08	30.12	30.12	30.02	
	MEAN SEA-LEVEL PRESS. (IN.)	30.19	30.10	30.05	29.99	30.00	30.06	30.03	29.93	29.93	30.12	30.15	30.15	30.06	
WINDS	RESULTANT SPEED (MPH)	1.2	1.6	1.9	1.9	1.5	0.8	1.3	0.2	1.9	3.1	1.5	2.0	0.9	
	RES. DIR. (TENS OF DEGS.)	21	29	28	22	30	23	34	13	01	02	36	29	31	
	MEAN SPEED (MPH)	7.6	8.3	9.0	10.6	8.7	7.9	6.8	7.5	8.4	6.6	6.6	6.7	7.9	
	PREVAIL. DIR. (TENS OF DEGS.)	21	36	25	22	01	20	23	18	03	03	04	24	21	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	26	41	32	36	36	23	26	48	62	32	37	26	62	
	DIR. (TENS OF DEGS.)	27	25	26	03	24	22	30	03	30	31	19	19	30	
	DATE OF OCCURRENCE	24+	28	03	30	06	29+	24	30	16	17	02	14	SEP 16	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	36	53	41	47	43	31	33	61	86	38	45	33	86	
DIR. (TENS OF DEGS.)	20	24	18	03	24	23	22	03	31	31	20	19	31		
DATE OF OCCURRENCE	03	28	03	30	06	29	11	30	16	17	02	14	SEP 16		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	4.80	2.00	3.07	5.02	8.16	3.91	4.54	8.35	23.41	3.81	3.58	1.41	72.06	
	GREATEST 24-HOUR (IN.)	1.83	0.83	1.38	2.19	5.02	1.58	1.62	4.73	14.84	2.80	1.64	0.59	14.84	
	DATE OF OCCURRENCE	24	01-02	25-26	30	01	15	11	29-30	15-16	17	01-02	19	SEP 15-16	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	9	8	7	7	8	9	11	13	14	9	7	8	110	
PRECIPITATION ≥ 0.10	8	7	6	5	5	6	8	9	9	5	6	5	79		
PRECIPITATION ≥ 1.00	1	0	1	2	2	1	1	2	5	1	1	0	17		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	
	GREATEST 24-HOUR (IN.)	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	
	DATE OF OCCURRENCE		28+										25	DEC 25	
	MAXIMUM SNOW DEPTH (IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		

NORMALS, MEANS, AND EXTREMES

WILMINGTON, NC (ILM)

LATITUDE: 34° 16' 06" N LONGITUDE: 77° 54' 22" W ELEVATION (FT): GRND: 31 BARO: 31 TIME ZONE: EASTERN (UTC + 5) WBAN: 13748

