



MARCH 2011 LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

RICHMOND, VA
RICHMOND INTERNATIONAL AIRPORT (KRIC)
 Lat:37° 30'N Long: 77° 19'W Elev (Ground) 163 Feet
 Time Zone : EASTERN WBAN: 13740 ISSN#: 0198-537X



Date 1	Temperature °F						Deg Days BASE 65°		WEATHER 10	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								Date 24
	MAXIMUM 2	MINIMUM 3	AVERAGE 4	DEP FROM NORMAL 5	AVERAGE DEW PT 6	AVERAGE WET BULB 7	HEATING 8	COOLING 9		0700 LST 11	1300 LST 12	2400 LST 13	2400 LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
																			SPEED 20	DIR 21	SPEED 22	DIR 23		
01	52	35	44	1	23	35	21	0			0.0	0.00	30.03	30.26	5.7	02	9.1	35	01	26	36	01		
02	64	30	47	4	24	38	18	0			0.0	0.00	30.05	30.24	4.6	27	9.0	26	03	22	03	02		
03	46	30	38	-5	10	29	27	0			0.0	0.00	30.36	30.59	7.6	06	9.8	26	03	21	04	03		
04	56	28*	42	-2	28	36	23	0			0.0	0.00	30.41	30.59	5.7	15	6.4	22	15	16	14	04		
05	67	39	53	9	44	49	12	0			0.0	0.00	30.15	30.31	9.5	18	9.8	29	23	23	21	05		
06	63	39	51	7	53	55	14	0	TSRA RA BR		0.0	0.71	29.61	29.83	5.3	19	13.1	41	34	32	35	06		
07	54	37	46	1	23	36	19	0			0.0	0.00	29.87	30.13	10.5	01	11.3	31	35	23	03	07		
08	55	29	42	-3	23	35	23	0			0.0	0.00	30.27	30.46	4.0	09	5.6			11	07	08		
09	53	36	45	0	41	44	20	0	RA		0.0	T	30.22	30.38	9.7	12	10.5	29	15	23	14	09		
10	63	48	56	11	53	54	9	0	TS TSRA RA FG BR		0.0	1.63	29.73	29.87	10.3	17	12.7	61*	25	40	27	10		
11	51	40	46	0	32	40	19	0			0.0	0.00	29.68	29.90	8.5	28	9.0	18	29	15	30	11		
12	66	32	49	3	30	42	16	0			0.0	0.00	29.82	30.00	11.1	23	11.4	32	23	23	22	12		
13	76	45	61	14	30	46	4	0			0.0	0.00	29.90	30.09	4.0	29	10.1	29	29	22	29	13		
14	55	36	46	-1	29	39	19	0	RA		0.0	T	30.16	30.36	5.6	04	6.5	26	05	18	02	14		
15	53	37	45	-3	35	41	20	0	RA BR		0.0	0.30	30.19	30.36	6.0	12	6.9	23	14	18	13	15		
16	63	44	54	6	44	48	11	0	RA BR		0.0	0.46	29.96	30.15	3.5	35	4.4	20	27	16	35	16		
17	66	41	54	6	38	47	11	0			0.0	0.00	30.05	30.24	2.3	22	4.9	20	03	15	03	17		
18	84*	48	66*	18	46	55	0	1	RA SQ		0.0	T	29.85	30.02	5.7	25	7.6	52	33	39	33	18		
19	68	46	57	8	37	50	8	0	RA		0.0	0.06	30.01	30.26	8.5	02	9.8	30	03	24	02	19		
20	57	39	48	-1	31	41	17	0	RA		0.0	0.01	30.35	30.54	4.1	11	7.6	22	09	14	16	20		
21	77	45	61	12	48	53	4	0	TS TSRA RA BR		0.0	0.65	29.96	30.11	11.7	23	13.0	31	36	25	36	21		
22	70	51	61	11	50	55	4	0	RA		0.0	T	29.74	29.93	3.5	10	7.1	20	07	16	07	22		
23	69	47	58	8	47	51	7	0	TS TSRA RA		0.0	0.02	29.52	29.67	3.4	16	9.1	55	22	41*	20	23		
24	55	42	49	-1	40	45	16	0	RA BR		0.0	0.03	29.49	29.73	9.3	01	10.0	35	36	26	35	24		
25	53	33	43	-8	26	37	22	0			0.0	0.00	29.82	30.01	2.6	33	6.9	20	23	16	35	25		
26	48	40	44	-7	23	36	21	0			0.0	0.00	29.83	30.03	4.7	05	6.4	22	04	18	03	26		
27	41	32	37*	-15	30	34	28	0	RA DZ SN PL BR		0.0	T	29.83	30.03	4.2	01	6.7	18	04	15	04	27		
28	51	32	42	-10	17	32	23	0			0.0	0.00	29.90	30.10	5.1	36	5.9	17	33	13	33	28		
29	58	29	44	-8	16	34	21	0			0.0	0.00	29.99	30.20	3.0	36	5.8	18	30	14	01	29		
30	47	41	44	-9	35	40	21	0	RA BR		0.0	0.20	29.88	30.05	5.2	09	7.3	24	13	18	13	30		
31	45	40	43	-10	40	41	22	0	RA DZ BR		0.0	0.09	29.57	29.74	6.6	01	7.0	17	07	13	03	31		
58.9		38.4	48.7	☼	33.7	42.5	16.1	0.0	< MONTHLY AVERAGES TOTALS >			T	4.28	29.94	30.13	0.6	06	8.4	< MONTHLY AVERAGES					
0.5	1.4	1.0	<-----DEPARTURE FROM NORMAL----->								0.19	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3												
DEGREE DAYS									GREATEST 24-HR PRECIPITATION : 1.63 DATE : 10				SEA LEVEL PRESSURE				DATE TIME							
MONTHLY									GREATEST 24-HR SNOWFALL : T DATE : 27				MAXIMUM : 30.68				04 0855							
TOTAL DEPARTURE									GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.42				23 1854							
SEASON TO DATE									NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0		MINIMUM TEMP <= 32 : 8		PRECIPITATION >= 0.01 INCH : 12							
HEATING : 500 -28 3578 1									MAXIMUM TEMP <= 32 : 0		MINIMUM TEMP <= 0 : 0		PRECIPITATION >= 0.10 INCH : 7		SNOWFALL >= 1.0 INCH : 0									
COOLING : 1 -7 2 -7									THUNDERSTORMS : 4		HEAVY FOG : 0													

