



# JANUARY 2000

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# RICHMOND, VA

R.E.BYRD INTERNATIONAL AP. (RIC)  
 Lat: 37°30' N Long: 77°19' W Elev (Ground): 165 Feet  
 Time Zone: EASTERN WBAN: 13740 ISSN #:0198-537X

JANUARY 2000  
RICHMOND, VA

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	66	28	47	10	37	42	18	0	BR	0		0.0	0.00	30.06	30.25	4.5	19	4.8	17	20	15	20	01																															
02	69	41	55	18	47	51	10	0		0		0.0	0.00	30.00	30.19	9.4	20	9.8	26	23	23	23	02																															
03	74*	53	64*	28	55	58	1	0	BR	0		0.0	0.00	29.92	30.11	12.9	20	13.4	30	21	25	20	03																															
04	73	52	63	27	55	59	2	0	RA FG BR SQ	0		0.0	0.75	29.64	29.83	15.5	21	18.9	46	27	33	21	04																															
05	53	30	42	6	23	35	23	0		0		0.0	0.00	30.06	30.26	9.1	33	10.7	29	36	23	33	05																															
06	50	25	38	2	28	34	27	0		0		0.0	0.00	30.30	30.50	3.4	17	3.9	15	18	11	17	06																															
07	55	31	43	7	27	38	22	0		0		0.0	0.00	30.11	30.31	6.6	28	7.8	23	28	18	31	07																															
08	49	25	37	1	25	34	28	0	RA	0		0.0	T	30.15	30.35	3.1	17	4.1	15	16	11	22	08																															
09	48	33	41	5	38	41	24	0	RA DZ BR	0		0.0	0.24	29.90	30.10	4.0	19	4.3	13	17	10	18	09																															
10	62	44	53	17	46	50	12	0	RA DZ FG+ BR	0		0.0	0.46	29.54	29.73	7.9	21	11.7	31	15	25	23	10																															
11	64	41	53	17	27	42	12	0		0		0.0	0.00	29.65	29.84	10.0	26	13.0	39	25	31	25	11																															
12	57	27	42	6	21	35	23	0		0		0.0	0.00	30.00	30.19	4.0	20	5.8	14	29	11	22	12																															
13	69	33	51	15	30	41	14	0		0		0.0	0.00	29.75	29.95	9.1	29	16.7	48*	31	38*	31	13																															
14	35	23	29	-6	7	23	36	0		0		0.0	0.00	30.39	30.59	11.3	34	11.5	25	33	22	33	14																															
15	38	15	27	-8	12	24	38	0	SN	0		T	T	30.44	30.64	6.0	18	6.3	22	19	17	19	15																															
16	57	36	47	12	24	37	18	0	SN GS	0		T	T	29.98	30.17	6.0	25	13.7	37	01	29	36	16																															
17	36	21	29	-6	-2	20	36	0		0		0.0	0.00	30.23	30.42	13.0	36	13.6	36	01	29	01	17																															
18	26	19	23	-12	4	18	42	0	SN BR	0		T	T	29.95	30.15	3.5	03	3.8	18	02	15	02	18																															
19	40	20	30	-5	20	27	35	0	SN BR	0		T	T	29.79	29.99	3.9	24	5.7	21	28	16	27	19																															
20	42	28	35	0	23	30	30	0	SN PL FG+ FZFG BR	3		3.0	0.17	29.45	29.64	7.7	29	14.6	39	31	32	30	20																															
21	31	15	23	-12	1	18	42	0		0		0.0	0.00	29.80	30.00	10.8	31	11.5	31	28	24	30	21																															
22	30	9	20	-15	4	17	45	0		0		0.0	0.00	30.06	30.26	2.4	14	3.8	10	22	8	14	22																															
23	29	25	27	-8	24	26	38	0	SN BR	1		1.0	0.08	29.94	30.14	2.3	04	5.8	17	18	14	18	23																															
24	40	27	34	-1	26	30	31	0	SN GS PL BR	T		T	T	29.80	30.00	12.5	02	13.1	37	01	28	01	24																															
25	33	27	30	-6	25	27	35	0	SN FG+ FZFG BR BLSN	6		11.0	1.10	29.31	29.50	16.1	34	17.8	45	35	36	34	25																															
26	33	23	28	-8	12	23	37	0		6		0.0	0.00	29.68	29.88	8.7	33	9.1	24	33	20	34	26																															
27	29	11	20	-16	4	17	45	0		5		0.0	0.00	30.05	30.25	8.7	31	9.2	25	35	21	32	27																															
28	34	-1*	17*	-19	2	14	48	0		4		0.0	0.00	30.33	30.53	3.4	31	4.4	22	28	16	31	28																															
29	37	10	24	-12	11	22	41	0		4		0.0	0.00	30.38	30.58	4.4	03	5.1	17	01	14	01	29																															
30	32	27	30	-6	27	29	35	0	RA FZRA SN PL BR	4		0.2	1.16	30.05	30.25	3.7	36	6.4	11	33	10	33	30																															
31	35	26	31	-5	27	30	34	0	BR	3		0.0	0.00	29.81	30.01	6.8	26	7.7	14	28	13	25	31																															
46.0											26.6	36.3	■ ■	22.9	32.0	28.5	0.0	< MONTHLY AVERAGES		TOTALS-->		15.2	3.96	29.95	30.15	3.1	29	9.3	<- MONTHLY AVERAGES																									
0.3											0.9	0.6	■ ■	<----- DEPARTURE FROM NORMAL ----->											0.72	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																												
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 1.16 DATE :30											SEA LEVEL PRESSURE DATE TIME																																
MONTHLY TOTAL DEPARTURE											GREATEST 24-HR SNOWFALL: 11.0 DATE :25											MAXIMUM : 30.76 15 0654																																
SEASON TO DATE TOTAL DEPARTURE											GREATEST SNOW DEPTH: 6 DATE :26+											MINIMUM : 29.33 25 1254																																
HEATING: 882 -26											NUMBER OF DAYS WITH →											MAXIMUM TEMP ≥ 90: 0											MINIMUM TEMP ≤ 32: 23											PRECIPITATION ≥ 0.01 INCH : 7										
COOLING: 0 0																						MAXIMUM TEMP ≤ 32 : 6											MINIMUM TEMP ≤ 0 : 1											PRECIPITATION ≥ 0.10 INCH : 6										
																						THUNDERSTORMS : 0											HEAVY FOG : 3											SNOWFALL ≥ 1.0 INCH : 3										

