



MARCH 1997

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

MARCH 1997
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	54	46	50	7	49	49	15	0	RA FG+ BR	0		0.0	0.07	29.98	30.19	2.5	14	4.5	11	20	10	20	01																															
02	76	52	64	21	57	61	1	0	RA FG+ BR	0		0.0	T	29.69	29.89	11.3	22	13.5	32	23	25	23	02																															
03	62	40	51	7	41	43	14	0	RA BR	0		0.0	0.78	29.81	30.01	9.7	04	10.7	26	06	21	06	03																															
04	48	39	44	0	40	41	21	0	BR	0		0.0	0.00	29.94	30.15	3.5	04	5.2	11	36	9	15	04																															
05	53	40	47	3	48	49	18	0	RA FG+ BR	0		0.0	0.29	29.84	30.05	5.0	14	7.6	23	20	20	33	05																															
06	59	32	46	1	28	41	19	0	RA	0		0.0	T	29.74	29.94	14.0	28	16.4	39	29	31	30	06																															
07	52	31	42	-3	21	34	23	0		0		0.0	0.00	30.13	30.34	9.5	29	6.3	16	30	14	26	07																															
08	67	36	52	7	33	43	13	0		0		0.0	0.00	30.06	30.27	10.3	22	11.9	31	25	26	26	08																															
09	51	36	44	-2	28	37	21	0	RA	0		0.0	T	30.25	30.46	7.9	09	10.7	21	04	17	14	09																															
10	68	40	54	8	38	45	11	0	RA BR HZ	0		0.0	0.04	29.81	30.01	2.7	17	6.6	18	02	16	04	10																															
11	72	33	53	7	32	43	12	0		0		0.0	0.00	29.73	29.93	5.1	28	7.9	29	33	24	32	11																															
12	54	35	45	-2	19	35	20	0		0		0.0	0.00	30.07	30.28	9.3	01	10.2	28	02	22	02	12																															
13	54	31	43	-4	25	36	22	0	RA	0		0.0	T	30.21	30.42	6.2	07	7.7	18	12	16	12	13																															
14	62	41	52	5	49	53	13	0	RA BR	0		0.0	0.47	29.69	29.89	9.0	16	11.2	26	17	21	16	14																															
15	56	37	47	-1	25	38	18	0		0		0.0	0.00	29.88	30.09	11.9	33	12.4	28	32	22	32	15																															
16	47	28	38*	-10	15	30	27	0		0		0.0	0.00	30.22	30.43	7.9	34	6.9	22	32	18	32	16																															
17	60	28*	44	-4	25	37	21	0		0		0.0	0.00	30.15	30.36	8.4	21	9.5	26	21	22	22	17																															
18	63	42	53	4	38	45	12	0	RA BR	0		0.0	0.10	30.04	30.24	4.0	14	5.0	16	08	14	09	18																															
19	45	38	42	-7	39	40	23	0	RA BR	0		0.0	0.56	29.92	30.13	7.7	04	8.2	22	03	17	03	19																															
20	57	38	48	-1	39	42	17	0	BR	0		0.0	0.00	29.70	29.91	3.3	23	4.7	16	26	13	22	20																															
21	69	36	53	3	39	47	12	0	BR	0		0.0	0.00	29.59	29.79	3.5	22	7.3	29	22	21	21	21																															
22	74	41	58	8	40	50	7	0		0		0.0	0.00	29.43	29.63	9.3	29	16.6	41	33	34	32	22																															
23	52	32	42	-8	27	36	23	0		0		0.0	0.00	29.87	30.07	4.2	31	5.5	16	27	13	18	23																															
24	52	35	44	-7	26	36	21	0		0		0.0	0.00	30.21	30.42	5.4	03	8.9	24	02	20	03	24																															
25	63	31	47	-4	31	40	18	0	RA	0		0.0	T	30.10	30.31	2.6	14	7.2	39	19	32	19	25																															
26	65	42	54	3	43	52	11	0	RA BR	0		0.0	0.36	29.73	29.93	6.7	26	13.6	40	19	32	19	26																															
27	71	35	53	1	32	44	12	0		0		0.0	0.00	29.85	30.05	12.2	21	9.1	24	21	18	21	27																															
28	72	44	58	6	41	50	7	0		0		0.0	0.00	29.73	29.94	9.1	19	8.5	25	21	21	21	28																															
29	81*	56	69*	17	49	57	0	4		0		0.0	0.00	29.49	29.69	7.9	26	13.2	43	32	34*	26	29																															
30	73	44	59	6	43	52	6	0		0		0.0	0.00	29.58	29.78	7.5	24	7.2	20	20	16	20	30																															
31	65	37	51	-2	31	41	14	0	RA SN BR	0		0.0	0.29	29.47	29.67	19.7	32	20.2	44*	31	33	33	31																															
61.2											37.9	49.6	■ ■	35.2	43.5	15.2	0.1	< MONTHLY AVERAGES		TOTALS-->		T	2.96	29.87	30.07	2.2	27	9.5	<- MONTHLY AVERAGES																									
1.7											1.6	1.6	■ ■	<----- DEPARTURE FROM NORMAL ----->											- .65	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																												
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 0.78 DATE: 3											SEA LEVEL PRESSURE DATE TIME																																
MONTHLY											GREATEST 24-HR SNOWFALL: T DATE: 31											MAXIMUM : 30.61 09 1000																																
TOTAL DEPARTURE											GREATEST SNOW DEPTH: 0 DATE:											MINIMUM : 29.47 22 0704																																
HEATING: 472 -55 3410 -251											NUMBER OF DAYS WITH →											MAXIMUM TEMP ≥ 90: 0											MINIMUM TEMP ≤ 32: 7											PRECIPITATION ≥ 0.01 INCH: 9										
COOLING: 4 4 4 4																						MAXIMUM TEMP ≤ 32: 0											MINIMUM TEMP ≤ 0: 0											PRECIPITATION ≥ 0.10 INCH: 7										
																						THUNDERSTORMS: 0											HEAVY FOG: 3											SNOWFALL ≥ 1.0 INCH: 0										

