



MARCH 1999

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

WILMINGTON, DE

NEW CASTLE COUNTY APRT (ILG)
 Lat: 39° 40' N Long: 75° 36' W Elev (Ground): 74 Feet
 Time Zone: EASTERN WBAN: 13781 ISSN #:0198-117X

**MARCH 1999
WILMINGTON, DE**

DATE	TEMPERATURE °F							DEG DAYS BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								DATE																																																														
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING	0700 LST		1300 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM																																																																				
																			5-SEC		2-MIN																																																																		
	1	2	3	4	5	6	7	8	9		11	12	13	14	15	16	17	18	19	20	21	22	23	24																																																															
01	47	35	41	3	31	37	24	0				0.01	29.35	29.43	14.0	26	14.6	33	27	25	27	01																																																																	
02	52	32	42	4	23	34	23	0				0.00	29.73	29.82	9.6	26	11.2	32	27	24	26	02																																																																	
03	59	39	49	11	44	47	16	0				0.15	29.55	29.63	18.2	14	18.4	52*	13	39	14	03																																																																	
04	50	31	41	2	26	33	24	0				0.03	29.55	29.63	18.3	25	21.3	44	27	34	29	04																																																																	
05	43	27	35	-4	17	29	30	0				0.00	30.24	30.33	5.8	29	7.5	25	31	21	30	05																																																																	
06	49	34	42	3	30	37	23	0				0.48	29.95	30.03	2.8	17	8.8	30	31	25	30	06																																																																	
07	42	21	32	-8	0	21	33	0				0.00	30.18	30.27	23.4	31	23.9	44	29	36	30	07																																																																	
08	37	17*	27	-13	5	21	38	0				0.00	30.45	30.54	13.4	32	13.7	30	32	25	33	08																																																																	
09	32	20	26*	-14	10	23	39	0				T	30.13	30.22	2.1	34	5.1	18	36	15	36	09																																																																	
10	45	27	36	-5	17	29	29	0				T	29.80	29.88	9.2	33	10.2	25	33	20	33	10																																																																	
11	41	25	33	-8	15	27	32	0				0.00	29.79	29.88	16.8	31	17.3	33	33	28	31	11																																																																	
12	39	29	34	-8	17	28	31	0				0.00	29.85	29.94	19.1	31	19.4	36	30	30	30	12																																																																	
13	50	29	40	-2	22	32	25	0				0.00	30.04	30.13	9.4	32	10.3	24	32	21	32	13																																																																	
14	39	32	36	-6	28	32	29	0				1.03	29.93	30.01	9.3	04	9.6	23	01	20	02	14																																																																	
15	42	33	38	-5	27	33	27	0				0.14	29.62	29.71	15.5	35	17.6	36	01	29	01	15																																																																	
16	49	30	40	-3	21	33	25	0				0.00	29.85	29.94	10.4	25	11.0	25	27	21	27	16																																																																	
17	69	33	51	8	30	42	14	0				0.00	29.78	29.86	6.5	22	6.9	25	22	20	22	17																																																																	
18	70	44	57*	14	31	44	8	0				0.00	29.70	29.78	14.4	28	16.1	47	26	39*	29	18																																																																	
19	51	36	44	0	24	36	21	0				0.00	30.02	30.10	15.4	29	15.7	34	30	28	30	19																																																																	
20	53	31	42	-2	25	36	23	0				0.00	30.13	30.21	5.1	27	7.5	18	30	17	31	20																																																																	
21	50	35	43	-1	38	41	22	0				1.70	29.85	29.93	5.3	10	8.2	24	25	22	07	21																																																																	
22	48	36	42	-3	27	36	23	0				0.28	29.73	29.82	17.2	26	17.8	40	27	32	26	22																																																																	
23	54	29	42	-3	29	38	23	0				T	30.08	30.17	7.8	20	9.4	25	20	22	15	23																																																																	
24	61	42	52	7	43	47	13	0				0.04	29.89	29.97	3.4	22	5.5	16	21	14	26	24																																																																	
25	51	34	43	-3	28	37	22	0				0.00	29.98	30.06	9.5	33	11.2	23	32	18	29	25																																																																	
26	51	30	41	-5	23	33	24	0				0.00	30.12	30.21	5.4	02	8.6	21	01	17	01	26																																																																	
27	53	30	42	-4	26	37	23	0				0.08	30.02	30.10	10.1	02	11.2	38	05	30	04	27																																																																	
28	51	40	46	-1	37	42	19	0				0.02	29.85	29.93	10.4	34	11.7	26	35	21	36	28																																																																	
29	68	44	56	9	31	45	9	0				T	29.90	29.99	13.2	29	13.7	31	28	26	29	29																																																																	
30	64	39	52	5	22	41	13	0				0.00	30.16	30.24	10.7	29	11.5	38	28	24	29	30																																																																	
31	71*	39	55	8	27	43	10	0				0.00	30.12	30.20	9.7	21	10.3	32	22	25	22	31																																																																	
< MONTHLY AVERAGES											TOTALS-->				3.96	29.91	30.00	6.7	29	12.4	<-- MONTHLY AVERAGES																																																																		
-1.1											-0.7		-1.0				DEPARTURE FROM NORMAL											0.53	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																																																										
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 1.98 DATE: 21-22											SEA LEVEL PRESSURE DATE TIME																																																																	
MONTHLY TOTAL DEPARTURE											SEASON TO DATE TOTAL DEPARTURE											GREATEST 24-HR SNOWFALL: DATE: MINIMUM											MAXIMUM : 30.62 08 1150																																																						
HEATING: 715											COOLING: 24											3960											-471											DATE: 04 0013																																											
0											0											0											0											NUMBER OF DAYS WITH											MAXIMUM TEMP ≥ 90: 0											MINIMUM TEMP ≤ 32: 16											PRECIPITATION ≥ 0.01 INCH : 11										
0											0											0											0											->											MAXIMUM TEMP ≤ 32 : 1											MINIMUM TEMP ≤ 0 : 0											PRECIPITATION ≥ 0.10 INCH : 6										
0											0											0											0																						THUNDERSTORMS : 2											HEAVY FOG : 1											SNOWFALL ≥ 1.0 INCH :										

