



# MARCH 2002

## 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						
																			5-SEC		2-MIN				
1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
01	50	20	35	-8	16	30	30	0			0.0	0.00	30.30	30.49	2.0	18	4.6	14	15	12	15	01			
02	60	28	44	1	40	42	21	0	RA BR		0.0	0.82	30.10	30.29	8.8	13	10.0	32	15	26	15	02			
03	61	43	52	9	52	54	13	0	RA BR		0.0	0.21	29.58	29.77	8.9	23	12.4	25	31	20	33	03			
04	43	25	34	-10	11	27	31	0			0.0	0.00	29.92	30.11	10.2	33	12.1	25	30	22	31	04			
05	47	14*	31*	-13	11	26	34	0			0.0	0.00	30.22	30.42	6.1	23	8.1	23	24	18	26	05			
06	63	29	46	2	25	38	19	0			0.0	0.00	30.18	30.37	11.4	21	11.7	28	22	22	21	06			
07	70	35	53	8	33	43	12	0			0.0	0.00	30.13	30.32	4.6	21	5.1	18	23	16	22	07			
08	71	38	55	10	43	50	10	0			0.0	0.00	30.21	30.40	5.0	16	5.5	25	21	20	15	08			
09	75	52	64	19	58	61	1	0	RA BR		0.0	0.01	30.07	30.26	13.6	18	14.0	33	19	26	18	09			
10	66	32	49	4	19	40	16	0	RA		0.0	T	29.98	30.17	10.3	28	12.8	30	28	24	27	10			
11	51	26	39	-7	16	31	26	0			0.0	0.00	30.22	30.41	2.8	10	4.1	20	13	17	13	11			
12	56	36	46	0	41	45	19	0	RA BR		0.0	0.04	30.00	30.19	1.1	09	2.3	10	29	8	05	12			
13	52	47	50	3	50	50	15	0	RA DZ FG+ BR		0.0	0.05	29.69	29.88	7.2	36	7.9	17	32	15	34	13			
14	71	47	59	12	48	52	6	0	FG+ BR HZ		0.0	0.00	29.85	30.04	2.8	17	5.8	16	16	13	15	14			
15	81	51	66	18	54	58	0	1	BR		0.0	0.00	29.83	30.02	10.9	20	10.9	26	21	22	21	15			
16	81*	54	68*	20	56	60	0	3	RA		0.0	T	29.82	30.01	3.7	26	11.0	28	03	22	03	16			
17	54	42	48	0	41	43	17	0	RA DZ BR		0.0	0.88	30.14	30.33	9.6	04	10.2	23	11	20	12	17			
18	48	42	45	-3	45	45	20	0	RA DZ BR		0.0	0.43	30.03	30.22	8.7	36	8.9	20	02	16	01	18			
19	48	43	46	-3	43	44	19	0	RA BR		0.0	0.06	30.14	30.33	5.5	07	6.6	17	06	15	05	19			
20	51	42	47	-2	47	47	18	0	RA DZ BR		0.0	0.35	29.86	30.05	1.1	30	6.0	16	29	13	29	20			
21	60	39	50	1	39	45	15	0			0.0	0.00	29.76	29.95	2.5	33	9.0	39*	36	35*	36	21			
22	42	26	34	-16	10	27	31	0	SN		T	T	29.99	30.18	10.3	33	12.7	37	36	30	36	22			
23	54	21	38	-12	16	31	27	0			0.0	0.00	30.00	30.19	7.9	23	8.3	26	25	23	23	23			
24	69	30	50	0	26	41	15	0			0.0	0.00	29.92	30.11	3.7	21	3.9	24	20	21	20	24			
25	71	46	59	8	42	49	6	0	BR		0.0	0.00	29.96	30.16	2.9	09	4.3	25	11	21	11	25			
26	70	44	57	6	51	52	8	0	TSRA RA DZ FG BR HZ SQ		0.0	1.09	29.89	30.08	1.7	08	6.1	29	30	26	29	26			
27	55	38	47	-5	40	45	18	0	RA BR		0.0	0.02	29.85	30.04	9.7	02	9.8	28	02	20	03	27			
28	54	32	43	-9	29	38	22	0			0.0	0.00	29.99	30.18	0.5	01	.5	22	36	17	01	28			
29	69	42	56	4	47	52	9	0	BR		0.0	0.00	29.88	30.06	7.9	19	7.7	26	18	21	19	29			
30	77	57	67	14	57	62	0	2	RA BR		0.0	0.09	29.75	29.94	8.2	22	11.8	24	20	20	21	30			
31	57	49	53	0			12	0	RA BR		0.0	0.43					7.0	22	04	17	04	31			
60.5		37.7	49.1	■ ■			15.8	0.2	< MONTHLY AVERAGES		TOTALS-->						8.1	<- MONTHLY AVERAGES							
2.1		0.7	1.4	■ ■	<-----DEPARTURE FROM NORMAL----->										0.39	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 1.31 DATE :17-18				SEA LEVEL PRESSURE				DATE		TIME						
MONTHLY TOTAL DEPARTURE									GREATEST 24-HR SNOWFALL: T DATE :22				MAXIMUM				:		01 2154						
SEASON TO DATE TOTAL DEPARTURE									GREATEST SNOW DEPTH:				MINIMUM				:		03 1554						
HEATING: 490 -37 2974 -687									NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 11				PRECIPITATION ≥ 0.01 INCH : 13				
COOLING: 6 -2 9 0													MAXIMUM TEMP ≤ 32 : 0				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 7				
													THUNDERSTORMS : 1				HEAVY FOG : 2				SNOWFALL ≥ 1.0 INCH : 0				

