



# FEBRUARY 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

FEBRUARY 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	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																														
01	41	18	30	-1	23	28	35	0	RA BR				0.04	30.40	30.49	3.0	18	4.8	11	19	10	20	01																																														
02	52	36	44	13			21	0	RA FG+ BR HZ				0.70	29.84	29.92	5.3	15	9.4	21	16	17	15	02																																														
03	55	35	45	14	34	41	20	0	RA BR				T	29.89	29.98	3.4	28	4.6	21	31	17	31	03																																														
04	49	34	42	11	39	42	23	0	RA BR				0.04	29.81	29.90	4.1	29	8.1	32	29	26	29	04																																														
05	46	33	40	9	18	32	25	0					0.00	30.11	30.20	14.6	30	15.1	38	30	29	30	05																																														
06	44	30	37	6	28	34	28	0	RA				0.02	29.90	29.99	2.9	21	4.4	13	16	10	15	06																																														
07	42	29	36	4	30	33	29	0	RA SN GS PL BR HZ				0.32	29.82	29.90	3.5	05	6.9	20	04	17	04	07																																														
08	41	28	35	3	31	34	30	0	RA SN PL BR UP				0.13	29.89	29.98	6.1	34	8.2	18	04	16	04	08																																														
09	49	25	37	5	30	34	28	0	BR HZ				0.00	29.98	30.07	4.6	22	5.7	20	18	16	19	09																																														
10	54	32	43	11	27	37	22	0					0.00	30.07	30.15	9.6	28	10.3	32	30	24	29	10																																														
11	55	27	41	9	31	37	24	0					0.00	30.17	30.25	5.3	15	6.9	18	14	15	16	11																																														
12	71*	34	53*	20	46	48	12	0	RA SN BR HZ SQ				0.56	29.81	29.90	7.5	21	13.8	46*	30	41*	30	12																																														
13	41	27	34	1	19	28	31	0					0.00	30.00	30.08	10.4	27	12.0	33	30	28	29	13																																														
14	36	24	30	-3	12	24	35	0	SN				T	30.20	30.28	12.3	32	13.1	31	31	25	31	14																																														
15	48	21	35	2	17	29	30	0					0.00	30.19	30.27	3.4	23	4.5	15	21	13	19	15																																														
16	57	26	42	9	26	35	23	0					0.00	30.02	30.10	3.6	17	5.2	17	16	15	17	16																																														
17	50	34	42	8	31	38	23	0	RA BR HZ				0.08	29.84	29.92	4.3	02	5.1	11	05	10	04	17																																														
18	49	35	42	8	32	39	23	0	RA				0.87	29.78	29.86	9.2	35	9.8	21	32	17	33	18																																														
19	45	30	38	4	27	33	27	0					0.00	29.85	29.94	6.6	35	7.4	17	36	15	36	19																																														
20	40	27	34	-1	21	29	31	0					0.00	29.86	29.95	9.9	32	10.8	21	30	18	30	20																																														
21	36	23	30	-5	14	25	35	0	SN				T	29.93	30.02	13.7	32	13.9	31	33	24	34	21																																														
22	31	17	24	-11	-3	18	41	0					0.00	30.16	30.25	14.0	34	14.2	29	32	23	32	22																																														
23	27	14*	21*	-14	2	18	44	0					0.00	30.37	30.46	2.9	04	5.4	16	36	13	36	23																																														
24	38	21	30	-6	19	26	35	0	SN BR				T	30.29	30.38	9.0	03	10.0	21	05	17	06	24																																														
25	42	22	32	-4	20	28	33	0	SN HZ				T	30.04	30.13	4.5	32	6.7	16	31	14	31	25																																														
26	47	28	38	2	19	31	27	0	BR HZ				0.00	29.95	30.03	12.4	29	13.0	31	28	26	28	26																																														
27	49	27	38	1	24	34	27	0	RA				T	29.95	30.04	3.2	23	5.9	13	15	10	15	27																																														
28	50	40	45	8	42	43	20	0	RA FG BR				0.75	29.45	29.53	1.5	14	10.4	26	15	22	14	28																																														
										45.9		27.8	36.9	■ ■			27.9	0.0	< MONTHLY AVERAGES		TOTALS-->		3.51	29.98	30.07	3.7	31	8.8	<- MONTHLY AVERAGES																																								
										4.0	3.0	3.5	■ ■	<----- DEPARTURE FROM NORMAL ----->										0.60	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																																												
<b>DEGREE DAYS</b>										GREATEST 24-HR PRECIPITATION: 0.94 DATE: 17-18										SEA LEVEL PRESSURE DATE TIME																																																	
MONTHLY TOTAL DEPARTURE										SEASON TO DATE TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: DATE: MINIMUM										MAXIMUM : 30.72 01 0006																																							
HEATING: 782 -103										COOLING: 0 0										GREATEST SNOW DEPTH: DATE: MINIMUM										MINIMUM : 29.33 28 2323																																							
HEATING: 0 0										COOLING: 0 0										NUMBER OF DAYS WITH →										MAXIMUM TEMP ≥ 90: 0										MINIMUM TEMP ≤ 32: 20										PRECIPITATION ≥ 0.01 INCH: 10																			
																														MAXIMUM TEMP ≤ 32: 2										MINIMUM TEMP ≤ 0: 0										PRECIPITATION ≥ 0.10 INCH: 6																			
																																								THUNDERSTORMS: 0										HEAVY FOG: 1										SNOWFALL ≥ 1.0 INCH: :									