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE

MARCH 1999

ILG

WBAN # 13781

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note 2)	2400 LST	
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water	Equiv.
01	T	T									0.01		01			T	T	T							01		0.01		
02													02												02		0.00		
03													03		T						0.03		0.05	0.02	0.02	0.03	03		0.15
04	T	T	0.01	T	0.01	0.01	T	T	T	T	T	T	04												04		0.03		
05													05												05		0.00		
06											T	T	06	0.12	0.06	T				0.01	0.15	0.12	0.01	06		0.48			
07													07												07		0.00		
08													08												08		0.00		
09													09							T		T		T	09		0.00		
10	T	T	T	T	T	T							10												10		T		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14												T	14	0.02	0.09	0.10	0.08	0.05	0.06	0.06	0.07	0.07	0.11	0.22	0.09	14	1.02	1.03	
15	0.06	0.03	T	T				T	0.03	0.03			15												15	0.15	0.14		
16													16												16		0.00		
17													17												17		0.00		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21												T	21	0.02	0.06	0.08	0.26	0.15	0.21	0.15	0.07	0.10	0.42	0.12	0.06	21		1.70	
22	0.04	0.05	0.09	0.06	0.04	T							22												22		0.28		
23													23									T	T		23		T		
24	T	0.01	T	T	0.01	T					T	T	24		T	T	0.01	0.01	T	T					24		0.04		
25													25												25		0.00		
26													26												26		0.00		
27													27												27		0.08		
28	0.02	T	T	0.01	T								28										T	0.07	28	0.07	0.08		
29			T	T									29												29		0.02		
30													30												30		T		
31													31												31		0.00		

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

* = Extreme for the month (last occurrence if more than one)

T = Trace precipitation amount

+ = also occurs on earlier date

FG+ = Heavy fog, visibility .25 miles or less
BLANK entries denote missing or unreported data

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1961 – 1990

WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	SQ Squalls
PR Partial	RA Rain	PY Spray	SS Sandstorm
SH Shower(s)	SG Snow Grains	SA Sand	GL Glaze
TS Thunderstorm	SN Snow	VA Volcanic Ash	
VC In the Vicinity	UP Unknown Precipitation		

Intensity (as indicated on pages 4 to 6):

'+' = Heavy '' = Moderate '-' = Light

WILMINGTON, DE MARCH 1999

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0-2 oktas, Partly Cloudy = 3-6 oktas, Cloudy = 7-8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled at constant pressure by evaporation of moisture into it, to 100% relative humidity.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							5.00	10.00	
02							10.00	10.00	
03							4.00	10.00	
04							1.25	10.00	
05							10.00	10.00	
06							2.50	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							6.00	10.00	
10							3.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							.50	10.00	
15							1.25	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							6.00	10.00	
21							2.00	10.00	
22							7.00	10.00	
23							8.00	10.00	
24							4.00	10.00	
25							3.00	10.00	
26							10.00	10.00	
27							7.00	10.00	
28							10.00	10.00	
29							10.00	10.00	
30							10.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							7.11	10.00	
SUNSHINE (MINUTES)									
Total:					Possible:				
					Percent Possible:				
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR					PTLY CLDY		CLOUDY		MISSING
									31
MINIMUM VISIBILITY (MILES)									
<=0.25			<=3.0			>=7.0			
0			7			19			