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## RICHMOND, VA

JANUARY 2000

RIC

WBAN # 13740

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													01												01		0.00		
02													02												02		0.00		
03													03												03		0.00		
04													04			T	T	0.31	0.22	0.20	0.02	T	T	T	04		0.75		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08							T	T				08		T		
09													09	0.05	0.04	0.07	0.04	0.03		T	T				09		0.24		
10	T		0.01		T	T	0.06	0.07	0.03	0.20	0.08	T	10	0.01	T	T					T	0.01	T	T	10		0.46		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14													14												14		0.00		
15													15											T	T	15		T	
16	T	T	T										16												16		T		
17													17												17		0.00		
18													18			T	T	T	T						18		T		
19	T	T	T										19												19		T		
20		0.01	0.06	0.02	T	T	0.01	T	0.01				20												20	0.11	0.17		
21													21												21		0.00		
22													22												22		0.00		
23	T	T	T	T	T	T	T		T	0.03	0.03	0.02	23	T	T	T								23		0.08			
24													24											T	T	24		T	
25	0.04	0.04	0.04	0.01	0.02	0.03	0.01	0.01	0.01	0.01	0.01	T	25	0.01	T	T	T	T	0.01	T	T	T			25	0.25	1.10		
26													26												26		0.00		
27													27												27		0.00		
28													28												28		0.00		
29													29												29		0.00		
30			0.02	T	0.01	T	T	T	T				30	0.13	0.15	0.13	0.28	0.20	0.11	0.09	0.03				30		1.16		
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

