



# FEBRUARY 2003

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# WILMINGTON, DE

NEW CASTLE COUNTY AP (ILG)  
 Lat: 39° 40' N Long: 75° 36' W Elev (Ground): 92 Feet  
 Time Zone: EASTERN WBAN: 13781 ISSN #: 0198-117X

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	36	34	35	3	32	34	30	0	RA FG BR HZ	T		0.0	0.20	29.75	29.84	7.3	02	10.7	21	04	18	04	01	
02	43	33	38	6	29	34	27	0		0		0.0	0.00	29.73	29.82	14.0	29	14.4	38	28	29	29	02	
03	46	29	38	6	27	33	27	0		0		0.0	0.00	29.81	29.90	2.7	21	7.0	20	29	16	29	03	
04	47*	35	41*	9	30	36	24	0	RA BR	0		0.0	0.36	29.49	29.57	9.3	26	11.9	48*	28	40*	27	04	
05	36	21	29	-3	13	25	36	0		0		0.0	0.00	30.00	30.09	14.6	28	15.1	35	25	28	28	05	
06	31	18	25	-7	16	23	40	0	SN BR	0		0.8	0.08	30.27	30.36	2.3	16	4.2	14	15	13	16	06	
07	36	26	31	-2	25	32	34	0	RA SN BR HZ	6		6.0	0.40	29.87	29.96	5.8	31	8.7	20	29	17	30	07	
08	30	15	23	-10	6	24	42	0	RA	6		0.0	T	30.06	30.14	8.0	27	9.3	25	31	22	29	08	
09	37	7*	22	-11	14	23	43	0		4		0.0	0.00	30.02	30.11	5.1	25	5.6	26	27	22	27	09	
10	34	28	31	-2	26	30	34	0	SN BR	3		0.5	0.09	29.70	29.78	3.7	21	6.0	24	27	20	27	10	
11	33	18	26	-7	11	21	39	0	SN BR	3		0.1	0.01	29.82	29.91	6.0	28	9.4	38	29	31	29	11	
12	36	18	27	-6	9	21	38	0	RA SN BLSN	3		0.0	T	29.79	29.87	12.4	27	14.0	41	27	37	28	12	
13	28	14	21	-13	5	21	44	0		3		0.0	0.00	29.95	30.03	10.9	28	11.6	36	29	31	28	13	
14	35	10	23	-11	13	26	42	0		3		0.0	0.00	30.11	30.19	1.5	24	3.0	17	28	16	28	14	
15	31	19	25	-9	15	23	40	0	SN BR	3		2.0	0.07	30.21	30.30	12.2	02	12.5	26	03	20	03	15	
16	19	11	15*	-19	7	13	50	0	SN FG+ FZFG BR	5		17.0	0.95	30.44	30.52	15.6	03	15.8	37	04	31	04	16	
17	28	17	23	-11	20	22	42	0	RA FZRA SN BR UP BLSN	22		3.0	0.39	29.98	30.07	19.9	03	20.3	39	03	32	05	17	
18	32	21	27	-8	21	24	38	0	SN BR	25		0.2	0.02	30.03	30.11	5.8	29	6.7	21	30	17	29	18	
19	35	13	24	-11	25	27	41	0	BR	19		0.0	0.00	30.18	30.26	3.0	17	3.8	14	15	13	15	19	
20	43	25	34	-1	26	32	31	0	HZ	16		0.0	0.00	30.18	30.27	5.2	27	5.8	16	33	14	31	20	
21	43	20	32	-4	29	31	33	0	RA BR UP HZ	11		0.0	0.26	30.02	30.11	1.9	15	3.0	10	15	9	15	21	
22	39	34	37	1	36	36	28	0	RA FG+ BR UP VCTS	8		0.0	2.15	29.55	29.63	9.5	04	10.2	24	06	21	06	22	
23	44	31	38	2	28	34	27	0	RA DZ FG+ BR	4		0.0	0.13	29.34	29.42	11.9	28	15.0	45	30	36	27	23	
24	39	25	32	-4	22	28	33	0	SN HZ	3		T	T	30.05	30.13	2.7	25	8.2	28	30	22	29	24	
25	34	22	28	-9	14	24	37	0		3		0.0	0.00	30.28	30.37	10.3	30	11.2	26	26	22	30	25	
26	26	20	23	-14	13	20	42	0	SN BR	2		T	T	30.28	30.37	10.1	05	10.3	20	06	16	06	26	
27	31	24	28	-9	21	26	37	0	SN BR	2		0.7	0.04	30.10	30.18	12.2	04	12.4	23	04	17	05	27	
28	37	28	33	-5	25	30	32	0	SN BR	4		1.3	0.06	30.04	30.13	4.2	02	6.7	21	05	15	02	28	