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

MARCH 1999

ILG

WBAN # 13781

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE ° F			WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE ° F			WIND		PRESSURE (INCHES, HG)								
	TIME (LST)	EFF CLD AMT Ok/as		VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		TIME (LST)	EFF CLD AMT Ok/as		VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL							
SUNRISE: 0636							MAR 01							SUNSET: 1754																				
01	OVC	038		5.00	-RA	BR	42	40	41	92	18	28	29.25	29.34	01	OVC	042		10.00			39	12	30	33	29	28	29.81	29.90					
04	CLR	NC		10.00			39	34	37	82	10	24	29.25	29.34	04	CLR	NC		10.00			24	-4	18	29	30	30	29.96	30.05					
07	SCT	NC		10.00			36	32	34	86	8	23	29.29	29.38	07	CLR	NC		10.00			21	-7	15	28	33	30	30.06	30.15					
10	BKN	090		10.00			43	34	39	71	14	24	29.31	29.39	10	CLR	NC		10.00			26	-1	20	31	28	32	30.15	30.24					
13	BKN	060		10.00			45	31	39	58	16	27	29.29	29.38	13	CLR	NC		10.00			30	4	23	33	25	31	30.19	30.28					
16	OVC	055		10.00	-RA		44	31	39	60	17	28	29.33	29.42	16	CLR	NC		10.00			33	6	25	32	21	31	30.24	30.33					
19	OVC	055		10.00			41	27	35	57	18	28	29.42	29.52	19	CLR	NC		10.00			27	2	21	34	18	32	30.34	30.43					
22	BKN	045		10.00			37	24	32	60	18	28	29.50	29.59	22	CLR	NC		10.00			24	-2	18	32	21	32	30.41	30.50					
SUNRISE: 0634							MAR 02							SUNRISE: 0625							MAR 08							SUNSET: 1802						
01	OVC	100		10.00			36	22	31	57	16	27	29.53	29.62	01	CLR	NC		10.00			20	2	16	45	21	32	30.44	30.53					
04	CLR	NC		10.00			33	23	29	67	10	26	29.58	29.67	04	CLR	NC		10.00			18	3	15	52	17	32	30.47	30.56					
07	CLR	NC		10.00			32	24	29	73	9	24	29.67	29.76	07	CLR	NC		10.00			18	5	15	57	15	32	30.49	30.58					
10	CLR	NC		10.00			41	24	35	51	17	28	29.72	29.81	10	CLR	NC		10.00			27	5	21	39	16	33	30.52	30.61					
13	CLR	NC		10.00			49	22	38	35	18	28	29.75	29.83	13	CLR	NC		10.00			33	5	25	30	16	31	30.47	30.56					
16	CLR	NC		10.00			51	19	39	28	17	26	29.76	29.85	16	CLR	NC		10.00			37	5	28	26	17	33	30.41	30.50					
19	CLR	NC		10.00			47	18	36	31	3	24	29.84	29.93	19	CLR	NC		10.00			30	6	23	36	9	33	30.39	30.48					
22	CLR	NC		10.00			40	27	35	60	5	14	29.86	29.95	22	CLR	NC		10.00			26	9	21	48	10	30	30.40	30.49					
SUNRISE: 0633							MAR 03							SUNRISE: 0624							MAR 09							SUNSET: 1803						
01	BKN	090		10.00			39	28	35	65	6	13	29.87	29.96	01	CLR	NC		10.00			26	2	20	35	7	35	30.35	30.45					
04	CLR	NC		10.00			40	30	36	68	7	13	29.82	29.91	04	CLR	NC		10.00			23	4	18	44	12	36	30.28	30.37					
07	SCT	NC		10.00			44	37	41	76	15	15	29.75	29.84	07	CLR	NC		10.00			23	5	18	46	10	36	30.27	30.36					
10	OVC	039		10.00			50	41	46	71	18	15	29.69	29.78	10	CLR	NC		10.00			27	3	21	36	3	04	30.24	30.33					
13	BKN	080		10.00			56	48	52	75	23	14	29.57	29.66	13	OVC	050		10.00			30	7	24	38	6	19	30.13	30.22					
16	CLR	NC		10.00			58	53	55	84	21	13	29.41	29.50	16	BKN	080		10.00			32	8	25	36	3	23	30.03	30.12					
