

1999

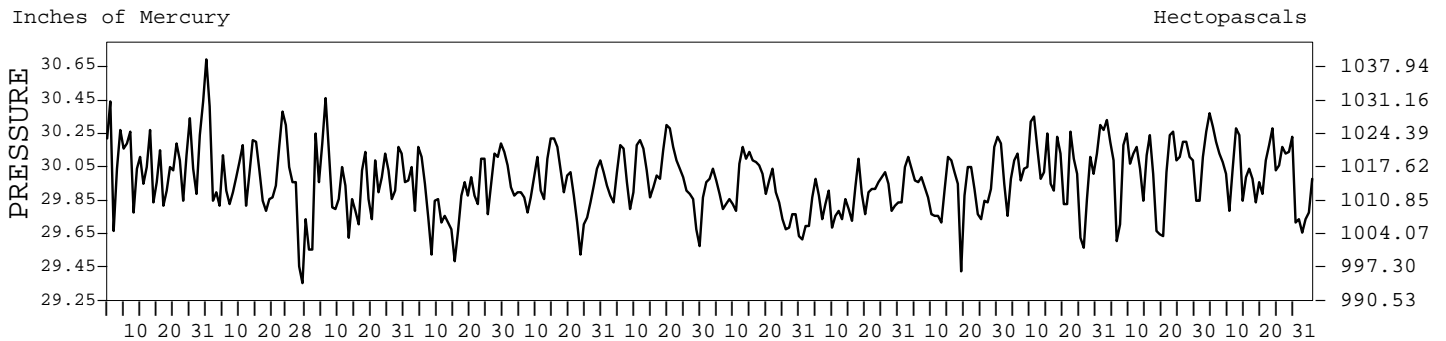
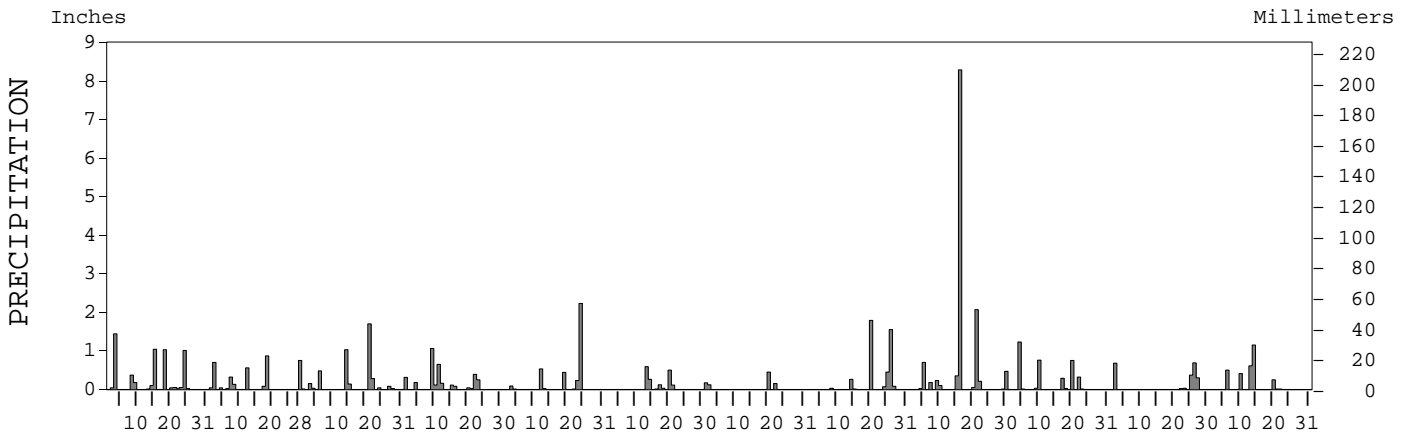
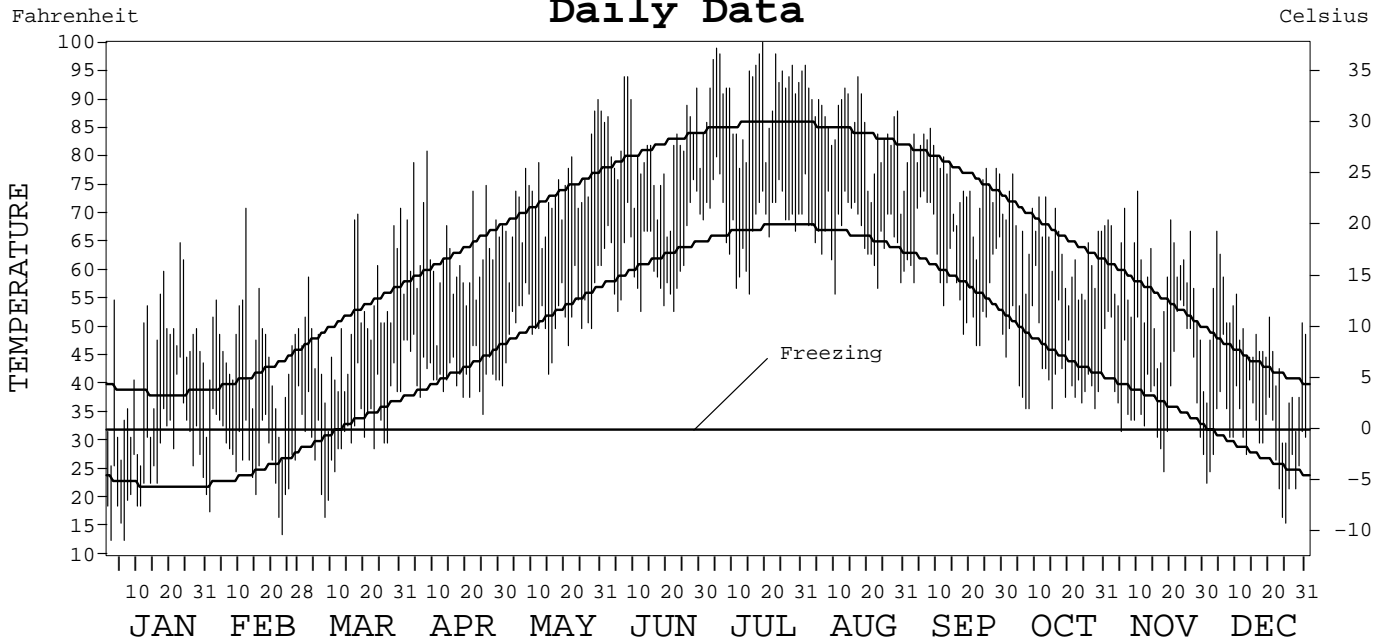
LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-1145