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	55.3	58.1	65.7	74.0	80.8	85.4	88.5	87.6	85.2	76.9	69.1	59.4	73.8
	MEAN DAILY MAXIMUM	52	56.5	59.2	65.4	74.0	80.7	86.5	89.6	88.4	83.9	75.4	67.2	59.3	73.8
	HIGHEST DAILY MAXIMUM	48	82	85	89	95	98	104	102	103	98	95	87	82	104
	YEAR OF OCCURRENCE		1975	1962	1974	1967	1953	1952	1977	1999	1975	1986	1974	1998	JUN 1952
	MEAN OF EXTREME MAXS.	52	73.7	76.5	81.5	88.0	91.7	96.1	96.6	95.7	92.4	86.1	80.9	75.4	86.2
	NORMAL DAILY MINIMUM	30	34.4	36.4	43.1	50.5	59.3	67.5	71.7	71.0	65.3	53.7	44.8	37.5	52.9
	MEAN DAILY MINIMUM	52	35.8	37.7	43.4	51.4	59.9	67.5	71.9	70.9	65.4	54.2	44.6	37.5	53.3
	LOWEST DAILY MINIMUM	48	5	11	9	30	38	48	55	55	44	27	20	0	0
	YEAR OF OCCURRENCE		1985	1996	1980	1983	1989	1983	1988	1981	1962	1970	1989	1989	DEC 1989
	MEAN OF EXTREME MINS.	52	19.7	22.1	28.1	36.5	45.8	56.2	63.9	62.2	52.8	38.1	28.4	21.1	39.6
	NORMAL DRY BULB	30	44.9	47.3	54.4	62.3	70.1	76.5	80.1	79.4	75.3	65.3	57.0	48.5	63.4
	MEAN DRY BULB	52	46.1	48.4	54.4	62.8	70.3	77.0	80.8	79.6	74.6	64.8	55.9	48.4	63.6
	MEAN WET BULB	16	42.4	44.7	49.3	56.2	63.9	71.1	75.2	73.5	69.0	59.9	52.3	44.5	58.5
	MEAN DEW POINT	16	36.5	38.5	43.1	50.5	59.9	68.0	72.8	71.3	66.3	56.0	47.5	39.1	54.1
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	1.0	2.3	8.1	15.8	13.0	4.6	0.2	0.0	0.0	45.0	
MAXIMUM ≤ 32°	30	0.6	0.1	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	
MINIMUM ≤ 32°	30	14.3	10.9	3.8	0.3	0.0	0.0	0.0	0.0	0.0	0.2	3.2	11.3	44.0	
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	
H/C	NORMAL HEATING DEG. DAYS	30	631	496	338	115	10	0	0	0	102	259	519	2470	
	NORMAL COOLING DEG. DAYS	30	8	0	10	34	168	345	468	446	309	111	19	8	
RH	NORMAL (PERCENT)	30	71	68	69	67	74	76	78	81	80	76	73	72	74
	HOUR 01 LST	30	78	77	80	80	87	89	89	91	90	87	83	79	84
	HOUR 07 LST	30	80	79	82	80	85	85	87	90	91	88	85	81	84
	HOUR 13 LST	30	56	53	52	48	55	60	63	64	62	56	54	55	56
	HOUR 19 LST	30	71	67	67	64	70	73	76	80	81	80	77	74	73
S	PERCENT POSSIBLE SUNSHINE	48	56	59	64	71	67	66	64	62	61	64	63	59	63
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	48	2.5	1.7	2.2	1.5	2.0	1.7	0.9	1.4	2.6	2.5	2.8	2.8	24.6
	THUNDERSTORMS	48	0.6	1.1	2.4	3.2	5.6	7.7	11.6	9.2	4.0	1.3	0.8	0.5	48.0
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1			5.6		3.2	4.8							
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1	2.0	2.0	8.0		10.0	6.0								