19	CLR	NC		10.00			56	52	54	87	23	13	29.30	29.39	19	OVC	070		10.00			29	21	26	72	6	19	29.97	30.06					
22	OVC	065		7.00	-RA		54	52	53	93	26	14	29.18	29.25	22	OVC	065		6.00	BR		27	25	26	92	3	29	29.93	30.02					
SUNRISE: 0631							MAR 04							SUNRISE: 0622							MAR 10							SUNSET: 1804						
01	OVC	027		10.00			48	44	46	86	21	16	29.09	29.17	01	OVC	040		3.00	-SN	BR	27	24	26	89	6	36	29.87	29.96					
04	OVC	016		10.00			38	35	37	89	20	21	29.10	29.18	04	OVC	085		9.00			28	23	26	81	10	02	29.81	29.90					
07	OVC	023		4.00	-SN	BR	34	31	33	89	20	22	29.25	29.34	07	OVC	030		10.00			28	24	27	85	7	32	29.83	29.92					
10	OVC	030		10.00			34	28	32	79	22	25	29.47	29.56	10	OVC	110		10.00			34	18	29	52	9	01	29.83	29.92					
13	OVC	041		10.00			38	25	33	60	21	26	29.57	29.65	13	SCT	NC		10.00			40	16	32	38	12	29	29.77	29.86					
16	FEW	NC		10.00			40	20	33	45	29	27	29.71	29.80	16	FEW	NC		10.00			44	13	33	28	16	33	29.72	29.81					
19	CLR	NC		10.00			36	17	30	46	23	27	29.87	29.96	19	BKN	100		10.00			37	14	29	39	14	31	29.75	29.85					
22	CLR	NC		10.00			32	15	27	50	22	28	29.98	30.07	22	CLR	NC		10.00			33	13	27	43	14	33	29.78	29.87					
SUNRISE: 0630							MAR 05							SUNRISE: 0621							MAR 11							SUNSET: 1805						
01	CLR	NC		10.00			31	13	25	47	14	28	30.08	30.17	01	CLR	NC		10.00			28	13	23	53	20	32	29.82	29.91					
04	CLR	NC		10.00			28	15	24	58	8	30	30.14	30.23	04	CLR	NC		10.00			25	13	21	60	9	31	29.81	29.90					
07	CLR	NC		10.00			28	16	24	61	8	28	30.24	30.33	07	CLR	NC		10.00			26	14	22	60	12	30	29.83	29.92					
10	CLR	NC		10.00			35	13	28	40	9	32	30.30	30.39	10	CLR	NC		10.00			34	15	28	46	18	33	29.81	29.91					
13	CLR	NC		10.00			40	15	32	36	5	VR	30.28	30.37	13	CLR	NC		10.00			39	17	31	41	22	29	29.75	29.84					
16	OVC	085		10.00			43	18	34	37	9	30	30.27	30.36	16	CLR	NC		10.00			41	18	33	39	22	32	29.72	29.81					
19	BKN	110		10.00			41	18	33	39	0	00	30.27	30.36	19	CLR	NC		10.00			36	17	30	46	20	33	29.75	29.84					
22	SCT	NC		10.00			38	21	32	51	0	00	30.26	30.35	22	CLR	NC		10.00			31	15	26	52	13	33	29.81	29.90					
SUNRISE: 0628							MAR 06							SUNRISE: 0619							MAR 12							SUNSET: 1806						
01	CLR	NC		10.00			34	28	32	79	7	11	30.24	30.33	01	CLR	NC		10.00			30	15	25	54	17	31	29.79	29.88					
04	BKN	110		10.00			35	30	33	82	5	08	30.19	30.28	04	CLR	NC		10.00			30	16	26	56	17	30	29.77	29.86					
07	OVC	110		10.00			37	30	34	76	9	09	30.11	30.21	07	CLR	NC		10.00			30	16	26	56	23	31	29.80	29.89					
10	OVC	030		10.00			41	31	37	67	5	13	30.04	30.13	10	OVC	085		10.00			33	14	27	45	26	30	29.83	29.92					
13	OVC	005		2.50	RA		44	31	39	60	13	16	29.87	29.96	13	SCT	NC		10.00			37	16	30	42	22	31	29.82	29.91					
16	OVC	015		10.00			49	30	41	48	12	22	29.77	29.86	16	BKN	065		10.00			35	21	30	57	24	30	29.83	29.92					
19	OVC	050		8.00			47	29	39	50	0	00	29.76	29.85	19	OVC	070		10.00			34	19	29	54	18	33	29.89	29.98					
22	OVC	039		10.00	-RA		47	29	39	50	10	26	29.73	29.82	22	CLR	NC		10.00			31	17	26	56	18	32	29.97	30.06					