WILMINGTON,
DELAWARE (ILG)

Daily Data



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Thomas R. Karl

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
 NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE
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 ASHEVILLE, NORTH CAROLINA

METEOROLOGICAL DATA FOR 1999

WILMINGTON, DE (ILG)

LATITUDE: 39° 40' 22" N LONGITUDE: 75° 36' 03" W ELEVATION (FT): GRND: 93 BARO: 93 TIME ZONE: EASTERN (UTC + 5) WBAN: 13781

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	43.1	45.9	51.0	62.9	73.8	80.8	91.0	85.1	76.3	64.1	58.3	46.7	64.9	
	HIGHEST DAILY MAXIMUM	65	71	71	81	90	94	100	96	85	77	74	67	100	
	DATE OF OCCURRENCE	23	12	31	08	30	08+	19	01	08	03	10	04	JUL 19	
	MEAN DAILY MINIMUM	26.5	27.8	32.4	42.4	52.0	62.3	69.0	66.5	59.9	43.5	40.4	30.8	46.1	
	LOWEST DAILY MINIMUM	13	14	17	35	40	53	56	56	47	36	25	16	13	
	DATE OF OCCURRENCE	06+	23	08	25	01	22+	15	10	23+	28+	18	25	JAN 06+	
	AVERAGE DRY BULB	34.8	36.9	41.7	52.7	62.9	71.6	80.0	75.8	68.1	53.8	49.4	38.8	55.5	
	MEAN WET BULB	32.5		35.3	46.5	56.0	64.9	70.8		63.3	50.3	45.3	34.7		
	MEAN DEW POINT	27.1		25.0	39.1	49.5	60.2	65.6		60.0	45.7	39.8	27.0		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	1	4	21	9	0	0	0	0	0	35
	MAXIMUM ≤ 32°	9	2	1	0	0	0	0	0	0	0	0	3	15	
	MINIMUM ≤ 32°	23	20	16	0	0	0	0	0	0	0	7	19	85	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	926	782	715	362	95	7	0	1	36	340	462	807	4533	
	COOLING DEGREE DAYS	0	0	0	0	40	211	476	342	139	1	0	0	1209	
RH	MEAN (PERCENT)	75	63	56	64	64	70	65	67	77	74	72	65	68	
	HOUR 01 LST	80	71	66	72	77	83	77	77	86	86	80	71	77	
	HOUR 07 LST	83	73	66	73	73	78	76	77	87	88	83	74	78	
	HOUR 13 LST	67	53	44	52	51	56	49	52	64	56	59	53	55	
	HOUR 19 LST	71	59	50	65	56	65	58	61	74	71	69	63	64	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	7	1	1	1	1	0	0	0	0	3	6	1	21	
	THUNDERSTORMS	0	0	2	3	1	0	1	3	1	1	0	0	12	
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.)	30.09	29.98	29.91	29.88	29.94	29.99	29.89	29.86	29.91	30.05	30.03	30.01	29.96	
	MEAN SEA-LEVEL PRESS. (IN.)	30.18	30.07	30.00	29.97	30.02	30.07	29.97		29.99		30.13	30.11		
WINDS	RESULTANT SPEED (MPH)		3.7	6.7	2.5	1.3	1.6	1.8	0.6	1.2	2.3	3.3	3.9		
	RES. DIR. (TENS OF DEGS.)		31	29	31	01	07	28	03	05	27	28	29		
	MEAN SPEED (MPH)	9.3	8.8	12.4	9.2	8.7	8.6	8.1	8.5	9.4	7.2	8.8	8.7	9.0	
	PREVAIL. DIR. (TENS OF DEGS.)	05	30	29	30	06	16	28	36	15	33	30	30	30	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	51	41	39	34	48	23	28	28	37	36	44	36	51	
	DIR. (TENS OF DEGS.)	15	30	29	29	24	30	27	25	03	27	14	31	15	
	DATE OF OCCURRENCE	03	12	18+	09	24	03	28	27+	16	14	02	10	JAN 03	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	61	46	52	40	61	29	36	44	46	46	57	45	61	
DIR. (TENS OF DEGS.)	23	30	13	31	23	25	24	29	31	26	13	31	23		
DATE OF OCCURRENCE	18+	12	03	13+	24	14	28	14	16	14	02	10	MAY 24		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	5.41	3.51	3.96	3.36	3.56	1.62	0.89	4.24	12.68	3.42	2.09	2.94	47.68	
	GREATEST 24-HOUR (IN.)	1.45	0.94	1.98	1.17	2.23	0.64	0.45	1.95	8.43	1.24	0.97	1.47	8.43	
	DATE OF OCCURRENCE	02-03	17-18	21-22	09-10	24	13-14	20	25-26	15-16	04-05	26-27	13-14	SEP 15-16	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	14	10	11	12	8	7	4	8	12	9	6	7	108	
PRECIPITATION ≥ 0.10	7	6	6	9	4	5	4	4	9	5	4	5	68		
PRECIPITATION ≥ 1.00	4	0	2	1	1	0	0	2	2	1	0	1	14		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