MARCH 2002  
RICHMOND, VA

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## RICHMOND, VA

MARCH 2002

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			0.82	
03													03												03			0.21	
04													04												04			0.00	
05													05												05			0.00	
06													06												06			0.00	
07													07												07			0.00	
08													08												08			0.00	
09													09												09			0.01	
10													10												10			T	
11													11												11			0.00	
12													12												12			0.04	
13													13												13			0.05	
14													14												14			0.00	
15													15												15			0.00	
16													16												16			T	
17													17												17			0.88	
18													18												18			0.43	
19													19												19			0.06	
20													20												20			0.35	
21													21												21			0.00	
22													22												22			T	
23													23												23			0.00	
24													24												24			0.00	
25													25												25			0.00	
26													26												26			1.09	
27													27												27			0.02	
28													28												28			0.00	
29													29												29			0.00	
30													30												30			0.09	
31													31												31			0.43	

### 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 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

## RICHMOND, VA MARCH 2002

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:

ERRATA for Jan & Feb 2002 LCD's: To stay consistent with the Heating Degree Day Season (July 2001–June 2002), NCDC reinstalled the 1961–1990 Heating Degree Day Normals and corrected the Jan & Feb 2002 LCD's. The corrected LCD's are available on NCDC's Website. The 1971–2000 Heating Degree Day Normals will go into effect with the July 2002 LCD. The new Cooling Degree Day Normals went into effect with the Jan 2002 LCD.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							1.75	10.00	
03							1.25	10.00	
04							10.00	10.00	
05							10.00	10.00	
06							10.00	10.00	
07							9.00	10.00	
08							10.00	10.00	
09							2.00	10.00	
10							8.00	10.00	
11							10.00	10.00	
12							2.50	10.00	
13							.13	7.00	
14							.06	10.00	
15							4.00	10.00	
16							7.00	10.00	
17							1.50	10.00	
18							2.50	10.00	
19							5.00	10.00	
20							.75	10.00	
21							10.00	10.00	
22							9.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							5.00	10.00	
26							.25	10.00	
27							5.00	10.00	
28							10.00	10.00	
29							5.00	10.00	
30							4.00	10.00	
31							2.50	10.00	
<b>MONTHLY AVGS</b>							5.76	9.90	
<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									
3                      11                      14									