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## WILMINGTON, DE

FEBRUARY 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													01												01	0.02	0.04		
02	0.05	T	0.05	0.03	0.07	0.15	0.12	0.01	0.07	0.10	0.03	0.01	02	0.01		T			0.02	T				T	02	0.72	0.70		
03			T	T									03												03		T		
04												T	04	0.01	0.03	T									04		0.04		
05													05												05		0.00		
06										0.01	0.01		06												06		0.02		
07													07		T	0.05	0.07	0.07	0.10	T	T			0.02	07	0.31	0.32		
08	0.09	0.03	T	T	T	0.01	T	T	0.01	T	T	T	08	T	T										08	0.14	0.13		
09													09												09		0.00		
10													10												10		0.00		
11													11												11		0.00		
12													12						0.10	0.17	0.12	0.13	0.04	T	12		0.56		
13													13												13		0.00		
14	T	T	T	T		T							14												14		T		
15													15												15		0.00		
16													16												16		0.00		
17													17	0.02	0.01							T		0.03	17		0.08		
18	0.01	0.05	0.04	0.08	0.12	0.19	0.09	0.08	0.08	0.05	0.04	0.03	18	0.01											18		0.87		
19													19												19		0.00		
20													20												20		0.00		
21										T	T		21												21		T		
22													22												22		0.00		
23													23												23		0.00		
24		T	T	T	T								24									T			24		T		
25													25					T	T		T	T			25		T		
26													26												26		0.00		
27													27							T	T	T		T	27		T		
28	T	T		T				0.04	0.19	0.20	0.01		28	0.02	T			0.05	0.03	0.01	0.06	0.10	0.03	0.01	28		0.75		

### 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	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unknown Precipitation		
Intensity (as indicated on pages 4 to 6): '+' = Heavy     ' ' = Moderate     '-' = Light			

## WILMINGTON, DE FEBRUARY 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							6.00	10.00	
02							.25	9.00	
03							4.00	10.00	
04							1.50	10.00	
05							10.00	10.00	
06							7.00	10.00	
07							1.25	10.00	
08							2.50	10.00	
09							1.50	10.00	
10							8.00	10.00	
11							9.00	10.00	
12							4.00	10.00	
13							10.00	10.00	
14							7.00	10.00	
15							10.00	10.00	
16							9.00	10.00	
17							2.50	8.00	
18							1.75	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							9.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							3.00	10.00	
25							6.00	10.00	
26							5.00	10.00	
27							7.00	10.00	
28							.50	10.00	
<b>MONTHLY AVGS</b>							5.92	9.89	
<b>SUNSHINE (MINUTES)</b>									
Total: Possible: Percent Possible:									
<b>NUMBER OF DAYS WITH: SKY CONDITION</b>									
CLR PTLY CLDY CLOUDY MISSING 28									
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25 <=3.0 >=7.0 1 9 14									