WILMINGTON, DE (ILG)

LATITUDE: 39° 40' 22" N LONGITUDE: 75° 36' 03" W ELEVATION (FT): GRND: 93 BARO: 93 TIME ZONE: EASTERN (UTC + 5) WBAN: 13781

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	38.7	41.9	52.1	62.6	72.9	81.4	85.6	84.1	77.7	66.6	55.5	43.9	63.6
	MEAN DAILY MAXIMUM	43	39.3	42.2	51.4	63.0	72.8	81.5	85.7	84.1	77.7	66.3	55.3	44.0	63.6
	HIGHEST DAILY MAXIMUM	52	75	78	86	94	96	100	102	101	100	91	85	75	102
	YEAR OF OCCURRENCE		1950	1985	1998	1985	1996	1994	1966	1955	1983	1951	1950	1998	JUL 1966
	MEAN OF EXTREME MAXS.	52	59.7	62.2	73.2	82.0	88.3	93.3	95.6	93.4	90.2	81.8	72.6	63.7	79.7
	NORMAL DAILY MINIMUM	30	22.4	24.8	33.1	41.8	52.2	61.6	67.1	65.9	58.2	45.7	37.0	27.6	44.8
	MEAN DAILY MINIMUM	43	23.2	25.2	32.8	42.0	52.1	61.6	67.1	65.5	58.1	45.6	36.9	27.8	44.8
	LOWEST DAILY MINIMUM	52	-14	-6	2	18	30	41	48	43	36	24	14	-7	-14
	YEAR OF OCCURRENCE		1985	1979	1984	1982	1978	1972	1988	1982	1974	1976	1955	1983	JAN 1985
	MEAN OF EXTREME MINS.	52	6.9	9.1	17.8	28.8	38.4	48.9	55.9	53.3	42.6	31.8	22.2	12.4	30.7
	NORMAL DRY BULB	30	30.6	33.4	42.7	52.2	62.5	71.5	76.4	75.0	68.0	56.2	46.3	35.8	54.2
	MEAN DRY BULB	52	32.0	34.1	42.1	52.6	62.4	71.5	76.5	74.7	67.6	56.4	45.9	36.0	54.3
	MEAN WET BULB	48	29.0	30.5	37.1	46.1	55.7	64.2	68.8	67.8	61.6	51.3	41.5	32.5	48.8
	MEAN DEW POINT	48	22.3	23.2	29.1	38.6	50.2	59.9	64.7	64.2	57.7	47.4	35.8	26.3	43.3
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.2	0.7	3.3	7.6	4.9	1.9	0.0	0.0	0.0	18.6	
MAXIMUM ≤ 32°	30	8.8	5.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.9	18.4	
MINIMUM ≤ 32°	30	26.0	22.0	14.5	3.3	0.1	0.0	0.0	0.0	0.0	1.9	9.6	22.2	99.6	
MINIMUM ≤ 0°	30	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.0	
H/C	NORMAL HEATING DEG. DAYS	30	1066	885	691	384	122	0	0	0	35	288	561	905	4937
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	44	199	353	310	125	15	0	0	1046
RH	NORMAL (PERCENT)	30	68	65	62	62	67	68	70	72	72	71	69	69	68
	HOUR 01 LST	30	72	71	70	71	77	80	81	83	83	81	76	74	77
	HOUR 07 LST	30	74	74	73	72	75	77	79	83	84	84	80	76	78
	HOUR 13 LST	30	59	56	51	49	53	54	54	56	56	54	56	59	55
	HOUR 19 LST	30	66	63	60	57	62	63	64	68	70	69	68	68	65
S	PERCENT POSSIBLE SUNSHINE														
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	52	4.2	3.5	2.8	2.1	2.2	1.7	1.6	2.3	2.4	3.8	3.4	3.4	33.4
	THUNDERSTORMS	52	0.2	0.3	1.1	2.3	3.9	5.5	6.1	5.4	2.4	0.9	0.6	0.2	28.9
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	1			6.0			5.0							
	MIDNIGHT-MIDNIGHT (OKTAS)														
	MEAN NO. DAYS WITH:														
