



AUGUST 1996

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): 164 Feet
 Time Zone: EASTERN WBAN: 13740 ISSN #:0198-537X

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																																																																						
										DEPTH	WATER EQUIV	SNOW-FALL	WATER EQUIV						5-SEC	2-MIN	SPEED	DIR	SPEED		DIR																																																																
01	77	67	72	-6	70	70	0	7	RA FG BR				1.16	29.77	29.97	4.6	19	7.0	24	24	20	23	01																																																																		
02	84	65	75	-3			0	10	RA FG+ BR HZ				T	29.80	30.00	3.6	13	4.7	15	13	13	13	02																																																																		
03	84	70	77	-1	70	71	0	12	RA BR				T	29.86	30.06	5.3	06	6.0	17	06	15	05	03																																																																		
04	85	68	77	-1	69	71	0	12	RA FG+ BR				T	29.98	30.18	5.8	05	5.4	14	09	11	08	04																																																																		
05	84	66	75	-3	67	70	0	10	FG+ BR				0.00	30.03	30.23	5.3	04	4.4	15	06	11	07	05																																																																		
06	85	69	77	-1	69	71	0	12	BR HZ				0.00	30.02	30.22	3.7	12	4.8	16	11	13	10	06																																																																		
07	84	66	75	-3	67	69	0	10	BR HZ				0.00	30.00	30.20	5.3	12	5.4	15	12	11	12	07																																																																		
08	85	63	74	-4	64	68	0	9	FG+ BR HZ				0.00	29.94	30.14	4.0	15	3.9	14	15	11	15	08																																																																		
09	76	66	71	-7	68	69	0	6	RA BR				0.32	29.82	30.02	5.3	19	5.5	16	22	13	21	09																																																																		
10	82	63	73	-5	62	66	0	8	BR				0.00	29.85	30.06	6.9	35	6.3	18	36	15	36	10																																																																		
11	81	60*	71	-7	61	65	0	6					0.00	29.94	30.14	3.8	05	5.1	14	07	10	06	11																																																																		
12	75	64	70	-8	64	66	0	5	RA BR				1.07	29.84	30.04	5.8	08	6.8	21	09	16	08	12																																																																		
13	67	64	66*	-11	65	65	0	1	RA BR				0.47	29.74	29.94	9.1	36	8.8	21	36	17	01	13																																																																		
14	80	64	72	-5	65	67	0	7	BR				0.00	29.88	30.08	5.0	03	4.2	11	07	9	12	14																																																																		
15	83	61	72	-5	64	67	0	7	BR				0.00	29.92	30.12	2.9	04	3.3	13	12	10	12	15																																																																		
16	87	65	76	-1	67	70	0	11	TS RA BR HZ				T	29.90	30.10	4.4	19	5.4	17	22	13	21	16																																																																		
17	85	65	75	-2	67	70	0	10	BR HZ				0.00	29.90	30.10	2.4	21	2.9	11	01	9	05	17																																																																		
18	84	68	76	-1	69	71	0	11	TS BR HZ				0.00	29.97	30.17	2.0	21	2.0	14	22	13	22	18																																																																		
19	86	67	77	0	66	70	0	12	BR HZ				0.00	30.08	30.29	3.8	05	4.2	15	04	11	04	19																																																																		
20	83	64	74	-2	64	67	0	9	BR HZ				0.00	30.12	30.32	2.6	06	3.6	15	06	13	13	20																																																																		
21	84	63	74	-2	66	68	0	9	HZ				0.00	30.01	30.21	5.0	17	5.2	14	18	11	18	21																																																																		
22	88	68	78	2	70	72	0	13	RA BR HZ				T	29.95	30.15	5.0	17	3.2	11	04	10	04	22																																																																		
23	90*	67	79	3	70	73	0	14	FG BR HZ				0.00	29.94	30.14	5.8	19	4.4	15	16	13	17	23																																																																		
24	89	68	79*	3	70	72	0	14	TS TSRA RA BR HZ				0.19	29.86	30.06	1.1	20	5.0	21	28	17	02	24																																																																		
25	84	65	75	-1	67	69	0	10	BR				0.00	29.85	30.06	5.6	02	6.1	16	03	11	02	25																																																																		
26	85	67	76	1	68	70	0	11	BR HZ				0.00	29.83	30.03	3.5	03	3.8	16	18	14	17	26																																																																		
27	84	67	76	1	67	69	0	11	TS TSRA RA FG+ BR HZ				1.19	29.81	30.01	2.1	15	5.1	52*	01	44*	36	27																																																																		
28	82	66	74	-1	67	69	0	9	BR HZ				0.00	29.86	30.06	5.4	02	5.5	13	36	10	01	28																																																																		
29	83	65	74	-1	67	69	0	9	BR HZ				0.00	29.88	30.08	6.1	01	1.9	9	21	8	22	29																																																																		
30	84	66	75	0	66	69	0	10	BR HZ				0.00	29.88	30.09	5.4	03	5.0	14	02	11	02	30																																																																		
31	82	63	73	-2	63	66	0	8	BR				0.00	29.88	30.08	6.4	05	6.8	20	03	16	04	31																																																																		
83.0										65.5		74.3		■■■		0.0		9.5		< MONTHLY AVERAGES				TOTALS-->				4.40		29.91		30.11		1.3		08		4.9		<- MONTHLY AVERAGES																																																	
-4.1										-9		-2.5		■■■		<-----		DEPARTURE FROM NORMAL		----->		0.00		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																																																																	
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 1.53										DATE: 12-13										SEA LEVEL PRESSURE										DATE										TIME																																							
MONTHLY										SEASON TO DATE										GREATEST 24-HR SNOWFALL:										MAXIMUM										: 30.36										20										1100																													
TOTAL DEPARTURE										TOTAL DEPARTURE										GREATEST SNOW DEPTH:										MINIMUM										: 29.86										13										0317																													
HEATING: 0										0										NUMBER OF DAYS WITH										MAXIMUM TEMP ≥ 90: 1										MINIMUM TEMP ≤ 32: 0										PRECIPITATION ≥ 0.01 INCH: 6										PRECIPITATION ≥ 0.10 INCH: 6										SNOWFALL ≥ 1.0 INCH: 0																			
COOLING: 293										-73										1131										-10										MAXIMUM TEMP ≤ 32: 0										MINIMUM TEMP ≤ 0: 0										HEAVY FOG: 5																													