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA

MARCH 1997

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			T	0.01	0.01	0.01		0.01	0.01	0.02	T		01											01		0.07			
02								T					02											02		T			
03	T	T	0.04	0.14	0.08	0.09	0.03	0.01	0.02	0.02	T	0.01	03	0.01	0.01	0.08	0.17	0.02	0.05					03		0.78			
04													04											04		0.00			
05													05							0.27	T	0.01	0.01	05		0.29			
06	T	T											06											06		T			
07													07											07		0.00			
08													08											08		0.00			
09													09										T	09		T			
10	T		T	0.03	T	0.01	T						10											10		0.04			
11													11											11		0.00			
12													12											12		0.00			
13													13										T	13		T			
14	0.04	0.01							0.07	0.07	0.11	0.03	14	0.02	0.05	0.04	0.03	T	T			T	14		0.47				
15													15											15		0.00			
16													16											16		0.00			
17													17											17		0.00			
18													18		T	0.03	0.02	0.02	0.01	0.01	0.01	T	T	18		0.10			
19	0.01			0.02	0.04	0.04	0.10	0.07	0.05	0.05	0.03	0.06	19	0.05	0.04	T						T	19		0.56				
20													20											20		0.00			
21													21											21		0.00			
22													22											22		0.00			
23													23											23		0.00			
24													24											24		0.00			
25													25	T	T									25		T			
26				T	0.02	0.03	0.25	0.03	0.03	T			26											26		0.36			
27													27											27		0.00			
28													28											28		0.00			
29													29											29		0.00			
30													30											30		0.00			
31	T	T	0.14	0.11	0.04	T							31										T	31		0.29			

MAXIMUM SHORT DURATION PRECIPITATION (See Note 1)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.07	.11	.15	.18	.25	.27	.27	.27	.27	.27	.28	.31
Ending Date	05	05	05	05	05	05	05	05	05	05	31	03
Ending Time (Hour/Min)	2023	2023	2026	2031	2037	2042	2042	2042	2042	2042	0427	0544

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	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 MARCH 1997

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							.50	10.00	
05							< .25	8.00	
06							10.00	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							5.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							2.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							6.00	10.00	
19							2.50	10.00	
20							3.00	10.00	
21							3.00	10.00	
22							7.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							9.00	10.00	
26							8.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							8.00	10.00	
30							10.00	10.00	
31							3.00	10.00	
MONTHLY AVGS							6.75	9.94	
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									
3 10 19									