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

MARCH 1999 ILG

WBAN # 13781

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F				WIND		PRESSURE (INCHES, HG)	
	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)			SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)		SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0618 MAR 13								SUNSET: 1807								SUNRISE: 0608 MAR 19								SUNSET: 1813							
01	CLR	NC			10.00		29	16	25	58	16	32	29.99	30.09	01	OVC	050			10.00		44	27	37	51	20	30	29.89	29.98		
04	CLR	NC			10.00		29	17	25	61	10	31	30.01	30.10	04	OVC	NC			10.00		40	22	33	49	12	30	29.94	30.03		
07	CLR	NC			10.00		30	18	26	61	9	33	30.07	30.16	07	SCT	050			10.00		41	24	35	51	10	30	29.99	30.08		
10	CLR	NC			10.00		39	22	33	50	14	33	30.06	30.16	10	SCT	NC			10.00		44	21	35	40	20	30	30.02	30.11		
13	CLR	NC			10.00		47	25	38	42	8	31	30.05	30.14	13	SCT	NC			10.00		49	23	39	36	21	28	30.02	30.10		
16	FEW	NC			10.00		48	25	39	41	10	30	30.02	30.11	16	SCT	NC			10.00		50	24	40	36	20	29	30.01	30.10		
19	CLR	NC			10.00		39	25	34	57	7	29	30.04	30.13	19	CLR	NC			10.00		45	24	37	44	18	28	30.05	30.14		
22	CLR	NC			10.00		37	27	33	67	6	32	30.05	30.14	22	CLR	NC			10.00		40	23	34	51	16	29	30.11	30.20		
SUNRISE: 0616 MAR 14								SUNSET: 1808								SUNRISE: 0606 MAR 20								SUNSET: 1814							
01	CLR	NC			10.00		36	24	32	62	7	36	30.06	30.14	01	CLR	NC			10.00		35	23	31	61	8	30	30.15	30.24		
04	CLR	NC			10.00		35	23	31	61	8	02	30.04	30.12	04	BKN	050			10.00		35	22	30	59	9	25	30.15	30.24		
07	CLR	NC			10.00		34	23	30	64	7	02	30.03	30.12	07	CLR	NC			10.00		33	23	30	67	5	24	30.17	30.27		
10	SCT	NC			10.00		38	24	33	57	10	06	30.01	30.10	10	CLR	NC			10.00		44	23	36	43	14	28	30.18	30.27		
13	OVC	014			3.00	-SN BR	35	33	34	93	8	03	29.97	30.06	13	CLR	NC			10.00		49	24	39	38	8	27	30.12	30.21		
16	OVC	003			0.75	-SN BR	32	32	32	100	12	05	29.89	29.98	16	CLR	NC			10.00		51	22	40	32	7	31	30.07	30.16		
19	OVC	003			1.25	-SN BR	33	32	33	96	16	05	29.79	29.88	19	CLR	NC			10.00		46	23	37	40	5	23	30.08	30.17		
22	OVC	003			1.00	-SN BR	33	32	33	96	12	02	29.74	29.83	22	CLR	NC			8.00		40	36	38	86	7	16	30.09	30.17		
SUNRISE: 0614 MAR 15								SUNSET: 1809								SUNRISE: 0605 MAR 21								SUNSET: 1815							
01	OVC	007			10.00	-RA	34	32	33	92	20	01	29.59	29.68	01	CLR	NC			8.00		38	34	36	86	0	00	30.07	30.16		
04	OVC	009			10.00		34	32	33	92	18	02	29.52	29.61	04	CLR	NC			9.00		37	30	34	76	0	00	30.02	30.11		
07	OVC	015			10.00		34	30	32	85	21	02	29.55	29.64	07	CLR	NC			9.00		38	32	36	79	7	12	30.00	30.09		
10	OVC	016			10.00		35	31	33	85	16	35	29.54	29.63	10	FEW	NC			10.00		46	35	41	66	12	10	29.97	30.05		
13	BKN	029			10.00		39	30	35	70	14	33	29.54	29.62	13	OVC	040			6.00	-RA	47	37	42	69	12	11	29.89	29.98		
16	OVC	042			10.00		41	27	35	57	15	34	29.60	29.69	16	OVC	027			2.00	+RA BR	45	43	44	93	15	08	29.78	29.86		