CLEAR	1	2.0	2.0	6.0		8.0	9.0	3.0	7.0	5.0	9.0		5.0		
PARTLY CLOUDY	1	1.0	1.0	6.0		4.0	5.0	1.0	4.0	3.0	2.0		2.0		
CLOUDY	1	4.0	5.0	11.0		6.0	8.0		2.0	7.0	3.0		8.0		
PR	MEAN STATION PRESSURE (IN)	27	30.00	29.99	29.94	29.90	29.90	29.90	29.92	29.96	29.99	30.02	30.02	30.01	29.96
	MEAN SEA-LEVEL PRES. (IN)	48	30.08	30.07	30.02	29.99	30.00	29.98	30.00	30.02	30.08	30.10	30.07	30.10	30.04
WINDS	MEAN SPEED (MPH)	40	9.8	10.1	11.0	10.5	8.8	8.2	7.7	7.3	7.7	8.0	9.0	9.1	8.9
	PREVAIL. DIR (TENS OF DEGS)	24	30	30	30	30	30	18	18	18	30	31	30	30	30
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	5	51	43	45	46	48	41	45	40	37	36	44	36	51
	DIR. (TENS OF DEGS)		15	29	28	33	24	27	32	14	03	29	14	29	15
	YEAR OF OCCURRENCE		1999	1996	1996	1995	1999	1998	1995	1997	1999	1995	1999	1998	JAN 1999
	MAXIMUM 5-SECOND:														
SPEED (MPH)	5	61	54	56	53	61	52	55	53	46	46	57	47	61	
DIR. (TENS OF DEGS)		23	29	27	33	23	27	32	15	31	26	13	30	23	
YEAR OF OCCURRENCE		1999	1996	1996	1995	1999	1998	1995	1997	1999	1999	1999	1998	MAY 1999	
PRECIPITATION	NORMAL (IN)	30	3.03	2.91	3.43	3.39	3.84	3.55	4.23	3.40	3.43	2.88	3.27	3.48	40.84
	MAXIMUM MONTHLY (IN)	52	8.41	7.02	7.50	6.80	7.38	7.49	12.63	12.09	12.68	8.01	7.84	7.96	12.68
	YEAR OF OCCURRENCE		1978	1979	1993	1983	1983	1972	1989	1955	1999	1995	1972	1996	SEP 1999
	MINIMUM MONTHLY (IN)	52	0.52	0.83	0.81	0.35	0.22	0.21	0.16	0.25	0.82	0.21	0.49	0.19	0.16
	YEAR OF OCCURRENCE		1981	1980	1966	1985	1964	1988	1955	1972	1970	1963	1976	1955	JUL 1955
	MAXIMUM IN 24 HOURS (IN)	52	2.53	2.29	3.11	2.56	2.72	4.35	6.83	4.11	8.43	3.88	3.83	2.33	8.43
	YEAR OF OCCURRENCE		1998	1966	1978	1961	1990	1972	1989	1971	1999	1966	1956	1996	SEP 1999
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	10.3	9.5	9.9	10.6	11.2	9.8	9.1	8.8	7.8	7.3	9.4	9.8	113.5	
PRECIPITATION ≥ 1.00	30	0.7	0.6	1.0	0.7	0.9	0.8	1.2	0.9	1.1	0.7	0.8	1.0	10.4	
SNOWFALL	NORMAL (IN)	30	7.6	6.9	2.4	0.3	T	0.0	0.0	0.0	0.0	0.*	0.7	3.4	21.3
	MAXIMUM MONTHLY (IN)	49	26.2	27.5	20.3	2.6	T	T	T	0.0	0.0	2.5	11.9	21.5	27.5
	YEAR OF OCCURRENCE		1996	1979	1958	1982	1991	1992	1990			1979	1953	1966	FEB 1979
	MAXIMUM IN 24 HOURS (IN)	49	22.0	16.5	15.6	2.4	T	T	T	0.0	0.0	2.5	11.9	12.4	22.0
	YEAR OF OCCURRENCE		1996	1979	1958	1987	1991	1992	1990			1979	1953	1966	JAN 1996
	MAXIMUM SNOW DEPTH (IN)	45	13	20	8	2	0	0	0	0	0	T	9	12	20
	YEAR OF OCCURRENCE		1987	1979	1956	1987						1962	1953	1966	FEB 1979
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	2.3	1.7	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.0	6.1	