AUGUST 1996 RICHMOND, VA

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA

AUGUST 1996

RIC

WBAN # 13740

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	0.09	0.15	0.10	0.01	0.03	0.03	0.07	0.05	0.07	T			01	T	0.56	0.01									01	1.17	1.16		
02				0.01									02												02		T		
03					T	T	T	T					03												03		T		
04													04					T							04		T		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08												08		0.00		
09													09												09		0.00		
10													10					T	0.03	T					10		0.32		
11													11												11		0.00		
12													12												12		0.00		
13	0.17	0.09	0.01	0.16	0.03	0.01							13												13	1.06	1.07		
14													14												14	0.48	0.47		
15													15												15		0.00		
16													16												16		T		
17													17												17		0.00		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22												22		T		
23													23												23		0.00		
24													24												24	0.18	0.19		
25													25												25		0.00		
26													26												26		0.00		
27													27												27		1.19		
28													28												28		0.00		
29													29												29		0.00		
30													30												30		0.00		
31													31												31		0.00		

MAXIMUM SHORT DURATION PRECIPITATION (See Note 1)

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 1: NCDC derives these data from one-minute ASOS values. The table is not printed when inconsistent with ASOS hourly totals.

Note 2: 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	PE 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	
VC In the Vicinity	UP Unknown Precipitation		
Intensity (as indicated on pages 4 to 6): '+' = Heavy '-' = Moderate '--' = Light			

RICHMOND, VA AUGUST 1996

Ceilorometer (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.

ADDITIONAL NOTES:

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							.25	10.00	
03							2.00	10.00	
04							<.25	10.00	
05							<.25	10.00	
06							3.00	10.00	
07							1.75	6.00	
08							<.25	10.00	
09							.75	8.00	
10							1.00	10.00	
11							10.00	10.00	
12							1.75	10.00	
13							1.50	10.00	
14							4.00	10.00	
15							6.00	10.00	
16							5.00	10.00	
17							2.00	8.00	
18							2.50	7.00	
19							1.50	10.00	
20							.75	10.00	
21							4.00	10.00	
22							2.50	7.00	
23							1.50	7.00	
24							1.00	6.00	
25							2.50	10.00	
26							3.00	10.00	
27							<.25	10.00	
28							1.50	10.00	
29							2.00	10.00	
30							1.75	7.00	
31							1.75	10.00	
MONTHLY AVGS							2.13	9.23	
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			
		6		26		1			