PARTLY CLOUDY	1		1.0	4.0		7.0	8.0								
CLOUDY	1	5.0	3.0	9.0		2.0	7.0								
PR	MEAN STATION PRESSURE (IN)	27	30.08	30.05	30.01	29.98	29.97	29.98	30.00	30.01	30.02	30.06	30.08	30.09	30.03
	MEAN SEA-LEVEL PRES. (IN)	16	30.13	30.10	30.07	30.01	30.01	30.00	30.04	30.03	30.03	30.10	30.13	30.15	30.07
WINDS	MEAN SPEED (MPH)	33	8.8	9.1	9.7	9.7	8.7	8.3	7.9	7.1	7.6	7.6	7.9	8.1	8.4
	PREVAIL. DIR (TENS OF DEGS)	23	36	22	22	22	22	22	22	22	03	04	02	02	22
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	4	34	41	38	44	36	43	53	56	67	33	37	30	67
	DIR. (TENS OF DEGS)		18	25	02	30	24	26	04	06	07	21	19	26	07
	YEAR OF OCCURRENCE		1996	1999	1996	1996	1999	1998	1996	1998	1996	1996	1999	1996	SEP 1996
	MAXIMUM 5-SECOND:														
SPEED (MPH)	4	46	53	46	51	46	64	69	74	86	48	45	37	86	
DIR. (TENS OF DEGS)		19	24	30	26	26	21	05	07	08	22	20	27	08	
YEAR OF OCCURRENCE		1996	1999	1997	1996	1998	1998	1996	1998	1996	1996	1999	1996	SEP 1996	
PRECIPITATION	NORMAL (IN)	30	3.87	3.70	3.88	2.87	4.43	5.98	8.13	6.94	5.04	2.69	3.11	3.63	54.27
	MAXIMUM MONTHLY (IN)	48	10.22	11.22	8.27	8.21	9.12	12.87	15.12	14.06	23.41	9.81	7.87	7.06	23.41
	YEAR OF OCCURRENCE		1991	1998	1994	1961	1956	1962	1966	1981	1999	1964	1972	1989	SEP 1999
	MINIMUM MONTHLY (IN)	48	1.09	1.01	0.93	0.16	0.95	0.89	1.65	1.66	0.70	0.17	0.49	0.48	0.16
	YEAR OF OCCURRENCE		1981	1976	1967	1995	1987	1984	1961	1968	1986	1953	1973	1955	APR 1995
	MAXIMUM IN 24 HOURS (IN)	48	3.08	5.00	4.81	3.52	5.02	7.73	6.58	9.06	14.84	7.01	4.82	3.88	14.84
	YEAR OF OCCURRENCE		1982	1998	1994	1961	1999	1966	1988	1998	1999	1994	1969	1980	SEP 1999
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	10.8	9.7	10.0	8.3	9.7	10.3	13.5	12.7	9.2	6.6	7.8	9.2	117.8	
PRECIPITATION ≥ 1.00	30	0.8	1.0	1.1	0.8	1.1	2.0	2.6	2.0	1.7	0.7	1.1	1.0	15.9	
SNOWFALL	NORMAL (IN)	30	0.5	0.7	0.4	T	0.0	0.0	0.0	0.0	0.0	0.0	T	0.7	2.3
	MAXIMUM MONTHLY (IN)	48	5.4	12.5	6.6	T	T	T	0.0	0.0	0.0	0.0	T	15.3	15.3
	YEAR OF OCCURRENCE		1988	1973	1980	1996	1998	1995					1976	1989	DEC 1989
	MAXIMUM IN 24 HOURS (IN)	48	5.0	11.7	5.7	T	T	T	0.0	0.0	0.0	0.0	T	9.7	11.7
	YEAR OF OCCURRENCE		1988	1973	1980	1996	1998	1995	1996				1976	1989	FEB 1973
	MAXIMUM SNOW DEPTH (IN)	51	3	8	7	0	0	0	0	0	0	0	0	13	13
	YEAR OF OCCURRENCE		1988	1973	1980									1989	DEC 1989
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	0.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.7	