PRECIPITATION (inches) 1999 WILMINGTON, DE (ILG)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	1.00	2.13	3.61	5.56	0.94	6.16	6.03	2.31	0.82	2.64	4.09	3.02	38.31
1971	2.22	6.29	2.29	2.15	4.51	2.50	3.65	8.38	6.99	6.41	5.52	1.33	52.24
1972	2.50	5.43	2.40	4.47	3.85	7.49	2.07	0.25	1.64	4.20	7.84	5.99	48.13
1973	3.81	3.42	4.02	6.57	5.56	5.19	2.82	2.44	3.02	2.22	0.67	7.31	47.05
1974	2.92	1.73	4.56	3.08	3.96	3.97	1.49	5.11	5.65	1.77	1.19	4.18	39.61
1975	4.23	2.95	4.63	3.03	5.65	6.16	5.53	2.55	6.19	3.06	2.63	3.00	49.61
1976	4.21	1.70	2.25	1.40	5.05	2.14	4.33	2.00	2.11	6.12	0.49	1.79	33.59
1977	2.18	1.09	4.55	3.91	0.96	4.41	1.38	4.82	1.29	3.59	6.14	5.81	40.13
1978	8.41	1.77	5.59	2.16	6.94	3.00	5.53	5.97	2.18	1.48	2.69	5.56	51.28
1979	7.61	7.02	2.61	4.03	3.10	4.01	4.76	6.11	5.94	3.45	3.23	1.44	53.31
1980	2.44	0.83	6.22	4.55	2.40	4.23	3.49	1.09	1.44	3.99	2.41	0.83	33.92
1981	0.52	3.23	1.26	3.54	5.05	4.50	2.52	3.38	3.82	2.84	0.67	3.95	35.28
1982	3.75	2.71	2.87	5.41	3.72	4.70	2.70	4.68	2.30	1.97	3.87	2.39	41.07
1983	2.98	3.55	6.84	6.80	7.38	3.94	2.33	1.29	3.44	3.87	5.48	6.80	54.70
1984	1.25	4.27	5.40	4.24	5.03	4.54	6.53	1.56	2.02	3.31	1.63	1.94	41.72
1985	1.56	2.05	2.03	0.35	5.52	1.37	6.91	2.28	4.56	1.84	4.46	0.80	33.73
1986	4.21	2.77	1.19	2.77	1.69	4.05	3.99	2.88	2.75	4.04	6.42	6.11	42.87
1987	4.35	1.52	1.16	2.63	3.15	2.31	4.09	4.21	4.85	2.31	3.50	1.90	35.98
1988	2.46	4.14	1.82	2.59	4.95	0.21	8.29	3.03	2.18	1.94	5.29	0.90	37.80
1989	2.48	2.75	3.69	2.76	6.57	5.43	12.63	1.97	4.31	3.92	1.99	1.27	49.77
1990	3.56	1.35	2.15	3.42	7.03	3.94	4.27	6.15	2.64	2.85	1.61	5.16	44.13
1991	4.30	0.97	4.64	3.28	1.98	3.41	3.71	5.38	5.36	1.27	1.26	4.26	39.82
1992	1.05	1.81	4.36	1.76	4.48	3.14	4.34	2.21	4.30	1.11	4.27	4.21	37.04
1993	2.64	3.11	7.50	5.87	3.95	1.60	4.04	2.65	6.26	2.77	2.85	3.51	46.75
1994	5.00	3.55	7.36	2.85	3.69	2.11	7.01	5.68	2.10	0.85	2.96	2.24	45.40
1995	3.08	2.28	2.47	2.10	3.50	1.26	2.89	2.03	5.17	8.01	4.31	2.17	39.27
1996	4.58	1.19	3.63	4.98	3.27	5.00	6.25	3.04	4.05	4.70	3.25	7.96	51.90
1997	1.83	1.83	3.49	1.49	0.82	1.75	3.08	3.66	1.93	2.33	3.24	2.57	28.02
1998	4.80	2.95	4.86	2.91	4.13	4.66	2.18	3.14	1.76	2.80	1.26	1.01	36.46
1999	5.41	3.51	3.96	3.36	3.56	1.62	0.89	4.24	12.68	3.42	2.09	2.94	47.68
POR= 106 YRS	3.33	3.01	3.73	3.47	3.65	3.67	4.51	4.46	3.69	3.03	3.21	3.42	43.18