## RICHMOND, VA JANUARY 2000

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:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							.75	10.00	
02							7.00	10.00	
03							5.00	10.00	
04							.50	10.00	
05							10.00	10.00	
06							8.00	10.00	
07							10.00	10.00	
08							7.00	10.00	
09							1.00	10.00	
10							.25	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							4.00	10.00	
19							6.00	10.00	
20							<.25	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							.75	10.00	
24							3.00	10.00	
25							<.25	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							9.00	10.00	
30							1.75	10.00	
31							6.00	10.00	
MONTHLY AVGS							6.50	10.00	
<b>SUNSHINE (MINUTES)</b>									
Total:		Possible:		Percent Possible:					
<b>NUMBER OF DAYS WITH:</b>									
<b>SKY CONDITION</b>									
CLR	PTLY CLDY	CLOUDY	MISSING						
				31					
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25		<=3.0		>=7.0					
2		8		18					





# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

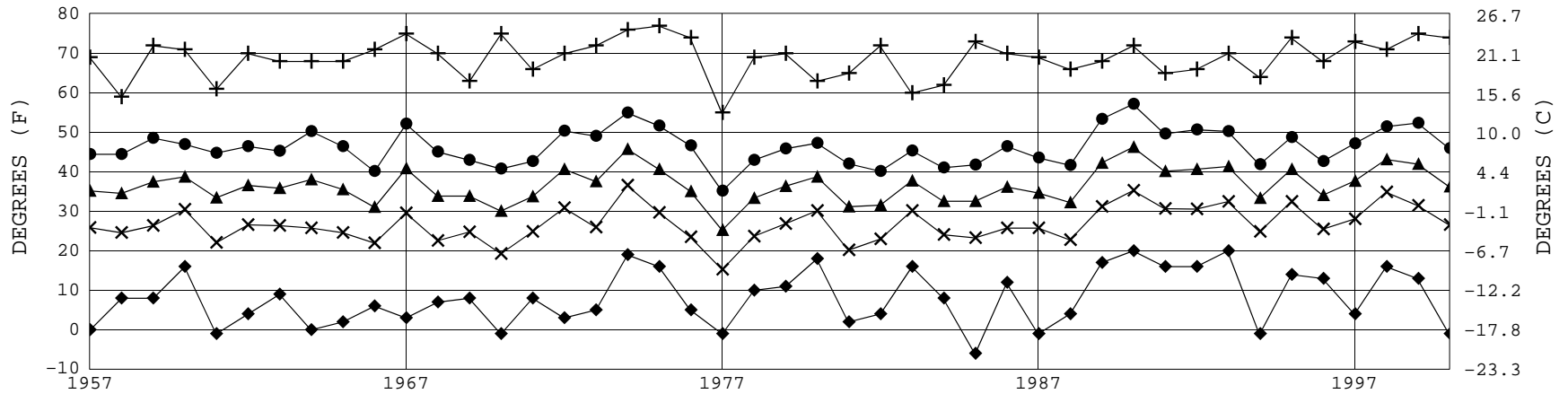
JANUARY 2000

RIC

WBAN # 13740

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	STATION	SEA LEVEL
SUNRISE: 0718 JAN 25 SUNSET: 1725											SUNRISE: 0714 JAN 31 SUNSET: 1732																
01	OVC	003		0.25	SN FZFG	30	28	29	92	22	01	29.49	29.69	01	OVC	005		8.00	30	29	30	96	7	30	29.77	29.97	
04	OVC	011		0.25	+SN FZFG	29	28	29	96	20	36	29.37	29.57	04	OVC	005		9.00	30	29	30	96	6	26	29.76	29.96	
07	OVC	016		0.75	SN FZFG	28	26	27	92	25	34	29.28	29.47	07	BKN	050		6.00	BR	29	28	29	96	0	00	29.77	29.97
10	OVC	012		0.50	+SN BLSN	27	26	27	96	24	34	29.21	29.40	10	CLR	NC		10.00		33	28	31	82	12	27	29.83	30.03
13	OVC	013		0.50	SN BLSN	28	25	27	88	16	33	29.13	29.33	13	SCT	NC		10.00		34	27	31	76	14	28	29.81	30.01
16	OVC	016		1.50	-SN BLSN	30	27	29	88	15	30	29.19	29.39	16	FEW	NC		10.00		34	25	31	70	8	24	29.79	29.98
19	OVC	050		5.00	-SN BLSN	29	25	28	85	13	32	29.32	29.52	19	CLR	NC		10.00		30	27	29	88	6	21	29.84	30.04
22	OVC	095		10.00		29	19	26	66	9	30	29.43	29.63	22	CLR	NC		9.00		28	26	27	92	5	23	29.87	30.06
SUNRISE: 0718 JAN 26 SUNSET: 1726											3-HOURLY OBSERVATION NOTES																
01	OVC	075		10.00		29	13	24	51	7	29	29.50	29.70	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	OVC	070		10.00		27	12	23	53	7	32	29.53	29.73	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.													
07	BKN	075		10.00		23	12	20	63	7	36	29.62	29.82	NC = No ceiling detected.													
10	OVC	075		10.00		25	10	21	53	7	01	29.71	29.91	& = Original observation contained additional weather elements.													