19	CLR	NC			10.00		39	19	32	45	17	32	29.70	29.79	19	OVC	008			2.50	-RA BR	46	45	46	96	12	04	29.63	29.72		
22	CLR	NC			10.00		36	18	30	48	20	31	29.79	29.88	22	OVC	010			2.50	RA BR	49	48	48	97	7	16	29.57	29.66		
SUNRISE: 0613 MAR 16								SUNSET: 1810								SUNRISE: 0603 MAR 22								SUNSET: 1816							
01	CLR	NC			10.00		31	16	26	54	8	28	29.84	29.93	01	OVC	014			10.00	-RA	44	41	43	89	16	29	29.52	29.61		
04	CLR	NC			10.00		31	16	26	54	9	26	29.86	29.95	04	OVC	011			7.00	-RA	36	33	35	89	24	28	29.49	29.58		
07	CLR	NC			10.00		32	17	27	54	12	26	29.91	30.00	07	CLR	NC			10.00		38	27	34	65	18	26	29.57	29.66		
10	CLR	NC			10.00		39	20	32	46	16	26	29.94	30.03	10	OVC	055			10.00		41	24	35	51	18	25	29.67	29.76		
13	CLR	NC			10.00		46	24	37	42	17	28	29.87	29.96	13	BKN	055			10.00		44	23	36	43	23	26	29.72	29.81		
16	CLR	NC			10.00		48	22	38	36	17	26	29.80	29.89	16	BKN	060			10.00		48	24	38	39	22	25	29.78	29.87		
19	CLR	NC			10.00		45	22	36	40	6	21	29.80	29.89	19	CLR	NC			10.00		43	22	35	43	14	25	29.89	29.97		
22	CLR	NC			10.00		41	24	35	51	6	21	29.79	29.88	22	CLR	NC			10.00		39	23	33	53	10	24	29.99	30.09		
SUNRISE: 0611 MAR 17								SUNSET: 1811								SUNRISE: 0602 MAR 23								SUNSET: 1817							
01	CLR	NC			10.00		38	27	34	65	6	21	29.78	29.87	01	CLR	NC			10.00		37	23	32	57	8	22	30.04	30.13		
04	CLR	NC			10.00		35	29	33	78	0	00	29.79	29.88	04	CLR	NC			10.00		35	23	31	61	5	22	30.06	30.15		
07	CLR	NC			10.00		35	30	33	82	0	00	29.84	29.93	07	CLR	NC			10.00		35	25	31	67	6	21	30.13	30.22		
10	FEW	NC			10.00		54	31	44	42	9	20	29.86	29.95	10	CLR	NC			10.00		46	27	38	47	10	26	30.14	30.22		
13	CLR	NC			10.00		64	31	49	29	13	22	29.82	29.91	13	CLR	NC			10.00		52	26	41	37	10	20	30.09	30.18		
16	CLR	NC			10.00		69	31	51	24	13	21	29.73	29.82	16	CLR	NC			10.00		48	32	41	54	17	16	30.05	30.14		
19	CLR	NC			10.00		63	31	48	30	6	20	29.71	29.80	19	OVC	075			10.00		46	38	42	73	8	15	30.06	30.14		
22	CLR	NC			10.00		49	31	41	50	6	16	29.70	29.78	22	OVC	060			10.00	-RA	45	38	42	77	9	18	30.07	30.16		
SUNRISE: 0610 MAR 18								SUNSET: 1812								SUNRISE: 0600 MAR 24								SUNSET: 1818							
01	CLR	NC			10.00		46	36	42	68	0	00	29.68	29.77	01	OVC	065			8.00		44	38	41	79	9	16	30.03	30.12		
04	CLR	NC			10.00		50	35	43	57	6	23	29.64	29.72	04	OVC	090			9.00	-RA	43	39	41	86	5	11	29.97	30.06		
07	OVC	085			10.00		52	35	44	53	7	22	29.64	29.72	07	BKN	095			4.00	BR	44	40	42	85	0	00	29.96	30.05		
10	FEW	NC			10.00		69	38	53	32	18	23	29.60	29.69	10	BKN	075			10.00		53	44	49	72	9	23	29.92	30.01		
13	CLR	NC			10.00		67	21	47	17	26	28	29.60	29.69	13	SCT	NC			10.00		59	45	52	60	8	25	29.84	29.93		
16	FEW	NC			10.00		58	31	46	36	32	31	29.67	29.76	16	OVC	070			10.00		55	46	50	72	6	25	29.82	29.91		
19	FEW	NC			10.00		47	26	39	44	16	30	29.81	29.90	19	OVC	085			9.00		52	46	49	80	0	00	29.80	29.89		
22	BKN	055			10.00		44	27	37	51	17	29	29.85	29.93	22	OVC	100			7.00		50	45	48	83	6	24	29.81	29.90		