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

MARCH 1997

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 Okta		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 Okta	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG
SUNRISE: 0640						MAR 01	SUNSET: 1803						SUNRISE: 0632						MAR 07	SUNSET: 1809							
01	OVC	010		10.00		49	45	47	86	5	08	30.12	30.32	01	CLR	NC		10.00	37	20	31	50	9	23	29.95	30.16	
04	OVC	006		4.00	BR	47	46	47	97	7	12	30.05	30.25	04	CLR	NC		10.00	37	20	31	50	10	26	29.99	30.20	
07	OVC	002		1.75	BR	46	46	46	100	7	10	30.06	30.27	07	CLR	NC		10.00	33	24	30	70	6	30	30.10	30.30	
10	OVC	002		1.00	-RA BR	48	48	48	100	3	14	30.04	30.25	10	CLR	NC		10.00	43	20	35	40	6	01	30.20	30.40	
13	OVC	002		0.50	FG	50	49	49	96	7	35	30.03	30.23	13	CLR	NC		10.00	48	18	37	30	5	VR	30.20	30.40	
16	OVC	004		0.50	FG	52	51	52	97	8	22	29.95	30.15	16	CLR	NC		10.00	52	14	38	22	5	32	30.17	30.38	
19	OVC	120		2.00	BR	52	52	52	100	6	18	29.91	30.11	19	CLR	NC		10.00	44	25	37	47	6	15	30.20	30.40	
22	VV	001		0.25	FG	52	52	52	100	3	19	29.84	30.04	22	CLR	NC		10.00	40	27	35	60	12	14	30.17	30.37	
SUNRISE: 0639						MAR 02	SUNSET: 1804						SUNRISE: 0630						MAR 08	SUNSET: 1810							
01	VV	001		< .25	FG	52	52	52	100	5	20	29.77	29.97	01	CLR	NC		10.00	36	30	34	79	5	16	30.17	30.38	
04	CLR	NC		10.00		61	60	60	97	15	20	29.69	29.89	04	CLR	NC		10.00	41	31	37	67	12	19	30.12	30.33	
07	OVC	100		10.00		66	62	64	87	17	21	29.68	29.88	07	OVC	080		10.00	44	29	38	55	8	25	30.14	30.35	
10	OVC	085		10.00		67	61	63	81	18	23	29.70	29.91	10	CLR	NC		10.00	49	32	42	52	16	20	30.10	30.31	
13	BKN	110		10.00		71	58	63	63	20	22	29.64	29.84	13	SCT	NC		10.00	61	34	48	36	21	21	29.98	30.19	
16	CLR	NC		10.00		73	55	62	53	17	23	29.62	29.82	16	FEW	NC		10.00	65	32	49	29	16	26	29.93	30.14	
19	CLR	NC		10.00		71	54	61	55	9	26	29.70	29.90	19	CLR	NC		10.00	59	34	47	39	7	24	29.99	30.19	
22	CLR	NC		10.00		64	56	59	75	3	36	29.77	29.97	22	CLR	NC		10.00	50	36	44	59	7	01	30.08	30.28	
SUNRISE: 0638						MAR 03	SUNSET: 1805						SUNRISE: 0629						MAR 09	SUNSET: 1811							
01	OVC	110		10.00		59	48	53	67	10	04	29.81	30.01	01	CLR	NC		10.00	49	34	42	57	7	07	30.18	30.38	
04	OVC	011		5.00	RA BR	50	48	49	93	9	05	29.85	30.05	04	CLR	NC		10.00	43	30	38	60	10	04	30.24	30.45	
07	OVC	006		10.00	-RA	42	40	41	92	10	06	29.88	30.08	07	FEW	NC		10.00	36	27	33	70	10	06	30.36	30.57	
10	OVC	008		2.00	BR	43	40	42	89	17	07	29.84	30.04	10	CLR	NC		10.00	40	20	33	45	13	06	30.40	30.61	
13	OVC	007		2.00	-RA BR	42	41	42	96	10	07	29.78	29.98	13	CLR	NC		10.00	46	24	37	42	9	13	30.33	30.54	
16	OVC	007		2.00	RA BR	42	41	42	96	10	03	29.72	29.92	16	CLR	NC		10.00	47	27	39	46	10	14	30.25	30.46	
19	OVC	007		10.00		40	39	40	97	13	36	29.77	29.98	19	BKN	110		10.00	41	30	37	65	12	12	30.20	30.40	