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

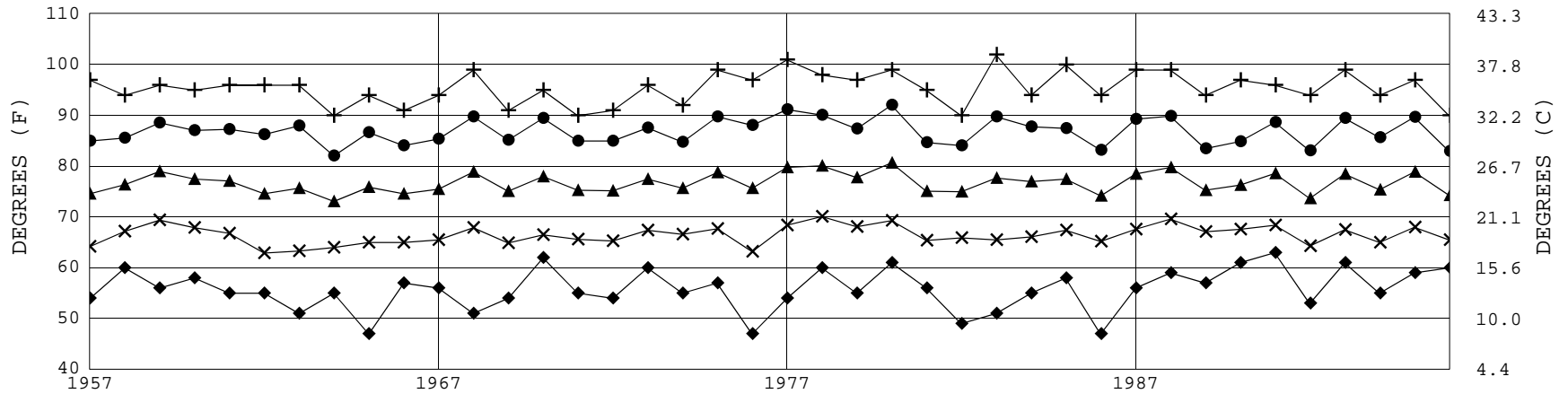
AUGUST 1996

RIC

WBAN # 13740

HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		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	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						
SUNRISE: 0534						AUG 25						SUNSET: 1848						SUNRISE: 0539						AUG 31						SUNSET: 1839					
01	CLR	NC			2.50 BR	71	69	70	94	7	36	29.85	30.05	01	CLR	NC			4.00 BR	66	64	65	93	0	00	29.90	30.10								
04	BKN	090			9.00	67	64	65	91	6	35	29.85	30.05	04	CLR	NC			2.00 BR	64	63	63	96	3	01	29.90	30.10								
07	OVC	050			10.00	67	63	64	87	8	36	29.90	30.10	07	CLR	NC			3.00 BR	67	65	66	93	7	03	29.91	30.11								
10	CLR	NC			10.00	77	67	70	71	7	02	29.90	30.09	10	CLR	NC			10.00	77	63	68	62	10	06	29.93	30.13								
13	BKN	047			10.00	82	67	72	60	8	03	29.86	30.06	13	SCT	NC			10.00	81	60	68	49	8	07	29.90	30.10								
16	FEW	NC			10.00	84	65	71	53	7	03	29.83	30.03	16	SCT	NC			10.00	80	61	68	52	9	08	29.85	30.05								
19	CLR	NC			7.00	76	70	72	82	5	09	29.82	30.02	19	CLR	NC			10.00	73	64	67	74	5	04	29.83	30.03								
22	FEW	NC			7.00	71	69	70	94	3	18	29.85	30.05	22	CLR	NC			10.00	66	62	64	87	6	02	29.84	30.04								
SUNRISE: 0535						AUG 26						SUNSET: 1846						3-HOURLY OBSERVATION NOTES																	
Sky Cover is the amount of the sky obscured. CLR = 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.																																			
01	FEW	NC			5.00 BR	69	68	68	96	0	00	29.84	30.03																						
04	CLR	NC			5.00 BR	68	67	67	96	0	00	29.84	30.04																						
07	CLR	NC			3.00 BR	70	68	69	93	0	00	29.86	30.06																						
10	SCT	NC			9.00	80	68	72	67	6	11	29.87	30.06																						
13	SCT	NC			10.00	84	68	73	59	8	13	29.83	30.03																						
16	BKN	041			10.00	83	68	73	61	7	10	29.78	29.98																						
19	CLR	NC			5.00 HZ	75	70	72	84	8	15	29.80	30.00																						
22	BKN	012			5.00 BR	72	70	71	94	6	20	29.83	30.03																						
SUNRISE: 0536						AUG 27						SUNSET: 1845																							
01	CLR	NC			6.00 BR	69	68	68	96	3	03	29.81	30.01																						
04	FEW	NC			4.00 BR	69	67	68	93	0	00	29.80	30.00																						
07	VV	001			< .25 FG	68	68	68	100	0	00	29.82	30.02																						