WBAN : 13781

AVERAGE TEMPERATURE (°F) 1999 WILMINGTON, DE (ILG)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	24.5	33.5	38.9	51.9	64.8	71.7	76.6	76.7	72.1	60.4	48.5	35.9	54.6
1971	27.4	35.5	40.7	51.1	60.4	73.4	75.9	74.0	71.1	62.9	45.7	42.1	55.0
1972	36.1	32.6	41.3	50.0	62.5	68.6	76.9	75.5	69.6	53.5	45.2	41.6	54.5
1973	35.6	35.5	49.4	54.7	61.4	75.8	78.1	78.1	70.4	59.9	49.1	37.7	57.1
1974	36.2	33.1	44.3	55.5	62.4	70.4	76.7	76.1	66.5	53.2	46.6	38.9	55.0
1975	37.5	35.9	40.6	47.5	65.2	71.5	75.7	76.3	65.4	60.0	51.0	36.2	55.2
1976	27.7	41.2	46.5	54.7	59.9	72.4	74.2	73.7	66.9	52.5	40.4	31.0	53.4
1977	20.8	33.3	47.2	54.4	63.9	68.9	76.4	75.4	69.3	53.4	46.6	33.4	53.6
1978	27.2	22.8	37.6	50.3	60.3	70.6	73.4	77.1	66.7	54.1	46.8	37.2	52.0
1979	31.4	22.1	45.4	50.6	63.8	67.9	75.3	75.0	68.2	55.0	49.6	38.1	53.5
1980	32.4	29.9	40.0	54.6	64.9	68.9	77.7	78.2	71.3	54.8	43.3	33.1	54.1
1981	25.4	37.9	40.2	55.0	62.5	72.3	77.1	73.5	66.9	53.0	45.3	34.2	53.6
1982	24.2	34.2	41.8	50.6	65.0	69.9	77.3	72.0	67.4	56.0	47.5	41.3	53.9
1983	35.2	35.3	45.9	53.1	61.0	71.8	77.6	77.0	69.3	56.9	46.7	32.1	55.2
1984	24.8	38.6	35.6	50.7	61.2	73.8	75.2	75.2	63.7	61.2	43.3	42.1	53.8
1985	27.5	37.4	47.1	58.0	65.9	70.6	76.6	74.4	69.1	58.3	51.0	32.9	55.7
1986	32.2	31.6	43.6	52.4	65.7	72.1	77.1	72.5	67.5	57.2	44.1	37.3	54.4
1987	31.4	31.9	44.6	52.3	63.1	73.5	79.1	74.3	68.3	51.7	47.4	38.6	54.7
1988	27.4	34.8	44.2	50.8	62.9	71.6	79.4	77.3	65.8	51.0	46.7	35.1	53.9
1989	36.0	34.3	42.1	51.6	62.1	74.3	75.9	74.4	68.4	57.6	44.6	25.0	53.9
1990	40.5	41.1	46.0	53.7	61.5	72.1	77.4	74.6	66.7	60.0	48.4	41.0	56.9
1991	34.3	39.7	44.9	54.7	69.1	73.6	77.3	76.7	67.2	57.6	46.8	39.5	56.8
1992	35.2	37.2	41.5	52.0	60.7	69.6	76.3	72.2	67.3	53.2	47.2	38.3	54.2
1993	37.6	31.0	39.0	52.8	65.3	72.8	79.4	77.8	68.7	55.7	47.4	36.4	55.3
1994	26.3	31.6	41.8	58.4	60.0	75.8	79.8	73.2	67.2	53.9	49.7	40.0	54.8
1995	36.6	30.3	45.3	51.5	62.2	72.0	78.7	77.1	68.2	59.3	41.3	31.3	54.5
1996	29.9	33.3	38.4	52.6	60.1	73.0	74.1	74.0	67.7	55.1	40.1	39.2	53.1
1997	31.8	38.9	43.2	50.3	58.6	69.6	75.9	72.8	65.5	55.6	43.6	37.6	53.6
1998	39.8	41.0	44.7	54.2	65.3	70.5	75.1	75.5	70.9	57.0	46.9	41.0	56.8
1999	34.8	36.9	41.7	52.7	62.9	71.6	80.0	75.8	68.1	53.8	49.4	38.8	55.5
POR= 105 YRS	32.3	33.5	42.1	52.3	62.7	71.4	76.1	74.3	67.8	56.5	45.7	35.4	54.2

HEATING DEGREE DAYS (base 65°F) 1999 WILMINGTON, DE (ILG)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0	0	25	175	487	895	1159	821	746	411	153	3	4875
1971-72	0	2	23	93	585	702	889	935	732	443	105	27	4536
1972-73	0	0	20	356	586	716	902	820	477	322	143	0	4342
1973-74	0	0	15	179	469	839	886	887	635	300	137	7	4354
1974-75	0	0	65	362	553	805	847	808	753	520	84	5	4802
1975-76	0	0	56	177	418	888	1149	681	567	341	178	31	4486
1976-77	0	4	44	387	734	1047	1361	884	546	333	107	32	5479
1977-78	0	1	31	353	550	975	1165	1179	842	433	191	17	5737
1978-79	6	0	60	337	542	854	1037	1197	605	424	89	28	5179
1979-80	4	7	31	318	458	827	1004	1009	768	307	83	35	4851
1980-81	0	0	20	322	645	985	1222	752	763	299	135	4	5147
1981-82	0	0	57	370	585	947	1259	855	715	426	69	12	5295
1982-83	0	14	29	305	519	724	919	822	587	368	163	7	4457
1983-84	0	0	74	275	542	1013	1240	758	904	422	162	5	5395
1984-85	0	2	113	149	641	701	1154	766	550	248	73	7	4404
1985-86	0	0	45	213	411	986	1011	930	653	373	99	11	4732
1986-87	0	27	36	276	619	848	1032	923	628	374	143	2	4908
1987-88	0	2	22	406	521	811	1159	869	637	419	121	38	5005
1988-89	3	0	52	434	541	923	893	854	710	395	142	0	4947
1989-90	0	2	54	236	605	1231	749	661	593	368	127	6	4632
1990-91	2	1	69	214	494	734	943	700	617	320	61	5	4160
1991-92	0	0	64	244	541	785	914	799	723	386	169	12	4637
1992-93	0	1	57	363	527	817	843	945	799	360	64	12	4788
1993-94	0	0	55	286	526	879	1193	929	715	223	189	2	4997
1994-95	0	0	29	343	454	770	875	967	598	401	122	0	4559
1995-96	0	0	41	208	703	1033	1083	912	816	378	206	10	5390
1996-97	0	0	43	304	741	794	1025	729	672	436	201	56	5001
1997-98	2	0	71	324	635	844	775	667	645	317	89	27	4396
1998-99	0	0	22	241	536	738	926	782	715	362	95	7	4424
1999-	0	1	36	340	462	807							