**MARCH 2011
RICHMOND, VA**

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
MARCH 2011

WBAN # 13740

Date	FOR HOUR (LST) ENDING AT												Date	FOR HOUR (LST) ENDING AT												Date	Sum of Hourly Data	2400 LST Water Equiv.
	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													01												01	0.00	0.00	
02													02												02	0.00	0.00	
03													03												03	0.00	0.00	
04													04												04	0.00	0.00	
05													05												05	0.00	0.00	
06					T						T	0.05	06	0.04	T	0.24	0.08	0.01	T		0.26	0.01	0.01	0.01	T	06	0.71	0.71
07													07												07	0.00	0.00	
08													08												08	0.00	0.00	
09													09							T	T	T	T		09	T	T	
10	T	0.06	0.05	0.07	0.12	0.06	0.02	0.01	0.02	0.01	0.11	0.17	10	0.14	0.05	0.35	0.02	T	T	0.35	T	0.02	T		10	1.63	1.63	
11													11												11	0.00	0.00	
12													12												12	0.00	0.00	
13													13												13	0.00	0.00	
14													14												14	T	T	
15													15						T	T	T		0.01	0.29	15	0.30	0.30	
16	0.38	0.03	0.02	0.03	T								16												16	0.46	0.46	
17													17												17	0.00	0.00	
18													18												18	T	T	
19	0.06	T											19												19	0.06	0.06	
20													20						T	T	0.01	T	T		20	0.01	0.01	
21							0.15	T					21								0.46	0.04			21	0.65	0.65	
22													22											T	22	T	T	
23	0.01	T											23							T	0.01	T	T	T	23	0.02	0.02	
24													24												24	0.03	0.03	
25													25												25	0.00	0.00	
26													26												26	0.00	0.00	
27	T	T	0.01	0.02	0.03	0.02	T	0.02	0.02	T			27												27	0.12	0.12	
28													28												28	0.00	0.00	
29													29												29	0.00	0.00	
30													30	T			T	T	0.02	0.03	0.05	0.04	0.02	0.01	0.02	30	0.20	0.20
31	T	T	0.01	T									31				T	T	0.01	T	0.03	T	0.02	0.02	31	0.09	0.09	

* Indicates sum of Hourly and Daily disagree.