# OBSERVATIONS AT 3-HOURLY INTERVALS

## RICHMOND, VA

MARCH 2002

RIC

WBAN # 13740

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)							
	OBSERVATION TIME (LST)	EFF CLD AMT Ok/as		DRY BULB	DEW POINT			WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Ok/as		DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)			SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Ok/as	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0641 MAR 01								SUNSET: 1803								SUNRISE: 0632 MAR 07								SUNSET: 1809													
01	CLR	NC			10.00		30	11	24	45	7	25	30.13	30.33	01	CLR	NC			10.00		43	27	37	53	7	19	30.13	30.32								
04	CLR	NC			10.00		26	12	22	55	3	36	30.19	30.39	04	CLR	NC			10.00		39	29	35	67	0	00	30.12	30.31								
07	CLR	NC			10.00		21	12	19	68	0	00	30.28	30.48	07	OVC	250			10.00		37	34	36	89	6	20	30.14	30.33								
10	CLR	NC			10.00		39	13	31	34	5	VR	30.35	30.55	10	OVC	250			10.00		53	36	45	52	9	21	30.16	30.35								
13	CLR	NC			10.00		46	14	35	27	8	27	30.31	30.51	13	BKN	250			10.00		65	33	50	31	6	24	30.10	30.30								
16	FEW	NC			10.00		48	15	36	27	0	00	30.28	30.48	16	OVC	250			10.00		68	30	50	24	6	25	30.06	30.26								
19	FEW	NC			10.00		41	17	33	38	9	15	30.32	30.52	19	SCT	NC			10.00		53	33	44	47	0	00	30.11	30.31								
22	SCT	NC			10.00		37	26	33	65	9	15	30.38	30.58	22	CLR	NC			10.00		48	36	43	63	0	00	30.15	30.35								
SUNRISE: 0639 MAR 02								SUNSET: 1804								SUNRISE: 0631 MAR 08								SUNSET: 1810													
01	FEW	NC			10.00		32	22	29	66	5	13	30.37	30.57	01	CLR	NC			10.00		47	36	42	66	0	00	30.18	30.37								
04	BKN	200			10.00		29	24	27	82	3	10	30.35	30.55	04	CLR	NC			10.00		40	37	39	89	0	00	30.17	30.37								
07	OVC	200			10.00		33	28	31	82	5	10	30.31	30.50	07	OVC	250			10.00		38	36	37	93	0	00	30.22	30.41								
10	OVC	080			10.00		42	36	39	79	8	08	30.27	30.47	10	OVC	250			10.00		61	43	52	52	0	00	30.25	30.45								
13	OVC	060			10.00		50	42	46	74	8	09	30.16	30.36	13	BKN	250			10.00		69	38	53	32	10	18	30.21	30.40								
16	OVC	041			5.00	-RA BR	50	50	50	100	9	13	30.03	30.22	16	SCT	NC			10.00		70	39	54	32	8	15	30.17	30.37								
19	OVC	007			6.00	-RA BR	50	50	50	100	16	11	29.86	30.06	19	BKN	250			10.00		61	48	54	63	9	11	30.19	30.38								
22	OVC	013			2.00	RA BR	55	55	55	100	23	15	29.66	29.85	22	BKN	250			10.00		59	56	57	90	12	15	30.22	30.41								
SUNRISE: 0638 MAR 03								SUNSET: 1805								SUNRISE: 0629 MAR 09								SUNSET: 1811													
01	OVC	012			10.00		61	61	61	100	13	19	29.61	29.80	01	BKN	250			10.00		56	56	56	100	7	16	30.21	30.40								
04	OVC	020			5.00	BR	61	61	61	100	12	21	29.58	29.77	04	BKN	250			5.00	BR	52	52	52	100	6	15	30.19	30.39								
07	OVC	140			10.00		55	55	55	100	15	22	29.60	29.79	07	SCT	NC			2.00	BR	54	54	54	100	7	15	30.20	30.40								
10	OVC	020			2.00	+RA BR	54	54	54	100	12	22	29.59	29.78	10	OVC	090			10.00		67	61	63	81	17	18	30.16	30.36								
13	OVC	035			3.00	BR	57	57	57	100	12	21	29.53	29.71	13	OVC	043			10.00		72	58	64	61	18	19	30.07	30.26								
16	OVC	150			10.00		59	56	57	90	13	22	29.51	29.69	16	OVC	110			10.00		74	59	65	60	18	19	29.97	30.16								