13	SCT	NC		10.00		30	12	25	47	14	33	29.67	29.87	See page 3 for additional notes.													
16	BKN	200		10.00		32	13	26	45	13	34	29.70	29.90														
19	SCT	NC		10.00		28	12	23	51	10	34	29.77	29.97														
22	BKN	120		10.00		25	12	21	58	7	32	29.83	30.03														
SUNRISE: 0717 JAN 27 SUNSET: 1727											SUMMARY BY HOUR																
01	CLR	NC		10.00		22	10	19	60	7	30	29.85	30.05	AVERAGES													
04	CLR	NC		10.00		19	8	16	62	7	31	29.91	30.11	RESULTANT WIND (MPH)													
07	CLR	NC		10.00		16	6	14	65	5	32	29.99	30.19	HOUR (LST)													
10	CLR	NC		10.00		22	5	18	48	12	34	30.07	30.28	CEILOMETER													
13	CLR	NC		10.00		26	4	20	38	15	29	30.06	30.26	EFF CLD AMT													
16	CLR	NC		10.00		29	2	22	31	14	32	30.06	30.26	DRY BULB													
19	CLR	NC		10.00		24	-2	18	32	8	31	30.14	30.34	DEW POINT													
22	CLR	NC		10.00		17	1	14	49	5	32	30.21	30.41	WET BULB													
SUNRISE: 0716 JAN 28 SUNSET: 1728											PRESSURE (INCHES, HG)																
01	CLR	NC		10.00		10	1	8	67	0	00	30.23	30.43	STATION													
04	CLR	NC		10.00		1	-4	0	79	3	20	30.26	30.47	SEA LEVEL													
07	CLR	NC		10.00		0	-5	-1	79	0	00	30.33	30.53	VISIBILITY (MILES)													
10	FEW	NC		10.00		15	2	12	56	8	22	30.40	30.60	WIND SPEED (MPH)													
13	SCT	NC		10.00		29	3	22	33	12	30	30.32	30.52	SPEED													
16	BKN	250		10.00		34	3	25	27	12	29	30.29	30.49	DIRECTION													
19	FEW	NC		10.00		27	5	21	39	0	00	30.35	30.55														
22	CLR	NC		10.00		24	4	19	42	6	36	30.39	30.60														
SUNRISE: 0715 JAN 29 SUNSET: 1729																											
01	CLR	NC		10.00		21	5	17	50	6	33	30.40	30.60														
04	CLR	NC		10.00		17	6	14	62	6	01	30.40	30.60														
07	CLR	NC		10.00		18	6	15	60	7	04	30.41	30.61														
10	CLR	NC		10.00		27	11	22	51	13	02	30.45	30.65														
13	CLR	NC		10.00		32	13	26	45	6	33	30.38	30.58														
16	FEW	NC		9.00		35	15	29	44	6	02	30.34	30.53														
19	SCT	NC		10.00		30	14	25	51	0	00	30.34	30.54														
22	OVC	180		10.00		26	15	23	63	0	00	30.33	30.53														
SUNRISE: 0715 JAN 30 SUNSET: 1731																											
01	OVC	075		10.00		28	20	25	72	6	22	30.32	30.52														
04	OVC	050		3.00	-SN BR	27	25	26	92	6	23	30.28	30.48														
07	OVC	060		10.00		27	24	26	89	6	06	30.25	30.45														
10	OVC	034		10.00		28	23	26	81	6	03	30.19	30.38														
13	OVC	013		1.75	FZRA BR	30	28	29	92	6	01	30.03	30.22														
16	OVC	006		1.75	FZRA BR	31	30	31	96	9	35	29.93	30.13														
19	OVC	006		2.00	-FZRA BR	32	30	31	92	6	34	29.84	30.04														
22	OVC	006		10.00		31	30	31	96	5	35	29.80	30.00														