22	OVC	005		10.00		40	38	39	93	9	02	29.83	30.03	22	SCT	NC		10.00	40	31	36	70	10	14	30.11	30.32	
SUNRISE: 0636						MAR 04	SUNSET: 1806						SUNRISE: 0628						MAR 10	SUNSET: 1812							
01	OVC	003		2.00	BR	40	39	40	97	8	03	29.86	30.06	01	OVC	024		10.00	40	32	37	73	8	17	29.99	30.20	
04	OVC	001		1.75	BR	40	39	40	97	6	34	29.85	30.06	04	OVC	048		10.00	40	32	37	73	12	21	29.84	30.05	
07	OVC	003		2.50	BR	39	39	39	100	7	34	29.93	30.13	07	FEW	NC		5.00	44	31	39	60	6	27	29.80	30.01	
10	OVC	005		3.00		40	38	39	93	0	00	29.99	30.19	10	CLR	NC		8.00	54	48	51	80	8	26	29.81	30.02	
13	OVC	007		3.00	BR	44	40	42	85	3	VR	29.97	30.17	13	FEW	NC		10.00	63	46	54	54	8	34	29.80	30.00	
16	OVC	011		10.00		47	43	45	86	6	16	29.93	30.14	16	FEW	NC		10.00	67	41	54	39	3	VR	29.75	29.95	
19	CLR	NC		2.00	BR	44	41	43	89	6	08	29.97	30.17	19	CLR	NC		10.00	58	36	48	44	0	00	29.76	29.96	
22	CLR	NC		4.00	BR	41	40	41	96	6	12	30.01	30.21	22	CLR	NC		10.00	48	36	43	63	7	14	29.79	29.99	
SUNRISE: 0635						MAR 05	SUNSET: 1807						SUNRISE: 0626						MAR 11	SUNSET: 1813							
01	BKN	002		1.00	BR	41	40	41	96	5	12	30.01	30.22	01	CLR	NC		10.00	43	35	40	74	6	13	29.75	29.96	
04	VV	001		0.25	FG	44	44	44	100	7	15	29.98	30.19	04	CLR	NC		10.00	36	33	35	89	0	00	29.72	29.93	
07	VV	001		< .25	FG	46	46	46	100	3	12	29.99	30.19	07	CLR	NC		10.00	33	31	32	92	0	00	29.72	29.92	
10	OVC	001		0.50	BR	50	50	50	100	8	17	29.98	30.19	10	CLR	NC		10.00	57	33	46	41	9	29	29.71	29.91	
13	OVC	001		0.50	BR	52	51	52	97	9	18	29.89	30.09	13	CLR	NC		10.00	68	25	49	20	9	29	29.64	29.85	
16	OVC	003		1.00	BR	52	52	52	100	8	13	29.77	29.97	16	FEW	NC		10.00	70	29	51	22	17	32	29.63	29.84	
19	OVC	001		1.00	BR	51	51	51	100	6	04	29.68	29.88	19	BKN	100		10.00	57	34	46	42	9	01	29.75	29.95	
22	BKN	110		3.00	BR	49	49	49	100	7	17	29.57	29.78	22	CLR	NC		10.00	51	32	43	48	12	01	29.86	30.06	
SUNRISE: 0633						MAR 06	SUNSET: 1808						SUNRISE: 0625						MAR 12	SUNSET: 1814							
01	OVC	090		10.00		55	53	54	93	21	20	29.46	29.66	01	CLR	NC		10.00	45	28	38	52	13	01	29.94	30.14	
04	OVC	028		10.00		59	53	56	81	21	26	29.49	29.70	04	CLR	NC		10.00	39	21	33	48	15	02	29.98	30.19	
07	CLR	NC		10.00		48	29	40	48	14	29	29.66	29.86	07	CLR	NC		10.00	36	17	30	46	18	01	30.07	30.28	
10	CLR	NC		10.00		50	26	40	39	18	29	29.74	29.95	10	CLR	NC		10.00	45	15	34	30	13	01	30.14	30.35	
13	SCT	NC		10.00		53	25	41	34	21	28	29.75	29.95	13	CLR	NC		10.00	51	13	37	22	9	01	30.09	30.29	
16	FEW	NC		10.00		53	19	40	26	16	29	29.79	29.99	16	CLR	NC		10.00	54	15	39	21	9	36	30.04	30.25	
19	CLR	NC		10.00		46	16	35	30	14	30	29.89	30.09	19	CLR	NC		10.00	46	23	37	40	0	00	30.09	30.29	
22	CLR	NC		10.00		41	17	33	38	5	28	29.96	30.16	22	CLR	NC		10.00	41	22	34	47	6	07	30.15	30.36	