WBAN : 13781

COOLING DEGREE DAYS (base 65°F) 1999 WILMINGTON, DE (ILG)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1970	0	0	0	2	97	211	365	371	244	38	0	0	1328
1971	0	0	0	0	16	261	345	287	214	34	16	0	1173
1972	0	0	2	0	35	143	376	334	165	8	0	0	1063
1973	0	0	0	19	42	332	416	413	183	29	0	0	1434
1974	0	0	0	24	64	175	370	355	113	2	6	0	1109
1975	0	0	0	0	97	207	337	355	73	27	5	0	1101
1976	0	0	0	37	25	260	291	278	106	6	0	0	1003
1977	0	0	5	20	80	156	360	328	166	0	5	0	1120
1978	0	0	0	0	48	188	273	383	117	7	0	0	1016
1979	0	0	4	1	57	123	327	324	138	16	0	0	990
1980	0	0	0	0	83	159	400	417	214	10	0	0	1283
1981	0	0	0	9	62	228	381	270	120	3	0	0	1073
1982	0	0	0	2	75	163	391	238	107	32	1	0	1009
1983	0	0	0	17	47	218	398	378	209	29	0	0	1296
1984	0	0	0	0	50	276	321	327	80	34	0	0	1088
1985	0	0	4	47	106	181	366	300	174	13	0	0	1191
1986	0	0	0	0	129	227	379	267	116	40	0	0	1158
1987	0	0	0	3	91	264	446	295	129	0	0	0	1228
1988	0	0	0	0	62	242	455	389	80	5	0	0	1233
1989	0	0	6	0	61	287	345	299	162	17	0	0	1177
1990	0	0	10	36	23	227	395	304	127	66	0	0	1188
1991	0	0	1	18	197	271	390	371	135	23	2	0	1408
1992	0	0	0	3	39	156	358	230	134	3	0	0	923
1993	0	0	0	1	79	252	452	405	176	3	4	0	1372
1994	0	0	0	32	41	334	466	260	99	4	0	0	1236
1995	0	0	0	4	42	218	434	381	148	39	1	0	1267
1996	0	0	0	13	64	254	291	285	129	2	0	0	1038
1997	0	0	0	0	9	204	348	248	92	40	0	0	941
1998	0	0	22	0	106	195	320	337	204	2	0	0	1186
1999	0	0	0	0	40	211	476	342	139	1	0	0	1209

SNOWFALL (inches) 1999 WILMINGTON, DE (ILG)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1970-71	0.0	0.0	0.0	0.0	0.0	3.2	5.8	0.2	2.4	0.6	0.0	0.0	12.2
1971-72	0.0	0.0	0.0	0.0	T	T	2.1	7.0	0.3	0.1	0.0	0.0	9.5
1972-73	0.0	0.0	0.0	T	T	T	T	1.2	T	T	0.0	0.0	1.2
1973-74	0.0	0.0	0.0	0.0	0.0	6.1	2.4	11.5	T	T	0.0	0.0	20.0
1974-75	0.0	0.0	0.0	0.0	T	T	5.1	4.8	1.1	T	0.0	0.0	11.0
1975-76	0.0	0.0	0.0	0.0	0.0	0.3	4.5	1.7	6.7	T	0.0	0.0	13.2
1976-77	0.0	0.0	0.0	0.0	0.1	3.2	14.5	T	0.0	T	0.0	0.0	17.8
1977-78	0.0	0.0	0.0	0.0	0.4	0.9	16.0	18.4	9.9	T	0.0	0.0	45.6
1978-79	0.0	0.0	0.0	0.0	4.5	T	12.0	27.5	0.2	T	0.0	0.0	44.2
1979-80	0.0	0.0	0.0	2.5	0.0	1.4	6.1	0.8	5.1	0.0	0.0	0.0	15.9
1980-81	0.0	0.0	0.0	0.0	0.5	1.4	6.5	T	3.7	0.0	0.0	0.0	12.1
1981-82	0.0	0.0	0.0	0.0	T	2.8	14.6	4.5	0.4	2.6	0.0	0.0	24.9
1982-83	0.0	0.0	0.0	0.0	T	5.8	T	18.5	0.3	0.5	0.0	0.0	25.1
1983-84	0.0	0.0	0.0	0.0	T	T	9.7	T	5.2	T	0.0	0.0	14.9
1984-85	0.0	0.0	0.0	0.0	T	0.3	14.2	0.7	T	0.4	0.0	0.0	15.6
1985-86	0.0	0.0	0.0	0.0	0.0	1.4	3.1	9.7	T	T	0.0	0.0	14.2
1986-87	0.0	0.0	0.0	0.0	T	0.3	21.4	15.7	0.2	2.4	0.0	0.0	40.0
1987-88	0.0	0.0	0.0	0.0	0.7	2.1	10.8	1.1	T	T	0.0	0.0	14.7
1988-89	0.0	0.0	0.0	0.0	T	0.2	6.7	2.9	1.2	0.0	0.0	0.0	11.0
1989-90	0.0	0.0	0.0	0.0	5.6	8.9	1.5	1.0	1.3	1.6	0.0	0.0	19.9
1990-91	T	0.0	0.0	0.0	0.0	6.4	5.2	0.6	0.9	T	T	0.0	13.1
1991-92	0.0	0.0	0.0	0.0	T	0.2	1.5	1.3	0.5	T	0.0	T	3.5
1992-93	0.0	0.0	0.0	0.0	T	0.1	1.4	10.0	13.9	0.0	0.0	0.0	25.4
1993-94	0.0	0.0	0.0	0.0	T	2.4	2.7	9.2	3.4	0.0	0.0	0.0	17.7
1994-95	0.0	0.0	0.0	0.0	T	0.0	T	8.3	T	0.0	0.0	0.0	8.3
1995-96	0.0	0.0	0.0	0.0	3.2	7.1		26.2					
1996-97													
1997-98													
1998-99													
1999-													
POR= 49 YRS	T	0.0	0.0	0.1	0.9	3.2	6.8	6.0	3.2	0.2	T	T	20.4