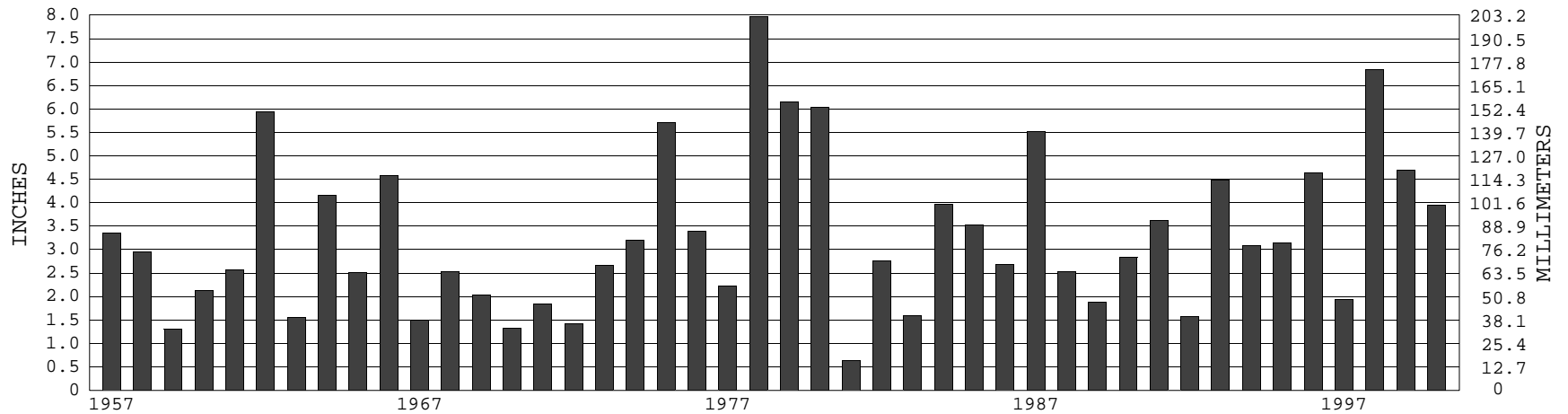
### RICHMOND, VA JANUARY TEMPERATURES



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

Long-Term (1957-2000) Mean: 36.6      1961-1990 Normal: 35.7

### RICHMOND, VA JANUARY PRECIPITATION



Long-Term (1957-2000) Mean Monthly Total: 3.30

1961-1990 Normal: 3.24



**JANUARY 2000  
RICHMOND, VA**

# 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.

We welcome your questions or comments, please contact us at  
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