35.3	22.0	28.7	■ ■	19.9	26.9	36.1	0.0	< MONTHLY AVERAGES	TOTALS->			31.6	5.21	29.97	30.05	3.9	32	9.8	<- MONTHLY AVERAGES
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-7.2	-3.8	-5.5	■ ■	->-----DEPARTURE FROM NORMAL-----<						2.40	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
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<b>DEGREE DAYS</b>								GREATEST 24-HR PRECIPITATION: 2.35 DATE :21-22				SEA LEVEL PRESSURE				DATE		TIME					
MONTHLY TOTAL DEPARTURE				SEASON TO DATE TOTAL DEPARTURE				GREATEST 24-HR SNOWFALL: 17.0 DATE :16				MAXIMUM				: 30.64		16 0851					
HEATING: 1011 147				4047 369				GREATEST SNOW DEPTH: 25 DATE :18				MINIMUM				: 29.11		23 0751					
COOLING: 0 0				0 0				NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 24				PRECIPITATION ≥ 0.01 INCH : 15			
												MAXIMUM TEMP ≤ 32 : 9				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 8			
												THUNDERSTORMS : 0				HEAVY FOG : 3				SNOWFALL ≥ 1.0 INCH : 5			

FEBRUARY 2003  
WILMINGTON, DE

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## WILMINGTON, DE

FEBRUARY 2003

ILG

WBAN # 13781

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	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					0.01	0.01			T	0.08	0.01		01		T	0.03	0.04	0.01	0.01	T	T	T				01		0.20	
02													02													02		0.00	
03													03													03		0.00	
04			T					T		0.04	0.14	0.06	0.09	04	0.03											04		0.36	
05														05												05		0.00	
06														06										0.01	0.04	0.03	06		0.08
07	0.03	0.05	0.04	0.04	0.04	0.05	0.08	0.04	0.02	0.01	T	T	07	T	T											07		0.40	
08									T	T			08													08		T	
09													09													09		0.00	
10											T	T	10	0.01	0.02	0.02	0.02	0.02							10		0.09		
11													11							0.01	T				11		0.01		
12								T	T				12												12		T		
13													13												13		0.00		
14													14												14		0.00		
15			T	0.01	0.03	0.02	0.01	T	T	T			15												15		0.07		
16								T	0.02	0.03	0.01	0.01	16	0.02	0.03	0.02	0.02	0.02	0.02	0.01	0.03	0.03	0.03	0.05	16	0.37	0.95		
17	0.04	0.05	0.05	0.04	0.03	0.04	0.01	0.02	0.02	0.05	0.04	0.01	17	T	T										17	0.40	0.39		
18			T	T	T	0.01	0.01	T	T	T			18	T											18		0.02		
19													19												19		0.00		
20													20												20		0.00		
21													21			0.01	0.03	0.02	0.04	0.07	0.05	0.04	T		21		0.26		
22	T	T	0.01		T		0.04	0.06	0.11	0.22	0.14	0.39	22	0.65	0.28	0.15	0.07		0.02	T	T		T		22	2.14	2.15		
23		0.01		0.01	0.01		0.01		T	0.01	0.09	0.03	23	T	T										23	0.17	0.13		
24													24	T	T										24		T		
25													25												25		0.00		
26													26	T	T	T	T	T	T	T	T	T	T	T	26		T		
27	T	T											27												27	0.03	0.04		
28	0.02	T	0.01	0.01	0.01	T	T	T	T	T	T		28										0.01	0.02	28	0.05	0.06		