WBAN : 13781

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 EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.</p>
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1999
WILMINGTON,
DELAWARE (ILG)

Delaware is part of the Atlantic Coastal Plain consisting mainly of flat low land with many marshes. Small streams and tidal estuaries comprise the drainage of the State. Wilmington, at the northern end of the State, marks the beginning of low rolling hills extending northward and northwestward into Pennsylvania. The Delaware River, the Delaware Bay, and the Atlantic Ocean are along the eastern boundary of the State. The broad Chesapeake Bay lies 35 miles, or less, to the west of the western boundary of nearly the entire State. These large water areas considerably influence the climate of the Wilmington, Delaware region.

Summers are warm and humid, winters are usually mild. During the summer maximum temperatures are usually in the 80s. The temperature reaches 100 degrees on the average once in six years. During January, the coldest month of the year, the daily average temperature is 32 degrees. Temperatures of zero may be expected once in four years. Most of the winter precipitation falls as rain. Seasonal snowfall has been as little as 1 inch, and as much as 50 inches. Snow is frequently mixed with rain and sleet, and seldom remains on the ground more than a few days.

The proximity of large water areas and the inflow of southerly winds cause the relative humidity to be quite high all year. During the summer months the relative humidity is approximately 75 percent. Fog is relatively frequent and may occur in any month. Light southeast winds blowing up the Delaware Bay favor the formation of fog. Light north-northeast winds bring in smoke from Philadelphia and from the heavy industry area located along the Delaware River north of Wilmington.

Rainfall distribution throughout the year is fairly uniform, however, the greatest amounts normally come during the summer months. Mostly, the summer rainfall comes in the form of thunderstorms. Moisture deficiencies for crops occur occasionally, but severe droughts are rare. During the fall, winter, and spring seasons, much of the rainfall comes from storms forming over the southern states or the South Atlantic and moving northward along the coast. During the late summer and early fall, hurricanes occasionally cause heavy rainfall, but winds seldom reach hurricane force in Wilmington. Heavy rains occasionally cause minor flooding, but the streams and rivers of northern Delaware are not subject to major flooding. Strong easterly and southeasterly winds sometimes cause high tides in the Delaware Bay and the Delaware River, resulting in the flooding of lowlands and damage to bay front and river front properties.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 29 and the average last occurrence in the spring is April 13.

STATION LOCATION

WILMINGTON, DELAWARE

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE												REMARKS
						SEA LEVEL	GROUND											
							WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	WIND	
<u>COOPERATIVE</u>																		
Wilmington, Delaware 6th and King Streets	4/1/94	7/12/16		39°45'	75°33'	86												Ordinary thermometer exposed outside N window; Sept. '09 max. and min. in use, exposure of thermometers poor.
Porter Reservoir Wilmington, Delaware 1.9 miles NNE of P.O.	3/1/12	Present		39°46'	75°33'	260												Home made shelter in use; C.R. shelter September 1936, good exposure over sod. Precipitation record began 7/12/12.
Wilmington, Delaware 10th and King Streets 1 block S of P.O.	7/12/16	10/31/58	1.9 mi. SSW	39°45'	75°33'	99												Precipitation only most of time.
<u>AIRPORT</u>																		
Bellanca Field New Castle, Delaware 6.1 miles SSW Wilmington Post Office	4/20/31	6/?/34		39°40'	75°36'													
DuPont Airport Wilmington Delaware 3 miles WNW Wilmington Post Office	4/27/42	12/8/42	6.8 mi. N	39°46'	75°36'													
New Castle County Airport Tower, Wilmington, Delaware, 5.6 miles SW of Post Office	5/19/47	11/6/47	5.6 mi. SSW	39°40'	75°36'	75												Airway observation by county tower employees.
New Castle County Airport, Admn. Bldg.	11/7/47	12/5/47	125 yds. SW	39°40'	75°36'	73	75	5	5									Wind instruments of previous location used.
New Castle County Airport, Terminal Bldg.	12/5/47	7/16/56	150 ft. NE	39°40'	75°36'	73	34	5	5									Exposure of instruments good.
New Terminal Building New Castle County AP + + Greater Wilmington Airport eff. 5/1961	7/16/56	10/01/94	7/8 mi. SE	39°40'	75°36'	78 b74	20	s5	s5	NA	NA		5	4	NA a4 c4	NA	Exposure of instruments excellent. a - Commissioned 1000 feet from thermometer site 4/11/67. b - Lowered 4/11/67. s - Standby after 4/11/67. c - Type change 8/12/85.	
New Castle County AP	10/01/94	Present	NA	39°40'	75°36'	93											S	ASOS commissioned 10/1/94.

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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