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.29	0.44	0.47	0.49	0.50	0.50	0.50	0.55	0.63	0.67	0.68	0.70
Ending Date	10	21	21	21	21	21	21	16	16	16	16	16
Ending Time (Hr/Min)	1805	1958	2000	2008	2010	2010	2010	0028	0042	0053	0127	0149

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. 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.

Date and time are not entered for TRACE amounts.

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		
DESCRIPTOR	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 Unkown Precipitation		

Intensity (as indicated on pages 4 to 6):
'+' = Heavy '' = Moderate '-' = Light

RICHMOND, VA MARCH 2011

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:

Station Augmentation-SANDSTON COOP
Lat/Lon:37.54417/-77.27583 Elevation:165
Distance:4 MI Dir:E
Augmented Elements:Temp, Precip, Snow
Equipment:MMTS, SRG, Snowboard

Date	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			Sky Cover	Satellite	Sky Cover	Satellite			
01							10.00	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							9.00	10.00	
06							2.00	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							7.00	10.00	
10							1.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							1.75	10.00	
16							0.75	10.00	
17							10.00	10.00	
18							8.00	10.00	
19							7.00	10.00	
20							10.00	10.00	
21							1.00	10.00	
22							10.00	10.00	
23							6.00	10.00	
24							1.50	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							2.50	10.00	
28							9.00	10.00	
29							10.00	10.00	
30							1.25	10.00	
31							1.25	10.00	
MONTHLY AVGS							7.06	10.00	
SUNSHINE (Minutes)									
Total : 0					Possible : 22283				
Percent Possible : 0									
NUMBER OF DAYS WITH : SKY CONDITION									
Clear		Partly CLDY		Cloudy		Missing			
MINIMUM VISIBILITY (MILES)									
<= .25			<= 3.0			>= 7.0			
0			9			21			