# OBSERVATIONS AT 3-HOURLY INTERVALS

# WILMINGTON, DE

FEBRUARY 1999

ILG

WBAN # 13781

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	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 Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB
SUNRISE: 0642				FEB 25				SUNSET: 1750				SUNRISE: FEB 31				SUNSET:									
01	CLR	NC				27	18	24	69	7	01	30.19	30.28												
04	CLR	NC				24	16	22	71	6	34	30.16	30.25												
07	CLR	NC				25	16	22	69	6	35	30.16	30.25												
10	CLR	NC				35	13	28	40	7	02	30.11	30.20												
13	BKN	090				39	18	32	43	5	VR	30.00	30.09												
16	OVC	050				39	22	33	50	8	23	29.92	30.01												
19	OVC	045				35	25	31	67	10	30	29.93	30.02												
22	OVC	037				33	28	31	82	8	27	29.91	30.01												
SUNRISE: 0640				FEB 26				SUNSET: 1751																	
01	OVC	045			6.00	31	26	29	82	9	30	29.90	29.99												
04	CLR	NC			6.00	30	24	28	79	13	29	29.89	29.98												
07	CLR	NC			6.00	30	23	28	75	13	29	29.94	30.03												
10	CLR	NC			10.00	39	14	31	36	17	30	29.96	30.05												
13	CLR	NC			10.00	44	15	34	31	18	30	29.93	30.02												
16	CLR	NC			10.00	46	16	35	30	17	30	29.92	30.01												
19	CLR	NC			10.00	41	18	33	39	10	27	29.96	30.05												
22	CLR	NC			10.00	36	18	30	48	6	28	29.97	30.06												
SUNRISE: 0639				FEB 27				SUNSET: 1752																	
01	CLR	NC			10.00	33	20	29	59	7	24	30.01	30.10												
04	CLR	NC			10.00	30	22	27	72	6	25	30.02	30.11												
07	CLR	NC			7.00	28	21	26	75	0	00	30.02	30.11												
10	CLR	NC			10.00	41	22	34	47	6	33	30.00	30.09												
13	CLR	NC			10.00	47	21	37	36	6	27	29.95	30.04												
16	CLR	NC			10.00	48	20	37	33	3	26	29.90	29.99												
19	OVC	060			10.00	45	24	37	44	0	00	29.88	29.97												
22	OVC	085			10.00	40	34	37	79	7	15	29.86	29.95												
SUNRISE: 0637				FEB 28				SUNSET: 1753																	
01	OVC	045			6.00	40	36	38	86	8	09	29.80	29.88												
04	OVC	031			6.00	40	36	38	86	7	10	29.72	29.80												
07	OVC	020			8.00	43	38	41	82	10	08	29.59	29.67												
10	OVC	006			1.75	48	48	48	100	14	13	29.45	29.54												
13	OVC	002			0.50	45	45	45	100	13	17	29.35	29.44												
16	OVC	006			1.50	50	50	50	100	7	25	29.28	29.37												
19	OVC	013			4.00	44	43	44	96	13	30	29.28	29.37												
22	OVC	045			7.00	43	41	42	93	10	32	29.26	29.34												
SUNRISE:				FEB 29				SUNSET:																	
SUNRISE:				FEB 30				SUNSET:																	

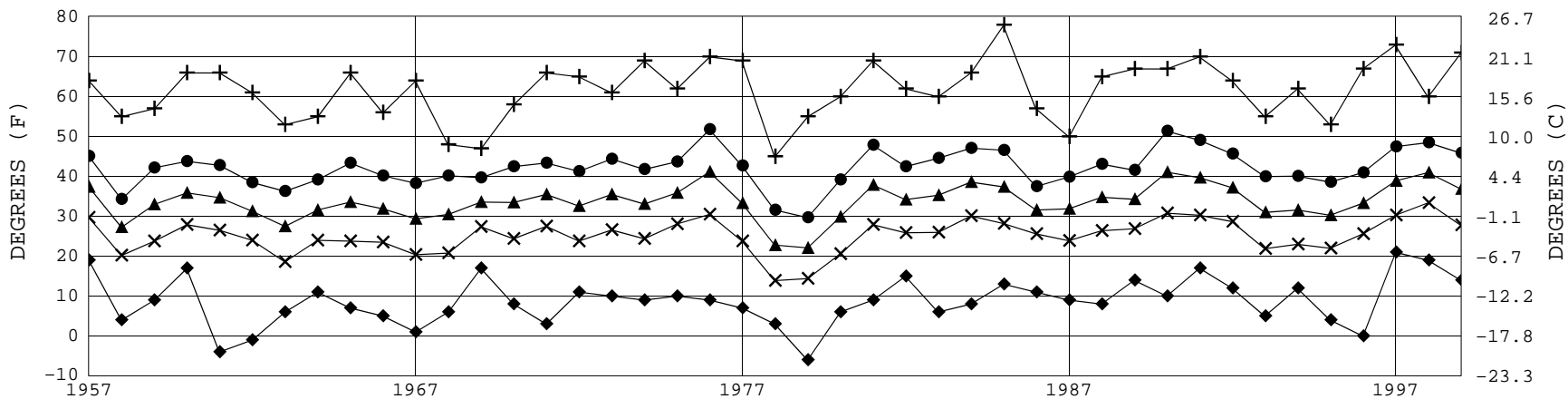
## 3-HOURLY OBSERVATION NOTES

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. Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected. & = Original observation contained additional weather elements. See page 3 for additional notes.