10	CLR	NC			10.00	79	67	71	67	5	17	29.83	30.03																						
13	SCT	NC			10.00	82	68	73	63	7	VR	29.80	30.00																						
16	SCT	NC			8.00	83	68	73	61	7	17	29.76	29.96																						
19	OVC	022			1.50 +TSRA BR	67	65	66	93	18	02	29.82	30.02																						
22	FEW	NC			10.00 -RA	69	66	67	90	3	19	29.82	30.02																						
SUNRISE: 0536						AUG 28						SUNSET: 1843																							
01	BKN	002			3.00 BR	66	65	65	96	8	35	29.83	30.03																						
04	FEW	NC			3.00 BR	67	66	66	97	8	01	29.83	30.03																						
07	FEW	NC			2.00 BR	67	66	66	97	3	02	29.86	30.06																						
10	CLR	NC			8.00	75	69	71	82	8	02	29.90	30.10																						
13	FEW	NC			9.00	80	68	72	67	7	01	29.88	30.08																						
16	BKN	048			10.00	81	67	72	62	7	04	29.84	30.04																						
19	CLR	NC			6.00 HZ	75	69	71	82	5	06	29.86	30.06																						
22	CLR	NC			5.00 BR	71	68	69	90	3	07	29.90	30.10																						
SUNRISE: 0537						AUG 29						SUNSET: 1842																							
01	CLR	NC			4.00 BR	68	67	67	96	0	00	29.89	30.09																						
04	CLR	NC			4.00 BR	66	65	65	96	0	00	29.89	30.09																						
07	CLR	NC			2.00 BR	68	66	67	93	0	00	29.91	30.11																						
10	FEW	NC			10.00	78	68	71	71	0	00	29.92	30.11																						
13	FEW	NC			8.00	82	66	71	58	5	VR	29.88	30.08																						
16	BKN	041			7.00	81	66	71	61	6	08	29.84	30.04																						
19	CLR	NC			5.00 HZ	75	68	70	79	3	20	29.84	30.04																						
22	CLR	NC			5.00 HZ	72	67	69	84	0	00	29.88	30.08																						
SUNRISE: 0538						AUG 30						SUNSET: 1841																							
01	CLR	NC			3.00 BR	70	67	68	90	5	24	29.88	30.08																						
04	FEW	NC			2.50 BR	67	66	66	97	0	00	29.87	30.07																						
07	FEW	NC			2.50 BR	70	67	68	90	6	33	29.90	30.09																						
10	CLR	NC			5.00 HZ	79	68	72	69	7	02	29.91	30.11																						
13	FEW	NC			7.00	83	65	71	55	7	11	29.89	30.09																						
16	CLR	NC			6.00 HZ	82	64	70	55	8	05	29.86	30.06																						
19	CLR	NC			5.00 HZ	75	66	69	74	5	07	29.88	30.08																						
22	CLR	NC			5.00 BR	69	65	66	87	3	05	29.89	30.09																						