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

MARCH 1997

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
SUNRISE: 0623					MAR 13	SUNSET: 1815					SUNRISE: 0614					MAR 19	SUNSET: 1820										
01	CLR	NC		10.00		36	25	32	64	0	00	30.18	30.38	01	OVC	006		2.50	BR	45	44	45	97	5	06	30.01	30.21
04	CLR	NC		10.00		33	27	31	78	3	03	30.19	30.40	04	OVC	004		2.50	-RA BR	44	43	44	96	12	07	29.95	30.16
07	CLR	NC		10.00		32	28	31	85	7	04	30.27	30.48	07	OVC	006		4.00	RA BR	43	41	42	93	10	05	29.94	30.15
10	CLR	NC		10.00		46	12	34	25	10	05	30.31	30.51	10	OVC	013		5.00	-RA BR	42	40	41	92	12	02	29.97	30.18
13	OVC	060		10.00		51	19	39	28	6	17	30.25	30.46	13	OVC	008		7.00	-RA	40	38	39	93	10	04	29.93	30.13
16	FEW	NC		10.00		53	27	42	37	10	13	30.18	30.39	16	OVC	006		10.00		39	37	38	93	8	03	29.89	30.09
19	CLR	NC		10.00		45	28	38	52	12	12	30.19	30.40	19	OVC	004		7.00		38	37	38	97	9	36	29.89	30.10
22	OVC	032		10.00		43	31	38	63	10	11	30.17	30.37	22	OVC	004		7.00		38	37	38	97	5	02	29.88	30.08
SUNRISE: 0622					MAR 14	SUNSET: 1816					SUNRISE: 0613					MAR 20	SUNSET: 1821										
01	OVC	041		10.00	-RA	41	32	37	70	8	10	30.07	30.28	01	OVC	004		9.00		39	37	38	93	0	00	29.81	30.01
04	OVC	034		10.00		44	32	39	63	12	11	29.94	30.14	04	OVC	006		6.00	BR	39	37	38	93	3	26	29.76	29.96
07	OVC	065		10.00		51	31	42	46	12	14	29.83	30.03	07	OVC	004		3.00	BR	39	37	38	93	7	27	29.76	29.97
10	OVC	035		2.00	-RA	57	54	55	90	16	16	29.74	29.94	10	OVC	008		10.00		42	39	41	89	8	22	29.74	29.94
13	OVC	013		5.00	-RA BR	61	59	60	93	16	17	29.62	29.82	13	OVC	014		10.00		48	42	45	80	8	24	29.67	29.87
16	OVC	013		10.00	-RA	62	60	61	93	13	17	29.52	29.72	16	SCT	NC		10.00		55	41	48	59	5	24	29.61	29.82
19	BKN	007		10.00		62	60	61	93	9	18	29.48	29.68	19	CLR	NC		10.00		50	40	45	68	3	10	29.64	29.85
22	OVC	009		10.00		61	60	60	97	7	22	29.49	29.69	22	SCT	NC		10.00		45	41	43	86	3	17	29.70	29.90
SUNRISE: 0620					MAR 15	SUNSET: 1817					SUNRISE: 0611					MAR 21	SUNSET: 1822										
01	BKN	075		10.00		56	53	54	90	9	30	29.51	29.72	01	CLR	NC		9.00		43	40	42	89	0	00	29.68	29.89
04	CLR	NC		10.00		49	38	44	66	13	32	29.64	29.85	04	CLR	NC		8.00		38	37	38	97	0	00	29.68	29.88
07	CLR	NC		10.00		44	29	38	55	17	33	29.81	30.02	07	CLR	NC		3.00	BR	37	36	37	96	0	00	29.71	29.92
10	CLR	NC		10.00		45	25	37	46	15	35	29.91	30.11	10	CLR	NC		9.00		58	42	50	56	0	00	29.69	29.90
13	FEW	NC		10.00		48	19	37	32	21	32	29.93	30.14	13	CLR	NC		10.00		64	36	50	35	6	VR	29.61	29.81
16	CLR	NC		10.00		49	14	36	25	13	31	29.97	30.17	16	CLR	NC		10.00		68	38	53	33	12	20	29.50	29.70
19	SCT	NC		10.00		45	13	34	27	10	33	30.00	30.21	19	CLR	NC		10.00		60	40	50	48	12	20	29.48	29.68