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.11	.16	.21	.27	.39	.55	.66	.86	.98	1.07	1.21	1.33
Ending Date	22	22	22	22	22	22	22	22	22	22	22	22
Ending Time (Hour/Min)	1200	1205	1203	1215	1224	1221	1250	1248	1301	1311	1345	1403

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 1971–2000

### 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 2003

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 to saturation at constant pressure by evaporation of water into it.

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

### ADDITIONAL NOTES:

**Note:** 2002 LCD Annual, the element "Normal Dry Bulb" was not updated using the 1971–2000 Normals. Correction will be made in the 2003 LCD Annual.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							.25	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							1.00	10.00	
05							10.00	10.00	
06							1.00	10.00	
07							.75	10.00	
08							10.00	10.00	
09							8.00	10.00	
10							.75	10.00	
11							2.50	10.00	
12							9.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							1.25	10.00	
16							.25	10.00	
17							.75	10.00	
18							2.00	10.00	
19							2.50	10.00	
20							6.00	10.00	
21							1.50	10.00	
22							.00	10.00	
23							.25	10.00	
24							1.00	10.00	
25							8.00	10.00	
26							1.25	10.00	
27							.75	10.00	
28							1.25	10.00	
<b>MONTHLY AVGS</b>							4.25	10.00	
<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 4            17        10									