19	BKN	150			10.00		57	53	55	87	15	25	29.58	29.77	19	OVC	070			10.00		70	60	64	71	16	19	29.94	30.13								
22	OVC	130			10.00		49	29	41	46	7	30	29.64	29.84	22	BKN	130			10.00		66	62	64	87	22	19	29.88	30.07								
SUNRISE: 0636 MAR 04								SUNSET: 1806								SUNRISE: 0628 MAR 10								SUNSET: 1812													
01	OVC	065			10.00		40	26	35	58	18	01	29.73	29.92	01	BKN	030			10.00		65	62	63	90	17	20	29.83	30.02								
04	OVC	130			10.00		33	17	28	52	12	36	29.80	29.99	04	FEW	NC			10.00		60	44	52	56	20	28	29.85	30.04								
07	OVC	250			10.00		30	16	26	56	9	01	29.87	30.06	07	CLR	NC			10.00		47	21	37	36	18	32	29.97	30.16								
10	OVC	250			10.00		35	17	29	48	10	33	29.91	30.11	10	CLR	NC			8.00		49	11	36	21	15	25	30.01	30.20								
13	OVC	250			10.00		38	9	29	30	15	32	29.87	30.06	13	CLR	NC			10.00		55	7	39	14	16	30	29.96	30.15								
16	SCT	NC			10.00		40	10	30	29	18	29	29.89	30.08	16	CLR	NC			10.00		57	8	40	14	14	27	29.94	30.13								
19	CLR	NC			10.00		33	1	25	25	17	30	30.01	30.21	19	CLR	NC			10.00		51	5	36	15	10	32	30.02	30.21								
22	CLR	NC			10.00		28	0	21	29	12	31	30.11	30.31	22	CLR	NC			10.00		40	10	30	29	6	05	30.12	30.32								
SUNRISE: 0635 MAR 05								SUNSET: 1807								SUNRISE: 0626 MAR 11								SUNSET: 1813													
01	CLR	NC			10.00		24	2	19	38	7	32	30.16	30.36	01	CLR	NC			10.00		32	15	27	50	7	02	30.16	30.36								
04	CLR	NC			10.00		21	2	17	43	0	00	30.22	30.42	04	CLR	NC			10.00		29	12	24	49	0	00	30.19	30.39								
07	CLR	NC			10.00		14	10	13	84	0	00	30.26	30.46	07	FEW	NC			10.00		30	12	25	47	0	00	30.29	30.49								
10	CLR	NC			10.00		31	7	24	36	10	21	30.29	30.49	10	FEW	NC			10.00		40	11	31	30	0	00	30.32	30.52								
13	CLR	NC			10.00		42	13	32	30	14	27	30.23	30.43	13	SCT	NC			10.00		46	10	34	23	0	00	30.27	30.46								
16	CLR	NC			10.00		46	13	35	26	15	25	30.19	30.39	16	OVC	250			10.00		50	15	37	25	0	00	30.18	30.37								
19	CLR	NC			10.00		36	18	30	48	8	19	30.18	30.38	19	OVC	250			10.00		43	23	35	45	10	13	30.17	30.36								
22	CLR	NC			10.00		38	19	31	47	10	20	30.22	30.42	22	BKN	250			10.00		37	28	34	70	9	15	30.16	30.36								
SUNRISE: 0634 MAR 06								SUNSET: 1808								SUNRISE: 0625 MAR 12								SUNSET: 1814													
01	CLR	NC			10.00		36	19	30	50	13	21	30.24	30.43	01	OVC	055			10.00		37	28	34	70	7	14	30.12	30.31								
04	CLR	NC			10.00		29	20	26	69	8	20	30.20	30.40	04	BKN	065			10.00		38	32	36	79	0	00	30.05	30.25								
07	CLR	NC			10.00		30	22	27	72	8	18	30.24	30.44	07	OVC	120			10.00		41	34	38	76	0	00	30.05	30.24								
10	SCT	NC			10.00		49	24	39	38	12	23	30.25	30.45	10	OVC	180			7.00		48	40	44	74	0	00	30.04	30.24								
13	OVC	250			10.00		60	28	46	30	16	20	30.17	30.37	13	OVC	140			10.00		54	43	49	67	0	00	30.01	30.20								
16	BKN	250			10.00		62	28	47	28	16	20	30.11	30.30	16	OVC	080			10.00		54	44	49	69	5	04	29.93	30.12								
19	FEW	NC			10.00		52	30	43	43	10	18	30.11	30.31	19	OVC	020			8.00	-RA	50	50	50	100	0	00	29.92	30.12								
22	CLR	NC			10.00		49	30	41	48	12	20	30.14	30.33	22	OVC	006			9.00	-RA	51	51	51	100	0	00	29.93	30.12								

# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

MARCH 2002

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
<b>SUNRISE: 0623</b>				<b>MAR 13</b>				<b>SUNSET: 1815</b>				<b>SUNRISE: 0614</b>				<b>MAR 19</b>				<b>SUNSET: 1820</b>						
01	OVC	002	1.75	-RA	BR	49	49	49	100	5	03	29.85	30.04	01	OVC	007	6.00	BR	46	45	46	96	6	01	30.07	30.27
04	VV	001	0.13	FG		47	47	47	100	6	02	29.77	29.96	04	OVC	130	7.00		45	45	45	100	6	02	30.07	30.27
07	VV	001	0.13	FG		47	47	47	100	5	02	29.73	29.92	07	OVC	100	5.00	BR	45	45	45	100	9	04	30.14	30.33
10	OVC	001	1.00	BR		52	51	52	97	9	02	29.69	29.88	10	OVC	020	10.00		46	41	44	83	8	05	30.19	30.38
13	OVC	003	2.50	BR		51	51	51	100	9	36	29.62	29.81	13	OVC	020	10.00		47	42	45	83	5	08	30.15	30.35
16	OVC	004	1.50	-RA	BR	51	51	51	100	9	33	29.59	29.78	16	OVC	090	7.00	-RA	46	43	45	89	5	07	30.14	30.34
19	OVC	004	4.00	BR		51	51	51	100	9	01	29.60	29.79	19	OVC	070	7.00		45	43	44	93	6	10	30.13	30.33
22	OVC	004	4.00	BR		50	50	50	100	6	32	29.67	29.86	22	OVC	012	8.00		44	42	43	93	7	10	30.15	30.35
<b>SUNRISE: 0622</b>				<b>MAR 14</b>				<b>SUNSET: 1815</b>				<b>SUNRISE: 0613</b>				<b>MAR 20</b>				<b>SUNSET: 1821</b>						
01	OVC	002	2.00	BR		50	50	50	100	9	31	29.71	29.90	01	OVC	065	9.00		44	42	43	93	6	11	30.09	30.29
04	VV	001	0.13	FG		48	48	48	100	3	34	29.73	29.92	04	OVC	011	2.00	-RA	43	42	43	97	5	06	30.01	30.21
07	VV	001	0.06	FG		47	47	47	100	0	00	29.83	30.03	07	OVC	011	2.00	-RA	44	44	44	100	9	11	29.92	30.11
10	OVC	002	1.50	BR		50	50	50	100	0	00	29.92	30.11	10	OVC	002	2.00	BR	46	46	46	100	7	31	29.87	30.06
13	OVC	250	10.00			66	47	56	50	5	07	29.91	30.10	13	OVC	004	4.00	BR	46	46	46	100	5	25	29.76	29.96
16	BKN	250	10.00			70	44	56	39	10	19	29.86	30.05	16	OVC	004	2.50	-RA	49	49	49	100	7	26	29.70	29.90
19	BKN	250	10.00			60	48	54	65	10	14	29.87	30.06	19	OVC	010	5.00	BR	50	50	50	100	8	27	29.72	29.92
22	BKN	250	10.00			55	48	51	77	10	15	29.90	30.09	22	OVC	100	5.00	BR	50	50	50	100	0	00	29.82	30.02
<b>SUNRISE: 0620</b>				<b>MAR 15</b>				<b>SUNSET: 1816</b>				<b>SUNRISE: 0611</b>				<b>MAR 21</b>				<b>SUNSET: 1822</b>						
01	BKN	250	7.00			53	50	51	89	7	16	29.88	30.07	01	OVC	150	10.00		49	46	47	90	15	36	29.83	30.02
04	BKN	250	7.00			53	51	52	93	9	18	29.85	30.04	04	OVC	150	10.00		47	41	44	80	9	01	29.84	30.04
07	OVC	006	4.00	BR		53	53	53	100	12	21	29.89	30.09	07	OVC	140	10.00		45	39	42	80	7	02	29.88	30.07
10	CLR	NC	10.00			66	55	60	68	15	21	29.88	30.07	10	BKN	180	10.00		48	39	44	71	7	08	29.85	30.04
13	CLR	NC	10.00			78	56	65	47	20	24	29.83	30.02	13	SCT	NC	10.00		54	40	47	59	3	VR	29.79	29.98
16	BKN	250	10.00			77	54	63	45	20	21	29.75	29.94	16	SCT	NC	10.00		58	40	49	51	12	22	29.66	29.85
19	OVC	250	10.00			71	56	62	59	12	19	29.76	29.96	19	CLR	NC	10.00		51	41	46	69	8	20	29.59	29.78