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

MARCH 2011

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)											
			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						
																														WEATHER	WEATHER				
SUNRISE: 0641						MAR 01						SUNSET: 1803						SUNRISE: 0632						MAR 07						SUNSET: 1809					
01	BKN	120			10.00		47	36	42	66	21	36	29.80	29.99	01	BKN	120			10.00		38	35	37	89	16	34	29.61	29.80						
04	CLR	NC			10.00		39	26	34	60	16	36	29.91	30.10	04	FEW	033			10.00		38	32	36	79	9	34	29.73	29.92						
07	FEW	150			10.00		35	22	30	59	15	01	30.03	30.23	07	FEW	035			10.00		37	27	33	67	13	35	29.85	30.04						
10	FEW	250			10.00		41	22	34	47	10	05	30.13	30.32	10	CLR	NC			10.00		44	26	37	49	18	02	29.95	30.15						
13	FEW	250			10.00		48	22	38	36	9	01	30.13	30.32	13	FEW	250			10.00		51	19	39	28	14	03	29.95	30.15						
16	FEW	250			10.00		52	17	39	25	5	VR	30.12	30.31	16	BKN	250			10.00		53	16	39	23	15	01	29.97	30.17						
19	FEW	250			10.00		43	21	35	42	6	13	30.15	30.34	19	BKN	250			10.00		46	15	35	29	7	02	30.07	30.27						
22	CLR	NC			10.00		37	25	33	62	6	16	30.15	30.35	22	OVC	250			10.00		41	20	33	43	7	03	30.13	30.33						
SUNRISE: 0640						MAR 02						SUNSET: 1804						SUNRISE: 0631						MAR 08						SUNSET: 1810					
01	CLR	NC			10.00		33	27	31	79	6	21	30.13	30.32	01	FEW	250			10.00		38	19	31	46	0	00	30.16	30.36						
04	CLR	NC			10.00		31	26	29	82	5	20	30.09	30.29	04	CLR	NC			10.00		33	19	28	56	0	00	30.20	30.39						
07	CLR	NC			10.00		32	25	29	75	7	22	30.09	30.29	07	FEW	250			10.00		32	21	28	64	0	00	30.25	30.45						
10	FEW	250			10.00		48	25	39	41	14	25	30.06	30.26	10	BKN	250			10.00		46	17	36	31	11	07	30.31	30.50						
13	FEW	250			10.00		60	26	45	27	9	28	29.99	30.18	13	OVC	250			10.00		53	19	40	26	3	VR	30.29	30.49						
16	SCT	250			10.00		64	23	46	21	7	27	29.94	30.13	16	BKN	250			10.00		55	20	41	25	8	06	30.25	30.45						
19	FEW	250			10.00		59	25	45	27	6	28	29.98	30.17	19	SCT	250			10.00		46	25	38	44	8	11	30.29	30.48						
22	CLR	NC			10.00		51	19	39	28	9	04	30.11	30.31	22	SCT	250			10.00		40	34	38	79	7	13	30.33	30.53						
SUNRISE: 0638						MAR 03						SUNSET: 1805						SUNRISE: 0630						MAR 09						SUNSET: 1811					
01	CLR	NC			10.00		44	14	34	30	15	03	30.19	30.38	01	OVC	150			10.00		37	33	35	86	5	11	30.31	30.51						
04	CLR	NC			10.00		36	11	28	35	13	03	30.28	30.47	04	OVC	150			10.00		36	34	35	92	6	07	30.27	30.47						
07	FEW	250			10.00		30	9	24	41	9	04	30.38	30.58	07	OVC	023			10.00		38	36	37	93	8	08	30.28	30.48						
10	SCT	250			10.00		37	6	28	27	11	08	30.46	30.65	10	OVC	200			10.00		47	40	44	77	10	11	30.26	30.46						
13	FEW	250			10.00		44	6	32	21	9	02	30.44	30.64	13	OVC	200			10.00		52	41	47	66	14	13	30.19	30.39						
16	SCT	250			10.00		44	8	33	23	7	06	30.39	30.59	16	OVC	150			10.00		52	43	48	72	10	13	30.13	30.33						
19	SCT	250			10.00		37	12	29	36	10	11	30.43	30.63	19	OVC	060			10.00		50	45	48	83	8	12	30.09	30.29						