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

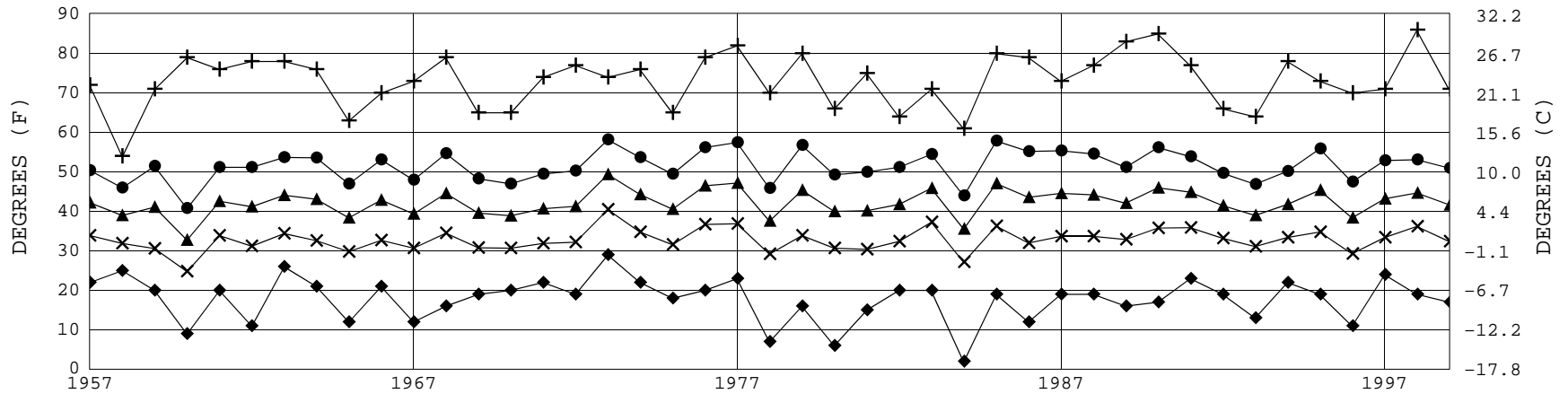
MARCH 1999

ILG

WBAN # 13781

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Ok/as		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER		CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Ok/as	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG
SUNRISE: 0558							MAR 25	SUNSET: 1819							SUNRISE: 0549							MAR 31	SUNSET: 1825							
01	CLR	NC			4.00	BR	44	42	43	93	5	29	29.83	29.92	01	CLR	NC			10.00			44	24	36	45	3	26	30.22	30.31
04	CLR	NC			10.00		41	32	37	70	10	35	29.89	29.98	04	CLR	NC			10.00			43	28	37	56	5	25	30.19	30.27
07	CLR	NC			8.00		39	30	35	70	6	35	29.95	30.04	07	CLR	NC			10.00			42	31	38	65	0	00	30.22	30.31
10	CLR	NC			10.00		46	30	39	54	13	33	29.99	30.08	10	CLR	NC			10.00			62	23	46	22	15	21	30.21	30.29
13	CLR	NC			10.00		50	27	40	41	14	28	29.98	30.07	13	CLR	NC			10.00			70	20	49	15	20	22	30.12	30.21
16	CLR	NC			10.00		50	24	40	36	10	29	29.96	30.05	16	CLR	NC			10.00			69	25	49	19	20	20	30.03	30.12
19	CLR	NC			10.00		44	22	36	41	10	29	30.01	30.10	19	CLR	NC			10.00			61	28	46	29	10	19	30.01	30.10
22	CLR	NC			10.00		39	22	33	50	10	35	30.07	30.16	22	CLR	NC			10.00			54	30	44	20	9	20	30.01	30.09
SUNRISE: 0557							MAR 26	SUNSET: 1820							3-HOURLY OBSERVATION NOTES															
01	CLR	NC			10.00		34	21	29	59	10	35	30.10	30.19	Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8.															
04	CLR	NC			10.00		31	20	27	64	8	36	30.11	30.20	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.															
07	CLR	NC			10.00		33	20	29	59	13	01	30.16	30.25	NC= No ceiling detected.															
10	CLR	NC			10.00		41	19	33	41	12	02	30.18	30.27	& = Original observation contained additional weather elements.															
13	CLR	NC			10.00		48	20	37	33	8	35	30.13	30.22	See page 3 for additional notes.															
16	CLR	NC			10.00		50	21	39	32	13	06	30.07	30.16																
19	CLR	NC			10.00		44	26	37	49	9	15	30.08	30.17																
22	CLR	NC			10.00		39	32	36	76	3	14	30.10	30.19																
SUNRISE: 0555							MAR 27	SUNSET: 1821																						
01	CLR	NC			10.00		35	30	33	82	3	33	30.11	30.20																
04	CLR	NC			9.00		31	28	30	89	7	01	30.10	30.18																
07	SCT	NC			10.00		34	28	32	79	6	34	30.11	30.20																
10	OVC	090			10.00		44	25	37	47	16	03	30.10	30.19																
13	OVC	085			10.00		51	24	40	35	18	04	30.05	30.14																
16	OVC	090			10.00		52	22	40	31	13	02	29.96	30.05																
19	OVC	085			10.00		49	25	39	39	5	02	29.92	30.01																
22	OVC	075			10.00		50	25	40	38	7	34	29.86	29.95																
SUNRISE: 0554							MAR 28	SUNSET: 1822																						
01	OVC	049			10.00	-RA	41	37	39	86	12	33	29.85	29.94																
04	OVC	023			10.00	-RA	41	36	39	82	17	35	29.81	29.90																
07	OVC	015			10.00		41	36	39	82	14	36	29.83	29.92																
10	OVC	019			10.00		45	37	41	74	16	35	29.85	29.94																
13	OVC	029			10.00		47	37	42	69	12	34	29.84	29.93																
16	OVC	028			10.00		51	39	45	64	12	35	29.83	29.92																
19	OVC	048			10.00		49	38	44	66	5	28	29.86	29.94																
22	SCT	NC			10.00		45	38	42	77	3	27	29.87	29.96																
SUNRISE: 0552							MAR 29	SUNSET: 1823																						
01	BKN	095			10.00		45	37	41	74	6	26	29.86	29.94																
04	OVC	090			10.00		46	37	42	71	8	30	29.86	29.95																
07	FEW	NC			10.00		49	31	41	50	12	30	29.88	29.97																
10	CLR	NC			10.00		60	27	46	28	21	31	29.88	29.97																
13	CLR	NC			10.00		65	33	50	31	22	32	29.85	29.94																
16	CLR	NC			10.00		67	32	50	27	18	28	29.85	29.94																
19	CLR	NC			10.00		59	25	44	27	13	29	29.92	30.01																
22	CLR	NC			10.00		55	25	43	31	15	29	30.00	30.09																
SUNRISE: 0550							MAR 30	SUNSET: 1824																						
01	CLR	NC			10.00		49	24	39	38	7	27	30.05	30.14																
04	CLR	NC			10.00		45	25	37	46	8	26	30.07	30.16																
07	CLR	NC			10.00		47	25	38	42	7	26	30.17	30.26																
10	CLR	NC			10.00		57	21	42	25	18	31	30.20	30.29																
13	CLR	NC			10.00		62	18	44	18	22	27	30.18	30.27																
16	CLR	NC			10.00		63	19	45	18	21	29	30.13	30.22																
19	CLR	NC			10.00		55	20	41	25	7	28	30.16	30.24																
22	CLR	NC			10.00		49	22	38	35	0	00	30.21	30.30																