22	BKN	250	10.00			63	57	60	81	9	19	29.79	29.98	22	CLR	NC	10.00		53	41	47	64	10	25	29.61	29.80
<b>SUNRISE: 0619</b>				<b>MAR 16</b>				<b>SUNSET: 1817</b>				<b>SUNRISE: 0610</b>				<b>MAR 22</b>				<b>SUNSET: 1823</b>						
01	BKN	250	10.00			63	56	59	78	9	20	29.76	29.95	01	OVC	060	10.00		36	19	30	50	23	01	29.80	30.00
04	OVC	250	10.00			58	54	56	87	7	20	29.74	29.93	04	FEW	NC	10.00		29	9	23	43	22	35	29.92	30.11
07	OVC	250	7.00			59	57	58	93	9	21	29.76	29.95	07	CLR	NC	10.00		27	9	22	47	17	36	30.04	30.23
10	SCT	NC	10.00			73	54	62	51	15	25	29.77	29.96	10	SCT	NC	10.00		33	11	26	40	13	32	30.05	30.24
13	OVC	090	10.00			77	57	65	50	9	25	29.78	29.97	13	FEW	NC	10.00		38	9	29	30	15	31	29.99	30.19
16	OVC	250	10.00			74	59	65	60	12	26	29.78	29.97	16	CLR	NC	10.00		41	5	30	22	14	28	29.95	30.14
19	SCT	NC	10.00			66	58	61	75	8	02	29.85	30.04	19	CLR	NC	10.00		38	6	28	26	10	26	29.98	30.18
22	OVC	038	10.00			59	52	55	78	16	05	29.99	30.18	22	CLR	NC	10.00		34	9	26	35	0	00	30.05	30.25
<b>SUNRISE: 0617</b>				<b>MAR 17</b>				<b>SUNSET: 1818</b>				<b>SUNRISE: 0608</b>				<b>MAR 23</b>				<b>SUNSET: 1824</b>						
01	OVC	025	10.00			52	44	48	75	15	05	30.06	30.25	01	CLR	NC	10.00		26	16	23	66	0	00	30.07	30.27
04	OVC	030	10.00			48	35	42	61	15	04	30.11	30.31	04	CLR	NC	10.00		21	14	19	74	0	00	30.07	30.27
07	OVC	045	10.00			44	34	40	68	8	05	30.17	30.36	07	CLR	NC	10.00		24	17	22	75	0	00	30.10	30.30
10	OVC	019	7.00	-RA		43	39	41	86	10	06	30.18	30.37	10	CLR	NC	10.00		40	12	31	32	12	23	30.08	30.28
13	OVC	019	1.50	+RA	BR	43	43	43	100	8	04	30.15	30.35	13	CLR	NC	10.00		49	14	36	25	16	22	29.98	30.18
16	OVC	011	1.50	-RA	BR	45	45	45	100	5	05	30.13	30.33	16	CLR	NC	10.00		54	14	39	20	18	23	29.89	30.09
19	OVC	008	7.00			44	44	44	100	9	05	30.14	30.34	19	CLR	NC	10.00		50	17	38	27	14	21	29.88	30.08
22	OVC	006	8.00			43	43	43	100	8	02	30.13	30.33	22	CLR	NC	10.00		46	21	37	37	12	21	29.91	30.11
<b>SUNRISE: 0616</b>				<b>MAR 18</b>				<b>SUNSET: 1819</b>				<b>SUNRISE: 0607</b>				<b>MAR 24</b>				<b>SUNSET: 1825</b>						
01	OVC	005	3.00	-DZ	BR	43	43	43	100	9	35	30.09	30.29	01	CLR	NC	10.00		39	23	33	53	0	00	29.93	30.12
04	OVC	007	8.00	RA		42	42	42	100	13	01	30.00	30.19	04	CLR	NC	10.00		38	23	32	55	0	00	29.95	30.15
07	OVC	006	5.00	-RA	BR	42	42	42	100	8	35	30.02	30.22	07	BKN	250	10.00		36	27	33	70	5	16	30.00	30.20
10	OVC	006	10.00			45	45	45	100	8	35	30.00	30.19	10	BKN	250	10.00		53	24	41	32	0	00	30.02	30.22
13	OVC	007	9.00			47	46	47	97	7	33	29.99	30.19	13	FEW	NC	10.00		63	19	45	18	0	00	29.93	30.12
16	OVC	007	5.00	-DZ	BR	47	46	47	97	10	35	30.00	30.20	16	SCT	NC	10.00		68	24	49	19	13	21	29.84	30.03
19	OVC	011	9.00			47	45	46	93	8	36	30.03	30.23	19	SCT	NC	10.00		58	31	46	36	0	00	29.83	30.02
22	OVC	009	6.00	BR		47	46	47	97	6	01	30.08	30.28	22	BKN	250	10.00		53	33	44	47	0	00	29.86	30.05

# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

MARCH 2002

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	RELATIVE HUMIDITY (PCT)	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL		OBSERVATION TIME (LST)	EFF CLD AMT	RELATIVE HUMIDITY (PCT)	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL											
<b>SUNRISE: 0605</b>				<b>MAR 25</b>				<b>SUNSET: 1826</b>				<b>SUNRISE: 0556</b>				<b>MAR 31</b>				<b>SUNSET: 1831</b>																
01	OVC	250		10.00	50	36	44	59	0	00	29.87	30.06	01	OVC	030		3.00	-RA	BR	54	53	53	97	12	01	29.83	30.02									
04	OVC	250		10.00	48	41	45	77	9	19	29.88	30.07	04	OVC	030		6.00	-RA	BR	51	50	51	96	10	05	29.86	30.05									
07	OVC	200		10.00	48	42	45	80	0	00	29.96	30.15	07	OVC	037		10.00			50	49	49	96	7	06	29.92	30.11									
10	SCT	NC		10.00	55	39	47	55	0	00	30.01	30.21	10	OVC	040		10.00			51	49	50	92	7	10	29.93	30.12									
13	OVC	250		10.00	65	41	53	42	0	00	29.98	30.18	13	OVC	013		10.00	-RA		51	49	50	92	8	06	29.90	30.09									
16	FEW	NC		10.00	70	45	57	41	9	10	29.92	30.12	16	OVC	025		10.00	-RA		51	48	50	89	5	08	29.77	29.97									
19	CLR	NC		10.00	52	45	48	77	6	10	29.96	30.15	19	OVC	021		5.00	-RA	BR	50	50	50	100	6	07	29.69	29.88									
22	OVC	011		8.00	48	47	47	96	8	09	30.03	30.22	22																							
<b>SUNRISE: 0604</b>				<b>MAR 26</b>				<b>SUNSET: 1826</b>																												
01	OVC	007		5.00	47	47	47	100	10	05	30.06	30.25																								
04	OVC	003		1.50	44	44	44	100	7	05	30.01	30.21																								
07	OVC	002		0.25	44	44	44	100	9	02	30.02	30.22																								
10	OVC	002		0.25	46	46	46	100	0	00	30.01	30.21																								
13	OVC	250		9.00	59	52	55	78	7	14	29.87	30.06																								
16	OVC	150		7.00	65	58	61	78	3	VR	29.77	29.96																								
19	OVC	150		10.00	69	63	65	81	16	17	29.68	29.88																								
22	OVC	011		2.00	52	52	52	100	7	35	29.76	29.96																								
<b>SUNRISE: 0602</b>				<b>MAR 27</b>				<b>SUNSET: 1827</b>																												
01	OVC	070		8.00	53	53	53	100	0	00	29.73	29.92																								
04	OVC	120		6.00	53	53	53	100	0	00	29.71	29.91																								
07	SCT	NC		10.00	47	43	45	86	10	01	29.82	30.01																								
10	FEW	NC		10.00	51	40	46	66	14	03	29.86	30.05																								
13	OVC	042		10.00	53	38	46	57	10	04	29.85	30.04																								
16	OVC	050		10.00	52	38	45	59	13	02	29.84	30.03																								
19	CLR	NC		10.00	46	33	40	61	13	03	29.90	30.10																								
22	CLR	NC		10.00	40	27	35	60	12	36	29.97	30.16																								
<b>SUNRISE: 0601</b>				<b>MAR 28</b>				<b>SUNSET: 1828</b>																												
01	CLR	NC		10.00	37	27	33	67	0	00	30.00	30.19																								
04	CLR	NC		10.00	34	26	31	73	0	00	29.99	30.19																								
07	CLR	NC		10.00	35	28	32	76	0	00	30.03	30.23																								
10	CLR	NC		10.00	44	28	38	53	0	00	30.07	30.26																								
13	CLR	NC		10.00	51	30	42	45	0	00	30.01	30.21																								
16	SCT	NC		10.00	53	26	42	35	0	00	29.93	30.13																								
19	OVC	250		10.00	49	31	41	50	0	00	29.92	30.12																								
22	SCT	NC		10.00	42	34	39	73	0	00	29.94	30.14																								
<b>SUNRISE: 0559</b>				<b>MAR 29</b>				<b>SUNSET: 1829</b>																												
01	BKN	120		10.00	42	39	41	89	0	00	29.96	30.16																								
04	OVC	120		9.00	43	40	42	89	0	00	29.95	30.15																								
07	SCT	NC		5.00	43	41	42	93	0	00	29.98	30.17																								
10	CLR	NC		10.00	56	46	51	70	0	00	29.97	30.16																								
13	CLR	NC		10.00	66	49	57	54	12	19	29.88	30.08																								
16	FEW	NC		10.00	69	50	58	51	18	20	29.80	29.99																								
19	SCT	NC		10.00	64	51	57	63	10	17	29.76	29.95																								
22	BKN	250		10.00	61	53	57	75	17	18	29.75	29.95																								
<b>SUNRISE: 0558</b>				<b>MAR 30</b>				<b>SUNSET: 1830</b>																												
01	OVC	200		10.00	61	58	59	90	15	19	29.71	29.90																								
04	OVC	150		10.00	63	59	61	87	15	18	29.69	29.88																								
07	OVC	150		10.00	63	59	61	87	14	22	29.72	29.92																								
10	OVC	150		10.00	68	57	62	68	18	24	29.78	29.97																								
13	OVC	200		10.00	75	55	63	50	10	27	29.76	29.95																								
16	BKN	065		10.00	76	56	64	50	9	24	29.74	29.93																								
19	OVC	080		10.00	70	58	63	66	6	20	29.77	29.96																								
22	OVC	060		10.00	65	56	60	73	7	07	29.80	29.99																								