PRECIPITATION (inches) 1999 WILMINGTON, NC (ILM)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.98	2.45	7.19	1.37	3.92	4.48	5.71	13.98	2.23	4.12	2.22	3.22	52.87
1971	4.97	3.51	4.57	3.46	2.29	5.60	8.08	10.42	5.04	6.05	2.22	1.49	57.70
1972	4.27	4.57	3.36	0.78	3.50	3.50	6.36	4.91	6.73	0.69	7.87	5.29	51.83
1973	4.37	4.85	3.48	5.32	3.48	10.70	9.33	6.42	5.60	1.52	0.49	5.60	61.16
1974	2.81	4.23	2.30	2.18	5.15	5.37	8.36	13.33	5.09	1.12	3.14	3.72	56.80
1975	5.06	5.09	3.15	3.90	3.11	7.11	9.76	4.52	6.06	3.14	3.00	5.20	59.10
1976	2.93	1.01	2.57	0.91	4.33	12.74	8.28	9.53	4.79	3.31	2.14	5.37	57.91
1977	2.94	1.83	5.66	1.43	6.75	4.26	3.25	5.85	4.88	5.73	6.33	2.83	51.74
1978	6.68	1.33	2.94	3.82	3.46	2.34	7.38	4.77	1.58	1.01	3.71	4.68	43.70
1979	6.23	4.21	4.82	5.60	5.27	4.74	2.82	2.48	15.17	0.38	2.01	2.35	56.08
1980	4.16	1.52	6.03	1.33	4.65	2.46	5.95	3.21	5.97	1.62	1.87	5.81	44.58
1981	1.09	3.08	3.02	1.43	5.02	2.45	5.23	14.06	1.07	1.39	0.78	5.76	44.38
1982	5.50	6.67	1.84	4.03	2.04	7.59	8.59	3.67	7.08	2.56	1.32	6.57	57.46
1983	4.90	8.74	8.09	2.09	1.13	6.71	5.53	5.63	5.59	1.02	4.49	5.20	59.12
1984	2.58	4.82	4.43	3.23	6.45	0.89	9.01	4.79	18.94	0.49	1.16	1.32	58.11
1985	2.01	5.08	1.66	0.71	2.76	4.56	10.34	3.63	2.75	2.43	6.74	1.35	44.02
1986	2.12	2.52	4.13	0.48	7.09	5.58	11.28	11.44	0.70	3.35	4.44	6.28	59.41
1987	6.49	4.42	2.70	2.96	0.95	5.24	5.19	9.35	6.42	0.51	5.67	1.35	51.25
1988	5.41	2.00	4.05	3.56	7.54	2.93	14.49	9.61	2.80	1.81	3.14	0.59	57.93
1989	1.60	2.64	6.70	7.60	3.58	7.55	9.93	3.93	9.54	4.61	1.91	7.06	66.65
1990	2.34	2.31	5.11	2.21	8.04	2.17	6.59	11.42	1.40	7.10	2.09	2.65	53.43
1991	10.22	1.65	6.52	3.35	1.75	2.57	13.35	8.65	3.31	4.19	2.98	2.17	60.71
1992	5.75	3.45	5.65	3.12	7.55	7.00	3.18	13.56	2.23	3.09	7.14	4.48	66.20
1993	5.83	2.96	6.34	5.78	2.82	3.70	7.04	5.66	8.09	8.29	2.58	2.67	61.76
1994	7.03	3.26	8.27	0.80	2.67	2.75	4.76	6.03	7.09	8.53	3.27	6.91	61.37
1995	4.93	4.47	4.35	0.16	6.47	12.03	8.74	4.08	6.92	9.31	1.56	2.09	65.11
1996	3.09	1.12	4.70	2.50	3.00	8.02	13.42	5.19	13.35	6.06	1.22	2.75	64.42
1997	3.38	3.86	2.55	3.02	1.61	5.81	6.15	2.86	8.94	1.33	5.25	4.83	49.59
1998	7.29	11.22	2.06	2.80	7.58	4.31	3.79	13.48	5.38	1.36	0.97	3.96	64.20
1999	4.80	2.00	3.07	5.02	8.16	3.91	4.54	8.35	23.41	3.81	3.58	1.41	72.06
POR= 128 YRS	3.54	3.51	3.73	2.85	3.87	5.21	7.28	6.82	5.63	3.19	2.61	3.31	51.55