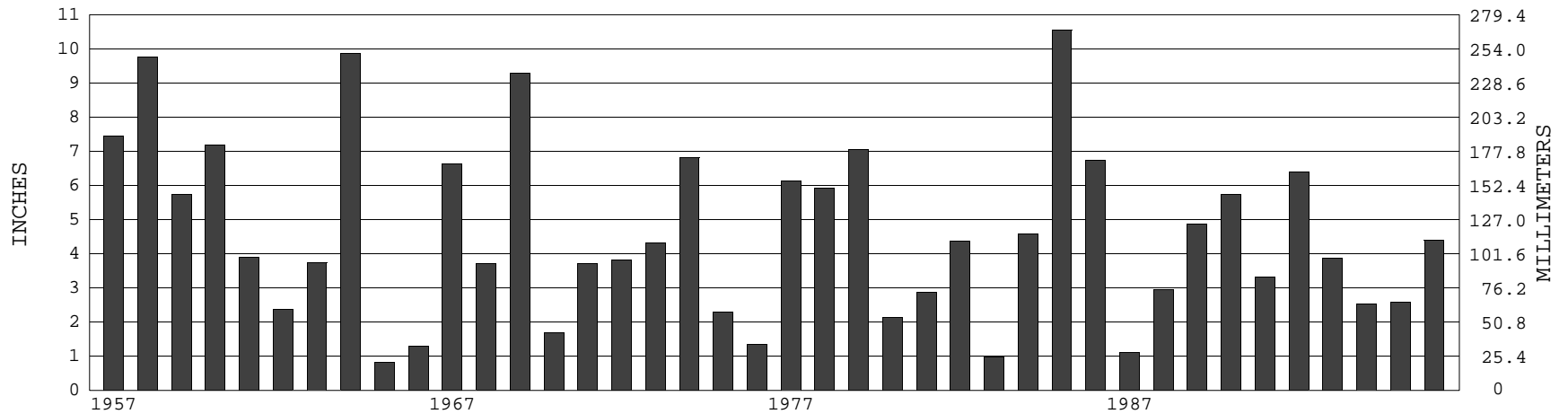
RICHMOND, VA AUGUST TEMPERATURES



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

Long-Term (1957-1996) Mean: 76.7 1961-1990 Normal: 76.8

RICHMOND, VA AUGUST PRECIPITATION



Long-Term (1957-1996) Mean Monthly Total: 4.63

1961-1990 Normal: 4.40



**AUGUST 1996
RICHMOND, VA**

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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Kenneth D Hadean

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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