22	CLR	NC		10.00		40	16	32	38	9	36	30.07	30.28	22	CLR	NC		10.00		60	41	51	50	15	21	29.44	29.64
SUNRISE: 0619					MAR 16	SUNSET: 1818					SUNRISE: 0610					MAR 22	SUNSET: 1823										
01	BKN	110		10.00		35	18	29	50	5	35	30.12	30.32	01	CLR	NC		10.00		58	49	53	72	20	21	29.37	29.57
04	CLR	NC		10.00		32	15	27	50	7	34	30.14	30.35	04	CLR	NC		9.00		58	52	55	81	14	22	29.29	29.49
07	CLR	NC		10.00		31	16	26	54	5	04	30.23	30.43	07	CLR	NC		7.00		56	51	53	84	15	22	29.28	29.48
10	CLR	NC		10.00		38	13	30	36	7	VR	30.27	30.47	10	CLR	NC		10.00		71	49	59	46	13	25	29.29	29.49
13	CLR	NC		10.00		45	11	34	25	16	27	30.25	30.45	13	BKN	075		10.00		73	44	57	36	18	33	29.33	29.53
16	CLR	NC		10.00		47	11	35	23	10	31	30.20	30.40	16	FEW	NC		10.00		65	31	49	28	24	33	29.47	29.67
19	CLR	NC		10.00		41	11	31	29	3	35	30.23	30.44	19	CLR	NC		10.00		54	29	43	38	13	35	29.58	29.78
22	CLR	NC		10.00		34	16	28	48	0	00	30.27	30.47	22	CLR	NC		10.00		44	27	37	51	10	01	29.70	29.90
SUNRISE: 0617					MAR 17	SUNSET: 1818					SUNRISE: 0608					MAR 23	SUNSET: 1824										
01	CLR	NC		10.00		30	22	27	72	3	12	30.27	30.48	01	CLR	NC		10.00		39	26	34	60	6	02	29.74	29.94
04	CLR	NC		10.00		28	24	27	85	0	00	30.25	30.45	04	CLR	NC		10.00		37	24	32	60	5	35	29.77	29.97
07	CLR	NC		10.00		32	27	30	82	3	12	30.27	30.47	07	OVC	070		10.00		35	28	32	76	0	00	29.86	30.06
10	CLR	NC		10.00		45	28	38	52	12	19	30.25	30.45	10	BKN	055		10.00		41	24	35	51	7	01	29.92	30.12
13	SCT	NC		10.00		55	21	41	27	12	23	30.15	30.35	13	BKN	070		10.00		47	26	39	44	7	VR	29.88	30.09
16	OVC	090		10.00		57	21	42	25	17	21	30.05	30.26	16	BKN	085		10.00		50	26	40	39	6	21	29.85	30.05
19	BKN	095		10.00		54	25	42	33	9	21	30.04	30.24	19	OVC	100		10.00		47	28	39	48	5	11	29.89	30.09
22	OVC	060		10.00		55	27	43	34	13	21	30.04	30.24	22	FEW	NC		10.00		39	30	35	70	5	15	29.95	30.16
SUNRISE: 0616					MAR 18	SUNSET: 1819					SUNRISE: 0607					MAR 24	SUNSET: 1825										
01	SCT	NC		10.00		53	29	43	40	8	24	30.02	30.23	01	OVC	090		10.00		42	33	38	71	7	26	30.00	30.21
04	BKN	075		10.00		47	32	41	56	3	23	30.02	30.22	04	CLR	NC		10.00		40	28	35	63	9	36	30.05	30.26
07	CLR	NC		10.00		42	31	38	65	3	08	30.06	30.26	07	CLR	NC		10.00		37	28	34	70	16	02	30.18	30.38
10	BKN	070		10.00		59	35	48	41	7	06	30.08	30.29	10	FEW	NC		10.00		43	26	36	51	9	01	30.28	30.49
13	OVC	050		10.00		60	37	49	42	12	09	30.03	30.23	13	FEW	NC		10.00		49	23	39	36	7	34	30.27	30.47
16	OVC	055		8.00	-RA	53	47	50	80	0	00	30.02	30.22	16	FEW	NC		10.00		51	21	39	31	5	05	30.23	30.43
19	OVC	035		10.00		49	46	48	90	7	06	30.05	30.25	19	CLR	NC		10.00		44	30	38	58	13	12	30.26	30.47
22	OVC	037		9.00		47	43	45	86	7	09	30.04	30.24	22	CLR	NC		10.00		36	24	32	62	6	11	30.29	30.50