WBAN : 13748

AVERAGE TEMPERATURE (°F) 1999 WILMINGTON, NC (ILM)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	39.2	45.5	53.6	64.0	70.8	76.2	80.2	79.7	76.7	67.4	55.1	49.9	63.2
1971	44.8	48.0	50.2	60.4	68.8	78.0	79.8	78.8	75.4	70.8	55.1	56.6	63.9
1972	52.0	47.0	53.8	61.3	67.2	72.7	80.1	79.3	74.7	64.3	55.4	51.9	63.3
1973	46.5	45.3	58.8	60.8	69.5	76.6	79.8	80.1	77.2	67.3	58.2	50.2	64.2
1974	58.8	49.5	59.7	64.4	70.7	75.5	79.1	79.3	74.4	61.7	54.8	49.5	64.8
1975	51.0	52.1	54.4	62.3	73.8	78.7	79.9	82.4	77.0	68.2	59.7	49.4	65.7
1976	45.1	55.3	60.8	63.9	69.6	76.0	81.7	77.7	74.0	60.5	49.7	46.4	63.4
1977	35.8	45.6	57.9	65.9	71.4	77.7	82.6	80.5	77.8	62.0	58.8	47.6	63.6
1978	41.9	38.5	51.3	64.2	69.8	77.1	80.3	82.1	76.8	63.8	60.2	49.4	63.0
1979	43.7	43.2	53.9	65.6	71.4	74.7	80.4	80.6	74.5	63.3	57.8	47.8	63.1
1980	47.2	41.7	50.4	63.2	70.5	76.9	82.9	82.2	78.7	62.9	51.9	45.0	62.8
1981	37.5	46.6	49.9	63.9	66.9	79.8	80.7	76.9	71.4	60.9	52.3	44.4	60.9
1982	41.5	50.7	55.8	58.6	71.1	75.8	79.1	77.7	72.0	62.0	57.5	52.6	62.9
1983	42.6	45.1	53.7	57.4	67.3	75.0	82.8	81.5	74.8	66.1	55.1	46.9	62.4
1984	42.1	50.4	52.9	61.0	70.0	77.3	77.9	78.3	71.0	68.7	55.0	57.5	63.5
1985	43.2	50.4	59.1	66.3	71.8	78.7	81.4	78.9	75.0	71.1	66.6	47.0	65.8
1986	44.2	51.6	55.6	64.3	71.9	79.4	84.0	78.8	76.5	67.3	59.7	49.9	65.3
1987	45.0	45.5	52.4	59.7	70.6	78.6	81.9	81.4	76.6	60.3	57.6	50.0	63.3
1988	41.2	46.4	54.2	61.5	68.8	74.3	79.9	81.1	74.4	59.2	58.0	46.6	62.1
1989	51.7	50.7	55.5	61.3	68.7	79.6	80.5	78.8	75.3	65.8	57.1	38.6	63.6
1990	52.6	55.5	58.5	63.5	71.2	77.9	81.7	80.2	75.2	68.8	57.7	54.8	66.5
1991	48.3	51.4	57.5	66.5	74.9	77.8	82.9	80.2	75.0	64.9	54.0	51.0	65.4
1992	47.0	51.6	53.9	61.5	66.9	74.3	83.0	78.5	75.0	62.2	58.7	48.3	63.4
1993	50.5	45.8	52.7	59.8	71.2	78.1	84.1	79.8	77.7	66.5	57.6	46.1	64.2
1994	44.0	50.0	57.0	65.9	67.7	79.3	81.7	78.8	72.7	64.4	60.0	52.8	64.5
1995	47.0	46.4	55.6	65.1	71.2	75.5	81.1	79.8	73.4	67.5	51.4	43.9	63.2
1996	45.1	46.9	50.2	62.3	71.9	77.1	80.3	78.2	74.8	65.0	50.9	50.5	62.8
1997	45.8	51.0	59.1	59.8	66.9	73.2	79.7	77.7	73.8	63.9	53.1	47.3	62.6
1998	49.7	50.9	54.7	63.1	72.1	80.9	81.8	79.8	76.9	66.0	57.7	53.1	65.6
1999	51.6	50.9	51.8	65.5	70.5	77.1	83.4	82.6	74.3	65.4	60.2	49.8	65.3
POR= 125 YRS	47.0	48.5	54.6	62.1	70.1	76.7	79.3	79.0	74.5	64.8	55.6	48.5	63.4