22	BKN	250			10.00		32	17	27	54	3	11	30.47	30.67	22	OVC	140			10.00		51	47	49	86	18	14	30.03	30.23						
SUNRISE: 0637						MAR 04						SUNSET: 1806						SUNRISE: 0628						MAR 10						SUNSET: 1811					
01	OVC	150			10.00		30	21	27	69	3	16	30.47	30.66	01	OVC	095			10.00	-RA	53	49	51	86	18	14	29.95	30.14						
04	SCT	150			10.00		29	22	27	75	0	00	30.45	30.65	04	OVC	070			5.00	RA BR	53	50	51	90	14	14	29.84	30.03						
07	BKN	250			10.00		29	23	27	78	0	00	30.47	30.67	07	OVC	036			3.00	BR	53	52	52	96	15	15	29.80	29.99						
10	SCT	250			10.00		42	28	36	58	7	17	30.47	30.66	10	OVC	014			9.00		58	55	56	90	14	17	29.74	29.93						
13	SCT	250			10.00		51	27	41	39	8	19	30.39	30.58	13	OVC	014			3.00	-RA BR	60	60	60	100	5	15	29.65	29.84						
16	OVC	250			10.00		56	31	45	39	6	16	30.31	30.51	16	OVC	022			10.00		63	60	61	90	17	16	29.50	29.70						
19	BKN	250			10.00		45	34	40	65	10	14	30.33	30.52	19	OVC	080			10.00	-RA	54	47	50	77	18	26	29.55	29.75						
22	SCT	250			10.00		40	35	38	82	6	15	30.32	30.52	22	BKN	110			10.00		50	46	48	86	8	19	29.57	29.76						
SUNRISE: 0635						MAR 05						SUNSET: 1807						SUNRISE: 0627						MAR 11						SUNSET: 1812					
01	FEW	250			10.00		41	38	40	89	3	17	30.29	30.48	01	SCT	050			10.00		47	44	46	89	6	25	29.58	29.77						
04	BKN	055			10.00		40	38	39	93	0	00	30.23	30.43	04	CLR	NC			10.00		43	39	41	86	6	26	29.60	29.79						
07	OVC	055			9.00		44	42	43	93	5	16	30.22	30.41	07	FEW	060			10.00		40	32	37	73	8	27	29.66	29.86						
10	BKN	250			10.00		59	46	52	62	11	18	30.19	30.38	10	SCT	055			10.00		48	32	41	54	9	28	29.70	29.89						
13	OVC	250			10.00		66	43	54	43	15	20	30.11	30.31	13	OVC	060			10.00		49	30	41	48	13	28	29.71	29.90						
16	OVC	200			10.00		65	45	54	49	17	17	30.04	30.23	16	OVC	060			10.00		50	29	41	44	10	28	29.71	29.91						
19	OVC	250			10.00		61	47	54	60	11	17	29.99	30.19	19	SCT	250			10.00		44	30	38	58	6	24	29.77	29.96						
22	OVC	200			10.00		59	49	54	70	10	18	29.97	30.16	22	CLR	NC			10.00		43	28	37	56	8	30	29.83	30.03						
SUNRISE: 0634						MAR 06						SUNSET: 1808						SUNRISE: 0625						MAR 12						SUNSET: 1813					
01	OVC	046			10.00		59	49	54	70	10	17	29.91	30.11	01	CLR	NC			10.00		40	27	35	60	7	27	29.85	30.05						
04	OVC	070			10.00		58	54	56	87	10	18	29.82	30.01	04	CLR	NC			10.00		36	27	33	70	7	24	29.85	30.05						
07	OVC	013			10.00		59	56	57	90	15	19	29.78	29.97	07	SCT	250			10.00		37	28	34	70	6	25	29.90	30.09						
10	OVC	019			10.00		62	57	59	84	11	18	29.72	29.91	10	BKN	250			10.00		48	30	40	50	9	24	29.88	30.08						
13	OVC	027			10.00		63	59	61	87	11	18	29.58	29.77	13	BKN	250			10.00		58	29	45	33	15	24	29.82	30.01						
16	OVC	080			10.00	-RA	62	59	60	90	15	20	29.44	29.64	16	SCT	250			10.00		65	33	50	30	20	23	29.72	29.91						
19	OVC	030			10.00		62	59	60	90	0	00	29.39	29.57	19	SCT	250			10.00		60	33	47	36	14	22	29.71	29.90						
22	OVC	024			3.00	-RA BR	42	39	41	89	14	32	29.56	29.75	22	FEW	250			10.00		56	34	46	44	13	22	29.75	29.95						