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

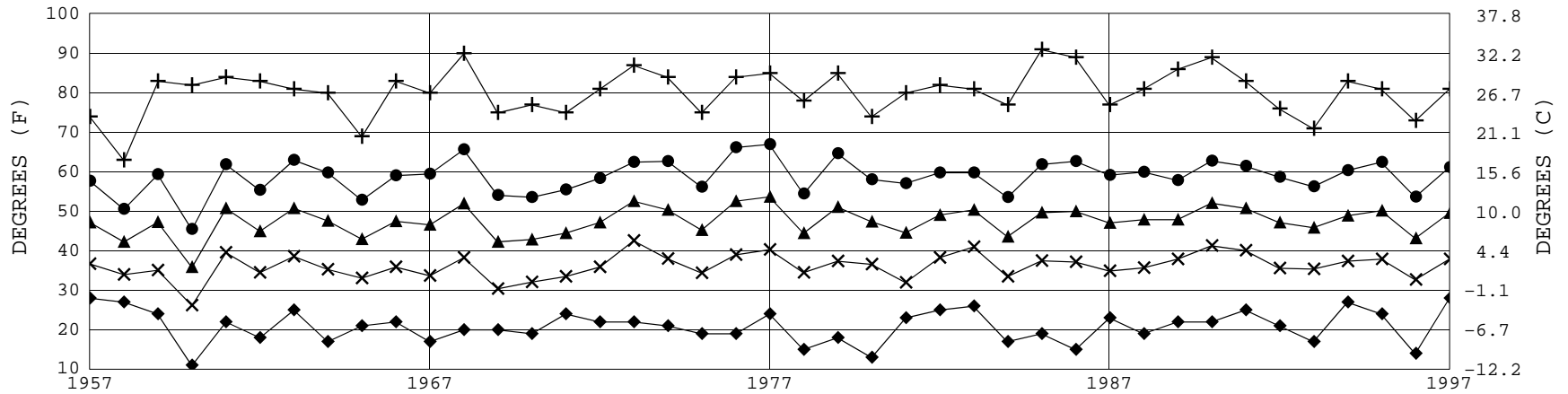
MARCH 1997

RIC

WBAN # 13740

HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		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	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL						
SUNRISE: 0605						MAR 25						SUNSET: 1826						SUNRISE: 0556						MAR 31						SUNSET: 1831					
01	CLR	NC			10.00	34	29	32	82	7	13	30.28	30.49	01	OVC	031			10.00	-RA	59	52	55	78	16	33	29.42	29.62							
04	CLR	NC			10.00	33	28	31	82	0	00	30.27	30.47	04	OVC	030			3.00	-RA BR	50	48	49	93	15	34	29.43	29.63							
07	CLR	NC			10.00	34	30	32	85	5	01	30.27	30.48	07	OVC	034			10.00		48	43	46	83	12	34	29.45	29.65							
10	BKN	046			10.00	48	32	41	54	6	14	30.24	30.45	10	BKN	050			10.00		49	29	40	46	25	32	29.45	29.65							
13	OVC	032			9.00	-RA	49	32	42	52	6	21	30.14	30.35	13	BKN	075			10.00		50	21	39	32	29	33	29.44	29.65						
16	OVC	060			10.00	53	31	43	43	8	20	30.01	30.22	16	BKN	065			10.00		47	22	37	37	28	32	29.45	29.66							
19	BKN	070			10.00	54	31	44	42	0	00	29.91	30.11	19	BKN	110			10.00		41	18	33	39	26	32	29.52	29.72							
22	FEW	NC			10.00	62	30	47	30	23	19	29.86	30.07	22	OVC	023			7.00	-SN	38	23	32	55	29	32	29.56	29.76							
SUNRISE: 0604						MAR 26						SUNSET: 1827						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			10.00	62	53	57	73	24	19	29.76	29.96	01	CLR	NC			10.00		39	31	36	73	3	17	29.88	30.08							
04	OVC	065			10.00	-RA	60	55	57	84	22	20	29.66	29.86	04	CLR	NC			10.00		38	33	36	83	0	00	29.87	30.07						
07	OVC	060			8.00	RA	61	60	60	97	14	24	29.64	29.84	07	CLR	NC			10.00		39	31	36	73	6	20	29.90	30.10						
10	BKN	060			10.00	59	56	57	90	13	33	29.71	29.91	10	CLR	NC			10.00		57	29	45	34	9	24	29.92	30.12							
13	FEW	NC			10.00	63	36	50	37	22	27	29.71	29.91	13	CLR	NC			10.00		67	32	50	27	16	21	29.86	30.06							
16	CLR	NC			10.00	65	28	48	25	10	31	29.71	29.91	16	CLR	NC			10.00		71	31	52	23	15	23	29.78	29.98							
19	CLR	NC			10.00	59	30	46	34	7	36	29.78	29.98	19	CLR	NC			10.00		59	32	47	36	10	20	29.79	30.00							
22	CLR	NC			10.00	51	31	42	46	10	03	29.86	30.06	22	CLR	NC			10.00		54	32	44	43	9	20	29.82	30.02							
SUNRISE: 0602						MAR 27						SUNSET: 1828						SUMMARY BY HOUR																	
												AVERAGES																							
												RESULTANT WIND (MPH)																							
HOUR (LST)	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	DIRECTION																								
							STATION	SEA LEVEL			SPEED	DIRECTION																							
01			46	37	42	73	29.88	30.08	8.83	8	2	27																							
02			45	37	42	75	29.87	30.08	8.83	8	1	27																							
03			45	37	42	77	29.86	30.07	8.12	8	1	27																							
04			44	37	41	77	29.86	30.07	8.37	9	1	26																							
05			43	36	41	78	29.87	30.07	8.36	9	1	27																							
06			43	35	40	77	29.89	30.09	8.51	8	1	32																							
07			43	35	40	76	29.90	30.10	8.14	8	1	27																							
08			46	35	42	68	29.91	30.12	8.33	8	1	27																							
09			49	36	44	66	29.92	30.12	8.06	10	1	27																							
10			51	36	44	60	29.91	30.12	8.40	10	2	27																							
11			53	35	45	55	29.91	30.11	8.73	10	4	27																							
12			54	35	46	52	29.89	30.09	8.61	12	3	27																							
13			56	34	46	49	29.87	30.07	8.61	12	5	27																							
14			57	34	47	47	29.84	30.04	8.69	12	5	27																							
15			57	34	47	47	29.83	30.03	9.05	11	4	27																							
16			57	34	47	47	29.83	30.03	9.08	11	4	28																							
17			57	33	46	47	29.82	30.03	9.35	11	3	29																							
18			55	33	45	50	29.83	30.04	9.13	8	2	27																							
19			52	34	44	56	29.85	30.05	9.10	8	1	27																							
20			50	35	43	61	29.86	30.06	9.11	8	1	36																							
21			48	35	43	62	29.87	30.07	9.15	8	2	27																							
22			48	35	42	64	29.87	30.07	9.04	8	1	27																							
23			47	35	42	65	29.87	30.07	8.75	8	1	27																							
24			46	35	41	68	29.86	30.07	8.70	8	1	27																							
01	CLR	NC			10.00	57	38	48	49	13	31	29.62	29.82	01	CLR	NC			10.00		57	38	48	49	13	31	29.62	29.82							
04	CLR	NC			10.00	53	39	46	59	5	27	29.64	29.84	04	CLR	NC			10.00		53	39	46	59	5	27	29.64	29.84							
07	CLR	NC			10.00	52	43	48	72	3	32	29.68	29.88	07	CLR	NC			10.00		52	43	48	72	3	32	29.68	29.88							
10	CLR	NC			10.00	64	43	53	46	6	VR	29.70	29.90	10	CLR	NC			10.00		64	43	53	46	6	VR	29.70	29.90							
13	CLR	NC			10.00	70	44	56	39	9	20	29.63	29.83	13	CLR	NC			10.00		70	44	56	39	9	20	29.63	29.83							
16	CLR	NC			10.00	72	44	57	37	15	24	29.54	29.74	16	CLR	NC			10.00		72	44	57	37	15	24	29.54	29.74							
19	CLR	NC			10.00	64	44	54	48	7	19	29.49	29.70	19	CLR	NC			10.00		64	44	54	48	7	19	29.49	29.70							
22	OVC	110			10.00	63	47	54	56	8	16	29.44	29.64	22	OVC	110			10.00		63	47	54	56	8	16	29.44	29.64							