HEATING DEGREE DAYS (base 65°F) 1999 WILMINGTON, NC (ILM)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	10	43	295	461	620	469	450	160	27	0	2535
1971-72	0	0	0	11	318	276	404	516	340	167	29	4	2065
1972-73	0	0	0	81	299	399	567	546	217	154	30	0	2293
1973-74	0	0	0	39	224	459	211	428	209	113	24	0	1707
1974-75	0	0	5	149	333	473	429	362	338	160	0	0	2249
1975-76	0	0	0	40	199	478	613	294	183	122	32	0	1961
1976-77	0	0	0	172	455	569	899	541	241	78	27	1	2983
1977-78	0	0	0	144	231	537	709	736	419	89	30	0	2895
1978-79	0	0	0	91	154	489	653	606	346	60	5	0	2404
1979-80	0	0	2	110	239	525	543	670	445	120	21	0	2675
1980-81	0	0	0	128	388	613	846	510	465	101	64	0	3115
1981-82	0	0	13	149	374	630	726	396	290	204	17	0	2799
1982-83	0	0	3	145	241	386	688	552	345	231	46	2	2639
1983-84	0	0	12	66	299	551	703	417	371	147	37	1	2604
1984-85	0	0	16	18	306	243	682	420	228	80	11	0	2004
1985-86	0	0	4	17	60	559	637	371	307	92	24	0	2071
1986-87	0	0	0	79	199	469	615	542	395	181	25	0	2505
1987-88	0	0	0	152	230	461	730	537	330	139	38	7	2624
1988-89	0	0	0	202	225	563	406	415	312	187	44	0	2354
1989-90	0	0	4	74	259	810	378	282	233	114	7	0	2161
1990-91	0	0	6	77	223	327	513	382	265	63	0	0	1856
1991-92	0	0	0	78	336	447	548	383	343	167	45	0	2347
1992-93	0	0	4	126	238	509	449	530	378	169	5	0	2408
1993-94	0	0	4	57	244	580	641	415	255	62	47	0	2305
1994-95	0	0	0	73	172	375	552	513	290	88	10	0	2073
1995-96	0	0	6	58	427	648	612	521	452	148	39	0	2911
1996-97	0	0	0	61	427	442	588	398	210	178	40	20	2364
1997-98	0	0	2	118	358	542	478	390	339	112	5	0	2344
1998-99	0	0	0	59	225	384	416	389	408	79	26	0	1986
1999-	0	0	8	77	184	465							

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COOLING DEGREE DAYS (base 65°F) 1999 WILMINGTON, NC (ILM)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	90	205	343	482	463	370	125	3	3	2084
1971	0	0	0	31	152	397	465	433	319	199	28	23	2047
1972	5	0	2	64	101	241	477	453	298	66	19	2	1728
1973	1	0	31	34	174	354	465	472	372	116	24	8	2051
1974	25	0	52	101	208	321	443	449	294	53	32	0	1978
1975	1	5	17	84	276	417	469	545	369	145	45	0	2373
1976	2	17	58	94	183	336	525	403	277	39	2	0	1936
1977	0	4	28	114	234	387	553	487	391	56	53	3	2310
1978	0	0	0	68	187	372	482	536	359	63	17	13	2097
1979	0	2	9	84	210	298	487	490	293	65	28	0	1966
1980	0	1	0	71	198	364	560	540	419	70	2	0	2225
1981	0	0	3	74	131	449	491	375	213	32	2	0	1770
1982	0	3	11	18	211	331	445	400	218	58	24	9	1728
1983	0	0	2	10	122	307	560	517	313	107	10	0	1948
1984	0	0	4	35	201	378	405	418	204	138	12	18	1813
1985	11	17	57	126	229	420	513	437	309	211	112	10	2452
1986	0	4	22	79	247	436	599	435	353	158	47	8	2388
1987	0	0	11	32	205	419	529	516	354	15	16	3	2100
1988	0	4	2	43	164	293	466	505	289	26	20	0	1812
1989	1	20	25	80	167	443	489	432	321	104	29	0	2111
1990	4	20	42	74	206	394	525	480	317	201	8	13	2284
1991	0	7	36	118	311	392	565	478	306	82	11	20	2326
1992	0	2	5	67	108	286	563	427	314	47	57	0	1876
1993	6	0	2	20	206	399	600	467	392	109	29	0	2230
1994	0	4	13	94	136	436	525	434	239	62	28	3	1974
1995	3	2	7	99	210	321	505	467	264	141	22	0	2041
1996	0	4	2	73	260	368	483	416	304	68	11	1	1990
1997	0	11	35	29	110	276	464	401	271	94	7	0	1698
1998	11	2	26	61	236	486	528	466	366	98	13	21	2314
1999	7	0	4	101	205	369	577	555	298	97	45	2	2260