## 3-HOURLY OBSERVATION NOTES

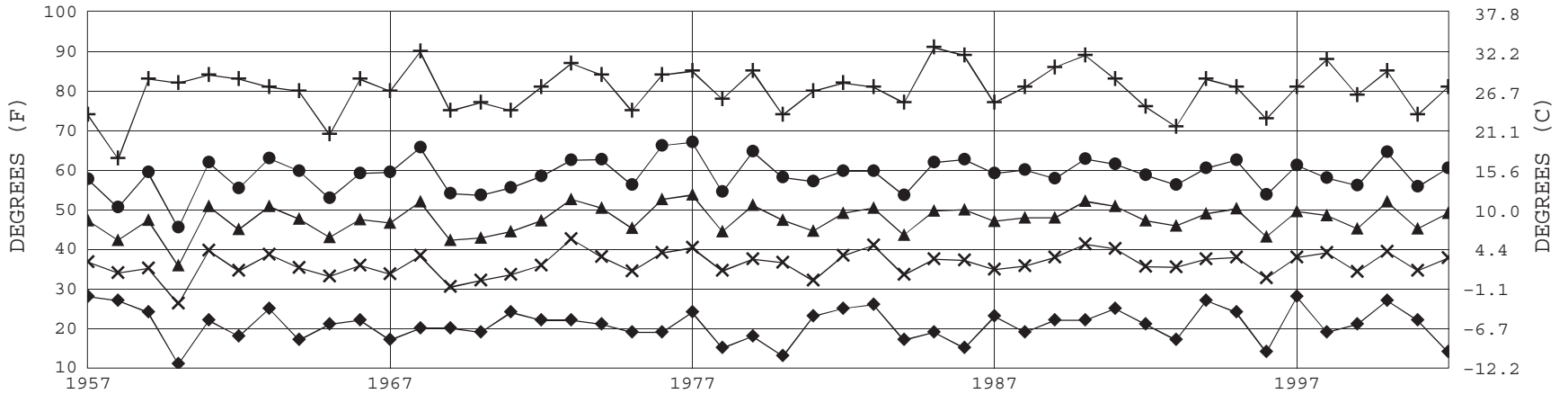
Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8. Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC = No ceiling detected. & = Original observation contained 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)	DIRECTION	SPEED	DIRECTION
							STATION	SEA LEVEL					
01			45	37	42	77	29.97	30.17	8.54	8	1	3	
02			44	37	42	78	29.97	30.17	8.28	8	1	6	
03			43	37	41	79	29.97	30.16	8.16	7	1	1	
04			42	36	40	79	29.97	30.17	7.96	6	1	1	
05			42	35	39	80	29.98	30.18	8.05	7	2	2	
06			42	35	39	80	30.00	30.19	7.92	6	1	34	
07			41	36	39	82	30.01	30.21	7.76	6	1	1	
08			44	36	41	77	30.02	30.22	8.02	7	1	36	
09			47	36	43	70	30.03	30.22	8.44	8	1	27	
10			49	36	44	65	30.02	30.22	8.35	8	2	25	
11			51	36	45	61	30.02	30.21	8.75	8	2	25	
12			53	36	46	58	30.00	30.19	8.80	8	3	23	
13			56	37	48	55	29.97	30.16	9.00	9	3	25	
14			56	37	48	55	29.94	30.14	9.18	9	5	25	
15			58	37	49	54	29.93	30.12	9.29	10	4	24	
16			58	37	49	54	29.91	30.11	8.69	10	5	23	
17			57	38	49	55	29.91	30.10	8.87	9	3	22	
18			55	38	48	58	29.91	30.11	9.13	9	4	21	
19			53	39	47	65	29.92	30.11	9.06	9	2	17	
20			51	39	46	68	29.94	30.13	9.23	9	2	15	
21			49	39	45	70	29.95	30.15	8.77	10	2	17	
22			49	39	45	72	29.96	30.16	8.73	9	3	16	
23			47	39	44	75	29.96	30.16	8.27	8	1	17	
24			46	39	43	77	29.96	30.16	8.38	8	0	0	



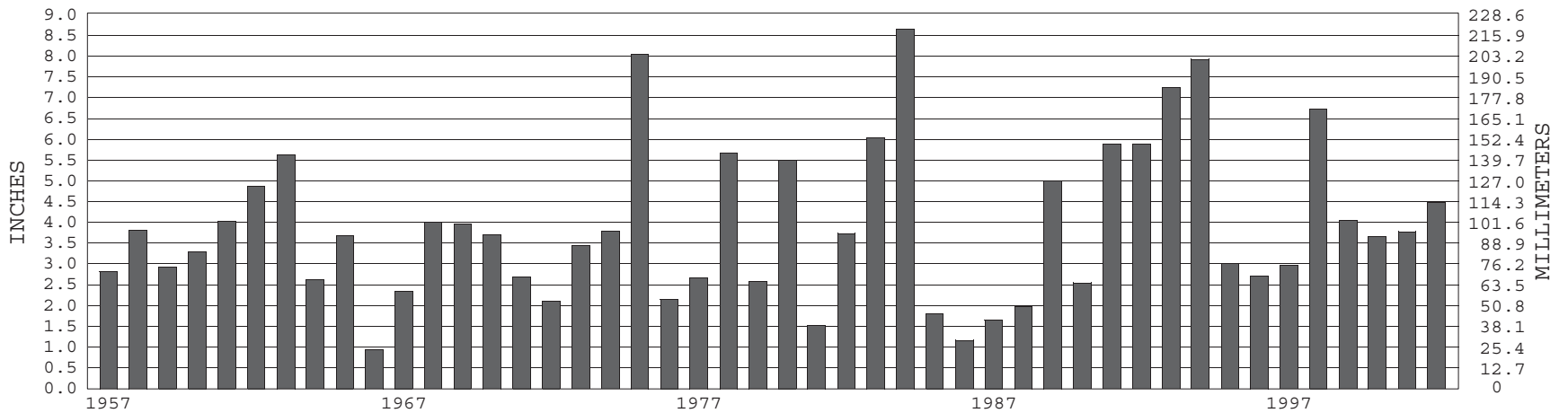
### RICHMOND, VA MARCH TEMPERATURES



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

Long-Term (1957-2002) Mean: 47.6      1961-1990 Normal: 47.7

### RICHMOND, VA MARCH PRECIPITATION



Long-Term (1957-2002) Mean Monthly Total: 3.90

1961-1990 Normal: 4.09



MARCH 2002  
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.*

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