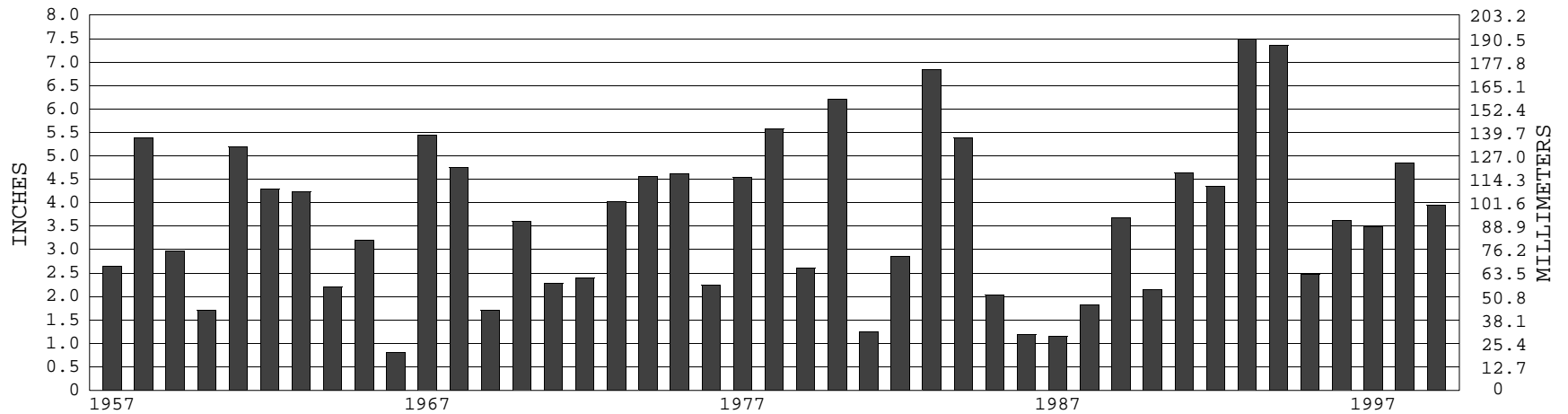
WILMINGTON, DE MARCH TEMPERATURES



+ Extreme Max. ● Mean Max. ▲ Mean × Mean Min. ◆ Extreme Min.

Long-Term (1957-1999) Mean: 42.2 1961-1990 Normal: 42.7

WILMINGTON, DE MARCH PRECIPITATION



Long-Term (1957-1999) Mean Monthly Total: 3.67

1961-1990 Normal: 3.43



**MARCH 1999
WILMINGTON, DE**

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA – National Weather Service / Department Of Transportation – Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.

DIRECTOR

NOTICE

Effective July 1, 1996, the National Weather Service & Federal Aviation Administration began using the METAR format for Hourly Observations.

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