SNOWFALL (inches) 1999 WILMINGTON, NC (ILM)

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	4.0	T	0.0	T	0.0	0.0	0.0	4.0
1971-72	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	T
1972-73	0.0	0.0	0.0	0.0	0.0	0.0	1.9	12.5	0.0	0.0	0.0	0.0	14.4
1973-74	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4
1974-75	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1976-77	0.0	0.0	0.0	0.0	T	T	0.6	0.3	0.0	0.0	0.0	0.0	0.9
1977-78	0.0	0.0	0.0	0.0	0.0	T	T	T	T	0.0	0.0	0.0	T
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	T	0.2	0.0	0.0	0.0	0.0	0.2
1979-80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	6.6	0.0	0.0	0.0	6.9
1980-81	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	T	0.1	0.0	0.0	0.0	0.0	0.1
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	4.2
1983-84	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1984-85	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	0.0	T
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
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	0.0	0.0	5.4	0.0	0.0	0.0	0.0	0.0	5.4
1988-89	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.8	T	T	0.0	0.0	2.5
1989-90	0.0	0.0	0.0	0.0	0.0	15.3	0.0	0.0	0.0	0.0	0.0	T	15.3
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	1.4	T	T	0.0	0.0	0.0	1.4
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	T	T
1993-94	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	T	0.6	0.0	T	0.0	0.0	0.6
1996-97	T	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	T	1.2
1997-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	T
1998-99	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	0.0	0.0	0.0	T
1999-	0.0	0.0	0.0	0.0	0.0	T							
POR= 47 YRS	0.0	0.0	0.0	0.0	T	0.6	0.4	0.5	0.4	T	0.0	T	1.9

WBAN : 13748

REFERENCE NOTES:

<p>PAGE 1: THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).</p> <p>PAGE 2 AND 3: H/C INDICATES HEATING AND COOLING DEGREE DAYS. RH INDICATES RELATIVE HUMIDITY W/O INDICATES WEATHER AND OBSTRUCTIONS S INDICATES SUNSHINE. PR INDICATES PRESSURE. CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).</p> <p>GENERAL: T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE. + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES. BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA. NORMALS ARE 30-YEAR AVERAGES (1961 - 1990). ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM. PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH. POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING. WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED. 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05. CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET. THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.</p>	<p>GENERAL CONTINUED: CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED. WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH. RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION. AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2. SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL. A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F. DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR. DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY. WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.</p> <p>ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
WILMINGTON,
NORTH CAROLINA (ILM)

Wilmington is located in the tidewater section of southeastern North Carolina, near the Atlantic Ocean. The city proper is built adjacent to the east bank of the Cape Fear River. Because of the curvature of the coastline in this area, the ocean lies about 5 miles east and about 20 miles south. The surrounding terrain is typical of coastal Carolina. It is low-lying with an average elevation of less than 40 feet, and is characterized by level to gently rolling land with rivers, creeks, and lakes that frequently have considerable swamp or marshland adjoining them. Large wooded areas alternate with cultivated fields.