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

MARCH 2011

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)											
			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: 0624						MAR 13						SUNSET: 1814						SUNRISE: 0615						MAR 19						SUNSET: 1820					
01	CLR	NC			10.00		54	34	45	47	10	23	29.75	29.95	01	OVC	090			7.00	-RA	62	60	61	93	7	05	29.83	30.01						
04	SCT	150			10.00		52	35	44	53	8	24	29.77	29.96	04	BKN	130			10.00		62	58	60	87	7	01	29.86	30.05						
07	BKN	250			10.00		58	33	47	39	8	27	29.84	30.03	07	BKN	250			10.00		59	40	50	50	14	02	29.99	30.18						
10	BKN	250			10.00		62	34	49	35	10	27	29.90	30.09	10	SCT	250			10.00		61	36	49	39	10	03	30.10	30.29						
13	BKN	250			10.00		71	20	49	14	13	29	29.87	30.07	13	CLR	NC			10.00		67	30	50	25	16	33	30.10	30.29						
16	SCT	250			10.00		74	12	49	9	13	31	29.86	30.05	16	FEW	250			10.00		67	24	48	20	8	03	30.09	30.28						
19	FEW	250			10.00		58	37	48	46	9	08	29.97	30.16	19	SCT	250			10.00		59	28	45	31	8	07	30.16	30.35						
22	CLR	NC			10.00		50	33	43	52	10	06	30.07	30.26	22	FEW	250			10.00		48	32	41	54	3	11	30.25	30.44						
SUNRISE: 0622						MAR 14						SUNSET: 1815						SUNRISE: 0613						MAR 20						SUNSET: 1821					
01	CLR	NC			10.00		43	29	37	58	8	04	30.12	30.31	01	CLR	NC			10.00		45	33	40	63	5	02	30.30	30.50						
04	CLR	NC			10.00		38	29	34	70	6	04	30.11	30.30	04	CLR	NC			10.00		43	34	39	71	11	07	30.36	30.55						
07	SCT	250			10.00		38	29	34	70	6	03	30.17	30.37	07	SCT	250			10.00		41	31	37	68	5	05	30.42	30.61						
10	SCT	250			10.00		49	27	40	43	16	02	30.21	30.40	10	FEW	250			10.00		49	28	40	44	8	09	30.44	30.63						
13	OVC	250			10.00		50	29	41	44	8	04	30.16	30.36	13	BKN	250			10.00		54	25	42	33	3	03	30.38	30.58						
16	OVC	150			10.00		51	28	41	41	6	07	30.13	30.32	16	OVC	250			10.00		56	29	44	36	7	18	30.32	30.51						
19	OVC	080			10.00		48	27	39	44	6	05	30.18	30.38	19	OVC	110			10.00	-RA	50	30	42	46	14	14	30.31	30.51						
22	OVC	100			10.00		46	31	40	56	5	14	30.22	30.41	22	OVC	120			10.00		44	38	41	80	9	17	30.30	30.50						
SUNRISE: 0621						MAR 15						SUNSET: 1816						SUNRISE: 0612						MAR 21						SUNSET: 1822					
01	BKN	250			10.00		43	31	38	63	3	09	30.22	30.42	01	OVC	055			10.00		45	37	41	74	9	18	30.22	30.41						
04	BKN	250			10.00		39	33	37	79	3	10	30.21	30.40	04	BKN	250			10.00		45	38	42	77	13	19	30.11	30.30						
07	BKN	200			10.00		39	34	37	82	3	09	30.25	30.44	07	BKN	110			9.00	-TSRA	46	38	42	74	13	21	30.06	30.25						
10	OVC	100			10.00		47	30	40	52	9	11	30.26	30.46	10	BKN	250			10.00		56	45	50	67	13	22	29.98	30.17						
13	OVC	150			10.00		52	29	42	41	9	10	30.20	30.40	13	BKN	250			10.00		73	52	61	48	20	26	29.86	30.05						
16	OVC	032			10.00		51	37	45	59	16	12	30.11	30.30	16	OVC	250			10.00		74	53	62	48	16	24	29.75	29.95						
19	OVC	024			10.00		48	38	43	68	10	14	30.11	30.31	19	OVC	250			10.00		70	54	61	57	16	24	29.71	29.91						