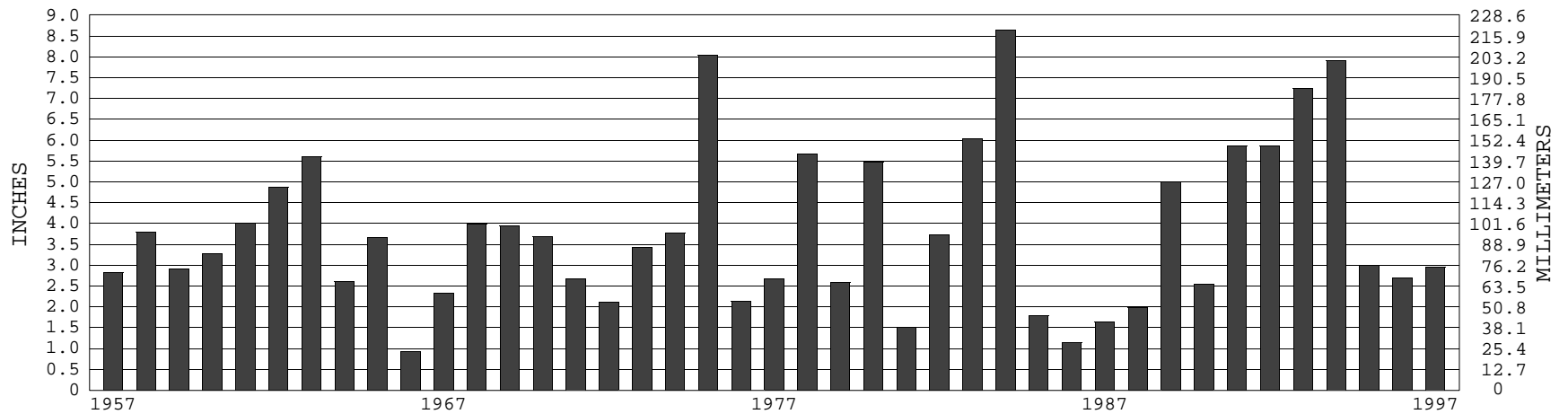
RICHMOND, VA MARCH TEMPERATURES



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

Long-Term (1957-1997) Mean: 47.5 1961-1990 Normal: 48.0

RICHMOND, VA MARCH PRECIPITATION



Long-Term (1957-1997) Mean Monthly Total: 3.83

1961-1990 Normal: 3.61



**MARCH 1997
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.

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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