## SUMMARY BY HOUR

HOUR (LST)	AVERAGES											RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION	
							STATION	SEA LEVEL					
01			34	25	30	71	30.01	30.10	8.43	8	4	31	
02			33	25	30	72	30.01	30.10	8.31	7	3	33	
03			33	25	30	74	30.00	30.09	7.82	7	4	34	
04			32	24	30	74	30.00	30.09	7.92	7	4	33	
05			32	24	29	75	30.00	30.09	8.21	8	4	34	
06			31	24	29	75	30.01	30.10	8.19	8	4	33	
07			32	24	29	73	30.01	30.10	8.32	7	4	32	
08			33	24	30	71	30.02	30.11	7.96	8	4	31	
09			36	25	32	64	30.02	30.11	7.79	10	4	32	
10			39	25	34	59	30.01	30.10	7.96	10	4	31	
11			40	24	35	55	30.01	30.10	8.31	11	4	28	
12			42	25	35	53	29.99	30.08	8.46	10	3	30	
13			43	25	36	53	29.96	30.05	8.58	10	4	28	
14			44	25	37	51	29.94	30.03	8.80	11	5	28	
15			44	25	37	50	29.93	30.02	8.53	10	4	28	
16			44	25	37	50	29.93	30.02	8.59	10	5	29	
17			43	24	36	51	29.94	30.03	8.55	10	4	29	
18			40	24	35	56	29.95	30.04	8.68	9	5	31	
19			39	24	34	59	29.96	30.05	8.89	8	4	31	
20			37	25	33	64	29.96	30.05	8.89	8	4	31	
21			36	25	32	65	29.96	30.05	8.96	8	4	31	
22			36	24	32	66	29.97	30.06	8.82	7	4	31	
23			35	24	31	67	29.97	30.06	8.71	7	4	30	
24			35	25	32	69	29.97	30.06	8.50	8	5	31	

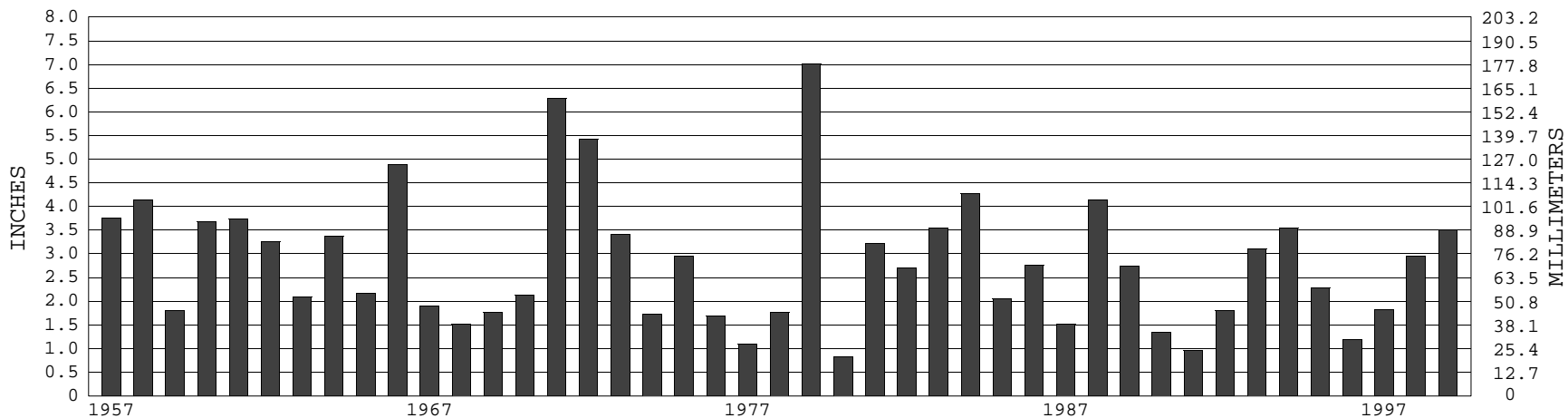
### WILMINGTON, DE FEBRUARY TEMPERATURES



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

Long-Term (1957-1999) Mean: 33.7      1961-1990 Normal: 33.4

### WILMINGTON, DE FEBRUARY PRECIPITATION



Long-Term (1957-1999) Mean Monthly Total: 2.84

1961-1990 Normal: 2.91



**FEBRUARY 1999  
WILMINGTON, DE**

# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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DIRECTOR

## NOTICE

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

We welcome your questions or comments, please contact us at  
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828–271–4010(TDD)  
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