# OBSERVATIONS AT 3-HOURLY INTERVALS

# WILMINGTON, DE

FEBRUARY 2003

ILG

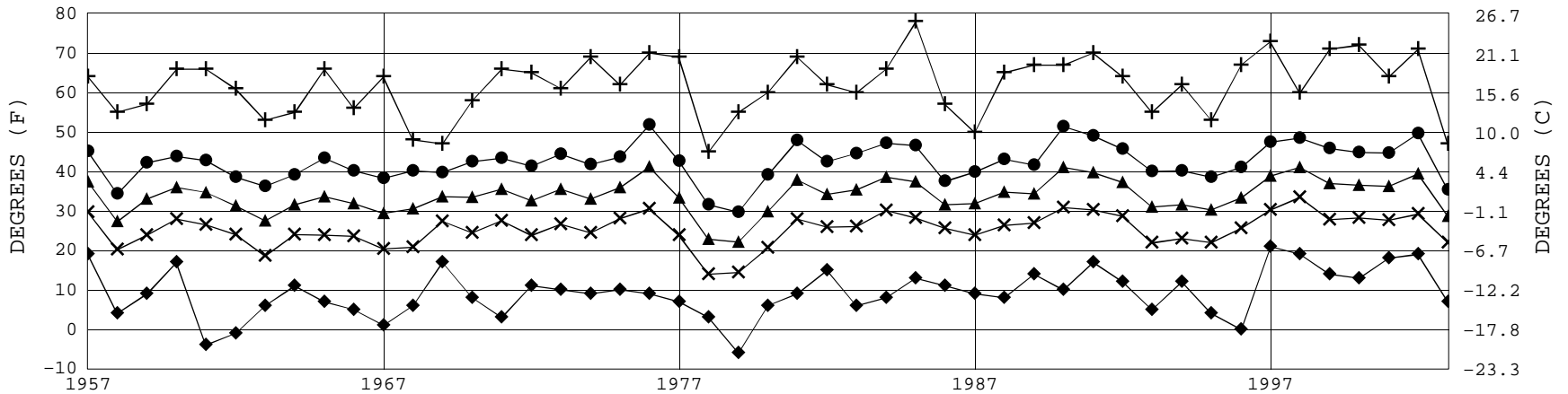
WBAN # 13781

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				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	RELATIVE HUMIDITY (PCT)	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG
SUNRISE: 0642				FEB 25				SUNSET: 1750				SUNRISE: FEB 31				SUNSET:									
01	BKN	043			8.00	33	24	30	70	6	28	30.10	30.19												
04	SCT	NC			10.00	30	15	25	54	16	30	30.19	30.28												
07	CLR	NC			10.00	27	13	23	55	7	30	30.26	30.35												
10	CLR	NC			10.00	29	13	24	51	16	31	30.32	30.41												
13	CLR	NC			10.00	30	14	25	51	15	28	30.30	30.39												
16	CLR	NC			10.00	30	11	24	45	13	29	30.28	30.37												
19	CLR	NC			10.00	27	12	23	53	8	30	30.32	30.41												
22	CLR	NC			10.00	24	11	20	57	5	32	30.35	30.44												
SUNRISE: 0640				FEB 26				SUNSET: 1751				3-HOURLY OBSERVATION NOTES													
01	CLR	NC			10.00	22	6	18	50	7	04	30.32	30.42	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	21	4	17	47	14	06	30.32	30.42	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.											
07	OVC	100			10.00	21	7	17	54	12	04	30.35	30.44	NC= No ceiling detected.											
10	FEW	NC			10.00	23	9	19	55	13	05	30.33	30.42	& = Original observation contained additional weather elements.											
13	OVC	024			3.00	25	12	21	58	3	VR	30.28	30.37	See page 3 for additional notes.											
16	OVC	014			2.50	24	19	23	81	12	04	30.24	30.33												
19	OVC	028			6.00	23	19	22	85	10	04	30.23	30.32												
22	OVC	055			10.00	24	20	23	84	13	04	30.22	30.31												
SUNRISE: 0639				FEB 27				SUNSET: 1752																	
01	OVC	050			9.00	24	19	23	81	10	04	30.19	30.28												
04	OVC	045			10.00	25	20	23	81	7	03	30.15	30.24												
07	OVC	080			10.00	26	20	24	78	13	05	30.14	30.24												
10	OVC	055			10.00	27	19	24	72	12	04	30.16	30.25												
13	OVC	050			10.00	29	18	25	64	16	03	30.11	30.20												
16	OVC	022			10.00	31	19	27	61	15	04	30.05	30.14												
19	OVC	043			9.00	31	23	28	72	14	05	30.01	30.10												
22	OVC	017			3.00	31	27	29	85	13	04	30.00	30.09												
SUNRISE: 0637				FEB 28				SUNSET: 1753																	
01	OVC	013			2.50	30	28	29	92	9	01	29.96	30.05												
04	OVC	010			1.75	29	28	29	96	7	35	29.95	30.04												
07	OVC	043			3.00	28	25	27	88	12	02	29.98	30.07												
10	OVC	017			5.00	30	24	28	79	12	03	30.05	30.14												
13	FEW	NC			10.00	35	24	31	64	3	VR	30.03	30.12												
16	OVC	065			10.00	36	23	31	59	0	00	30.03	30.12												
19	BKN	049			10.00	34	24	30	67	3	15	30.09	30.18												
22	OVC	041			9.00	33	25	30	72	5	25	30.14	30.23												
SUNRISE:				FEB 29				SUNSET:																	
SUNRISE:				FEB 30				SUNSET:																	