22	OVC	016			10.00		47	42	45	83	5	10	30.04	30.24	22	BKN	150			10.00		63	59	61	87	6	26	29.76	29.96						
SUNRISE: 0619						MAR 16						SUNSET: 1817						SUNRISE: 0610						MAR 22						SUNSET: 1823					
01	BKN	028			3.00	-RA BR	45	44	45	96	6	35	29.99	30.19	01	OVC	250			10.00		60	57	58	90	3	23	29.73	29.92						
04	OVC	004			10.00		45	43	44	93	5	33	29.94	30.14	04	BKN	250			10.00		61	55	58	81	3	28	29.70	29.89						
07	OVC	002			0.75	BR	44	43	44	96	6	34	29.95	30.14	07	OVC	250			10.00		60	55	57	84	10	04	29.76	29.95						
10	OVC	250			10.00		49	46	48	89	5	26	29.97	30.16	10	BKN	250			10.00		61	49	55	65	10	09	29.79	29.99						
13	BKN	250			10.00		60	44	52	56	11	32	29.94	30.13	13	BKN	250			10.00		65	48	56	54	5	09	29.76	29.95						
16	BKN	250			10.00		60	42	51	52	7	02	29.91	30.10	16	BKN	250			10.00		67	49	57	53	7	10	29.69	29.88						
19	BKN	070			10.00		54	46	50	75	0	00	29.95	30.14	19	SCT	250			10.00		57	46	51	67	9	12	29.71	29.91						
22	BKN	250			10.00		49	45	47	86	0	00	29.99	30.18	22	OVC	100			10.00		52	44	48	74	13	12	29.75	29.95						
SUNRISE: 0618						MAR 17						SUNSET: 1818						SUNRISE: 0609						MAR 23						SUNSET: 1824					
01	FEW	065			10.00		49	40	45	71	7	02	30.02	30.21	01	OVC	090			10.00	-RA	49	44	47	83	3	09	29.74	29.93						
04	FEW	250			10.00		45	38	42	77	0	00	30.03	30.23	04	BKN	250			10.00		47	42	45	83	0	00	29.67	29.86						
07	FEW	250			10.00		42	38	40	86	0	00	30.09	30.29	07	OVC	022			10.00		49	44	47	83	3	06	29.66	29.85						
10	FEW	250			10.00		57	39	48	51	0	00	30.14	30.34	10	OVC	018			10.00		53	45	49	74	8	14	29.56	29.75						
13	FEW	250			10.00		64	36	50	36	6	VR	30.10	30.29	13	BKN	250			10.00		61	48	54	63	9	21	29.47	29.65						
16	BKN	250			10.00		66	38	52	36	10	19	30.01	30.21	16	BKN	250			10.00		69	50	58	51	8	17	29.31	29.51						
19	BKN	250			10.00		58	39	49	49	6	21	30.00	30.19	19	BKN	050			6.00	-TSRA	65	56	60	73	32	19	29.23	29.42						
22	BKN	250			10.00		51	39	45	64	7	21	29.99	30.18	22	BKN	090			10.00	-RA	53	48	50	83	11	02	29.33	29.51						
SUNRISE: 0616						MAR 18						SUNSET: 1819						SUNRISE: 0607						MAR 24						SUNSET: 1824					
01	CLR	NC			10.00		51	39	45	64	10	21	29.92	30.11	01	OVC	150			10.00		52	49	50	90	7	27	29.31	29.50						
04	SCT	250			10.00		54	40	47	59	8	23	29.88	30.07	04	OVC	002			2.00	BR	49	48	48	96	7	36	29.33	29.51						
07	BKN	250			10.00		49	41	45	74	7	20	29.89	30.08	07	OVC	003			1.50	BR	48	47	48	96	10	01	29.37	29.57						
10	FEW	200			10.00		70	45	57	41	9	24	29.87	30.06	10	OVC	065			10.00		51	46	48	83	13	01	29.49	29.68						
13	SCT	200			10.00		81	47	62	30	8	29	29.81	30.00	13	BKN	070			10.00		53	39	46	59	15	03	29.57	29.76						
16	BKN	250			10.00		82	48	62	31	10	26	29.76	29.95	16	OVC	080			10.00		52	35	44	53	11	03	29.62	29.81						
19	FEW	100			10.00		72	52	61	50	0	00	29.77	29.96	19	OVC	080			10.00		47	33	41	58	10	35	29.72	29.91						
22	BKN	090			10.00		69	52	59	55	5	27	29.79	29.98	22	OVC	070			10.00		44	31	39	60	9	01	29.78	29.98						