The maritime location makes the climate of Wilmington unusually mild for its latitude. All wind directions from the east-northeast through southwest have some moderating effects on temperatures throughout the year, because the ocean is relatively warm in winter and cool in summer. The daily range in temperatures is moderate compared to a continental type of climate. As a rule, summers are quite warm and humid, but excessive heat is rare. Sea breezes, arriving early in the afternoon, tend to alleviate the heat further inland. Long-term averages show afternoon temperatures reach 90 degrees or higher on one-third of the days in midsummer, but several years may pass without 100 degree weather. During the colder part of the year, numerous outbreaks of polar air masses reach the Atlantic Coast, causing sharp drops in temperatures. However, these cold outbreaks are significantly moderated by the long trajectories from the source regions, the effects of passing over the Appalachian Range, and the warming effects of the ocean air. As a result, most winters are short and quite mild. Even in the most severe cold spells, the temperature usually remains above zero. Normally, the temperature fails to rise above the freezing point during a 24-hour period only once each winter.

Rainfall in this area is usually ample and well-distributed throughout the year, the greatest amount occurring in the summer. Summer rainfall comes principally from thunderstorms, and is therefore usually of short duration, but often heavy and unevenly distributed. Thunderstorms occur about one out of three days from June through August. Winter rain is more likely to be of the slow, steady type, lasting one or two days. Generally, the winter rain is evenly distributed and associated with slow-moving, low-pressure systems. Seldom is there a winter without a few flakes of snow, but several years may pass without a measurable amount, and appreciable accumulation on the ground is rare. Hail occurs less than once a year. Sunshine is abundant, with the area receiving about two-thirds of the sunshine hours possible at its latitude.

Because of these many factors, the growing season is long, averaging 244 days, but records show the range is from 180 days to as long as 302 days. This area is exceptionally good for floriculture. Agricultural pursuits, principally field-grown flowers, nursery plantings, and vegetables, are an important part of the economy. Some types of plants continue to grow throughout the year.

In common with most Atlantic Coastal localities, the area is subject to the effects of coastal storms and occasional hurricanes which produce high winds, above normal tides, and heavy rains.

STATION LOCATION

WILMINGTON, NORTH CAROLINA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE											AUTOMATED	* Type	REMARKS
						SEA LEVEL	GROUND												
							G	W	E	P	S	T	R	W	8	H			
<u>CITY</u>																			
Market & Water Streets (Southeast corner)	12/18/70	12/1/74	NA	34°14'	77°57'	6	38	26	26									Observations began 1/1/1871.	
Bank of New Hanover (Front Street between Market & Princess)	12/1/74	1/1/81	300 ft. NE	34°14'	77°57'	27	78	62	62										
First National Bank 19 North Front Street	1/1/81	7/1/90	100 ft. S	34°14'	77°57'	35	63	28	28										
U.S. Post Office Bldg. Front & Chestnut Sts.	7/1/90	11/24/31	500 ft. N	34°14'	77°57'	32	91	81	81		76								
U.S. Custom House Water Street (between Market & Princess Sts.)	11/24/31	10/2/51	600 ft. SW	34°14'	77°57'	8	107	73	73		65								
<u>AIRPORT</u>																			
Terminal Building New Hanover County AP	10/2/51	7/24/79	4 mi. NE	34°16'	77°55' f77°54'	30 b28 g30	43 a20	6 e5	5 e5	32	3	5	3	NA c4	NA	a - Effective 3/5/63. b - Effective 6/29/63. c - Commissioned 2/750; SSE of thermometer site 7/1/63. d - Removed 3/28/66. e - Added 10/24/74. f - Corrected due to resurvey in 1975. g - Effective 3/21/79.			
NWS Building New Hanover County AP	7/24/79	11/01/95	0.2 mi. SW	34°16'	77°54'	30	h20 i33	5	5	7 k15	3	5	3	h4 i14 j5	NA	h - Not moved 7/24/79. i - Moved 1000' NNE 1/23/80. j - Relocated and type change 8/9/85			
New Hanover County AP	11/01/95	Present	NA	34°16'	77°54'	31									S	k - Moved 45' E to roof 1/15/87. ASOS Commissioned 11/01/95			

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

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