## 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)	DIRECTION	SPEED	DIRECTION
							STATION	SEA LEVEL					
01			29	20	26	72	29.97	30.06	8.03	9	4	33	
02			28	19	26	72	29.96	30.05	7.96	9	4	34	
03			28	19	25	74	29.96	30.05	7.67	8	4	34	
04			27	19	25	75	29.95	30.04	7.37	8	4	33	
05			27	19	25	75	29.96	30.05	7.34	9	3	35	
06			27	19	25	76	29.96	30.05	7.45	8	3	35	
07			26	19	24	76	29.97	30.06	7.00	8	3	34	
08			27	20	25	76	29.98	30.07	6.58	8	4	34	
09			29	19	26	70	29.99	30.08	6.84	9	5	33	
10			31	20	27	67	29.98	30.07	7.30	11	5	33	
11			32	19	28	64	29.97	30.06	7.85	12	4	33	
12			33	20	29	62	29.96	30.05	7.76	12	6	31	
13			34	20	29	61	29.94	30.03	8.22	13	7	30	
14			34	21	30	62	29.93	30.02	8.43	13	6	30	
15			34	20	30	60	29.93	30.02	8.44	13	5	30	
16			33	21	29	62	29.93	30.02	8.55	12	6	30	
17			33	20	29	61	29.94	30.03	8.54	11	4	30	
18			32	20	28	63	29.95	30.04	8.75	10	3	30	
19			31	20	28	66	29.96	30.05	8.88	8	3	30	
20			31	20	28	68	29.97	30.06	8.54	8	3	30	
21			30	21	27	70	29.98	30.07	8.66	9	3	31	
22			29	20	26	72	29.98	30.07	8.05	8	3	32	
23			29	20	26	73	29.98	30.07	8.16	8	3	32	
24			28	20	26	71	29.97	30.07	7.97	8	3	31	

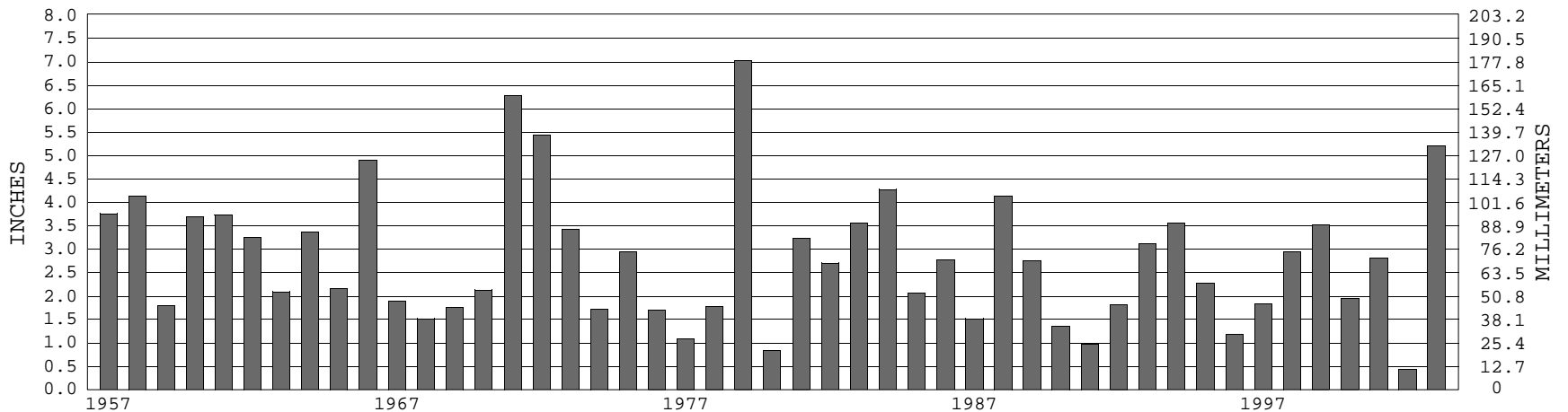
### WILMINGTON, DE FEBRUARY TEMPERATURES



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

Long-Term (1957-2003) Mean: 33.9      1961-1990 Normal: 34.2

### WILMINGTON, DE FEBRUARY PRECIPITATION



Long-Term (1957-2003) Mean Monthly Total: 2.82

1961-1990 Normal: 2.81



FEBRUARY 2003

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.*

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