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

MARCH 2011

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)			
			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: 0606 MAR 25 SUNSET: 1825														
01	OVC	070				41	24	35	51	14	36	29.82	30.01	
04	FEW	065				37	24	32	59	7	01	29.84	30.03	
07	SCT	250				36	25	32	64	5	36	29.90	30.09	
10	SCT	250				44	23	36	44	3	16	29.88	30.07	
13	BKN	050				49	25	39	39	5	22	29.80	29.99	
16	OVC	200				53	26	42	35	10	25	29.74	29.94	
19	OVC	085				50	29	41	44	6	22	29.77	29.96	
22	OVC	080				48	34	42	59	0	00	29.79	29.98	
SUNRISE: 0604 MAR 26 SUNSET: 1826														
01	OVC	060				44	25	37	47	11	02	29.81	30.01	
04	OVC	060				41	19	33	41	14	03	29.84	30.03	
07	OVC	200				40	19	33	43	10	03	29.90	30.09	
10	BKN	110				44	19	35	37	8	04	29.89	30.09	
13	BKN	100				46	20	36	36	0	00	29.85	30.05	
16	OVC	055				47	21	37	36	7	02	29.80	30.00	
19	OVC	050				44	28	38	53	11	12	29.79	29.98	
22	OVC	049				41	27	36	58	6	11	29.82	30.01	
SUNRISE: 0603 MAR 27 SUNSET: 1827														
01	OVC	048				41	27	36	58	5	04	29.76	29.96	
04	OVC	025			-DZ	37	34	36	89	7	05	29.75	29.95	
07	OVC	019			-RA BR	33	31	32	92	9	04	29.83	30.03	
10	OVC	055			-DZ BR	35	31	33	85	9	04	29.87	30.06	
13	OVC	055				38	28	34	67	10	36	29.85	30.04	
16	OVC	028				40	28	35	62	0	00	29.82	30.02	
19	FEW	033				39	28	35	65	5	29	29.84	30.03	
22	CLR	NC				36	29	33	76	3	25	29.88	30.08	
SUNRISE: 0601 MAR 28 SUNSET: 1828														
01	CLR	NC				34	29	32	82	0	00	29.89	30.09	
04	BKN	250				34	28	32	79	10	34	29.88	30.07	
07	BKN	150				35	20	30	54	10	02	29.91	30.11	
10	OVC	130				39	14	31	36	8	02	29.95	30.15	
13	BKN	250				46	7	33	20	8	33	29.90	30.09	
16	FEW	150				51	13	37	22	5	VR	29.86	30.06	
19	CLR	NC				45	9	33	23	3	01	29.89	30.08	
22	CLR	NC				34	19	29	54	0	00	29.93	30.13	
SUNRISE: 0560 MAR 29 SUNSET: 1829														
01	CLR	NC				32	21	28	64	3	01	29.94	30.14	
04	CLR	NC				32	16	27	52	0	00	29.96	30.16	
07	FEW	150				34	18	29	52	7	02	30.03	30.22	
10	SCT	250				47	14	35	26	8	36	30.06	30.25	
13	FEW	110				54	11	39	18	9	31	30.02	30.22	
16	SCT	150				56	11	40	17	6	27	29.96	30.16	
19	SCT	200				50	17	38	27	5	04	29.98	30.18	
22	OVC	150				47	16	36	29	7	10	30.01	30.21	
SUNRISE: 0558 MAR 30 SUNSET: 1830														
01	BKN	070				45	31	39	58	6	12	30.02	30.21	
04	OVC	120				44	34	40	68	0	00	29.99	30.18	
07	OVC	120				44	31	39	60	0	00	29.97	30.16	
10	OVC	070			-RA	47	27	39	46	10	12	29.96	30.16	
13	OVC	070				43	33	39	68	14	12	29.87	30.06	
16	OVC	037			-RA	43	36	40	76	9	10	29.76	29.96	
19	OVC	011			-RA BR	42	41	42	96	6	02	29.70	29.89	
22	OVC	011			-RA BR	42	40	41	93	8	04	29.68	29.88	

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)								
			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: 0557 MAR 31 SUNSET: 1831																			
01	OVC	005				5.00			BR			40	39	40	96	8	02	29.63	29.83
04	OVC	004				4.00			BR			40	39	40	96	10	35	29.59	29.78
07	OVC	004				2.00			BR			40	38	39	93	7	36	29.61	29.81
10	OVC	006				10.00						42	40	41	93	8	02	29.62	29.81
13	OVC	011				10.00						44	40	42	86	9	35	29.58	29.77
16	OVC	007				5.00			BR			44	41	43	89	8	02	29.49	29.68
19	OVC	005				1.50			-DZ BR			43	42	43	96	5	02	29.47	29.66
22	OVC	005				2.00			-RA BR			43	41	42	93	3	05	29.44	29.62

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, W = 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.

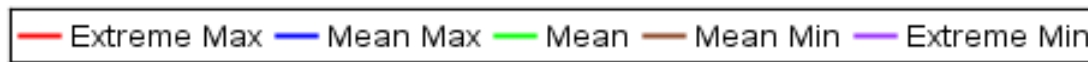
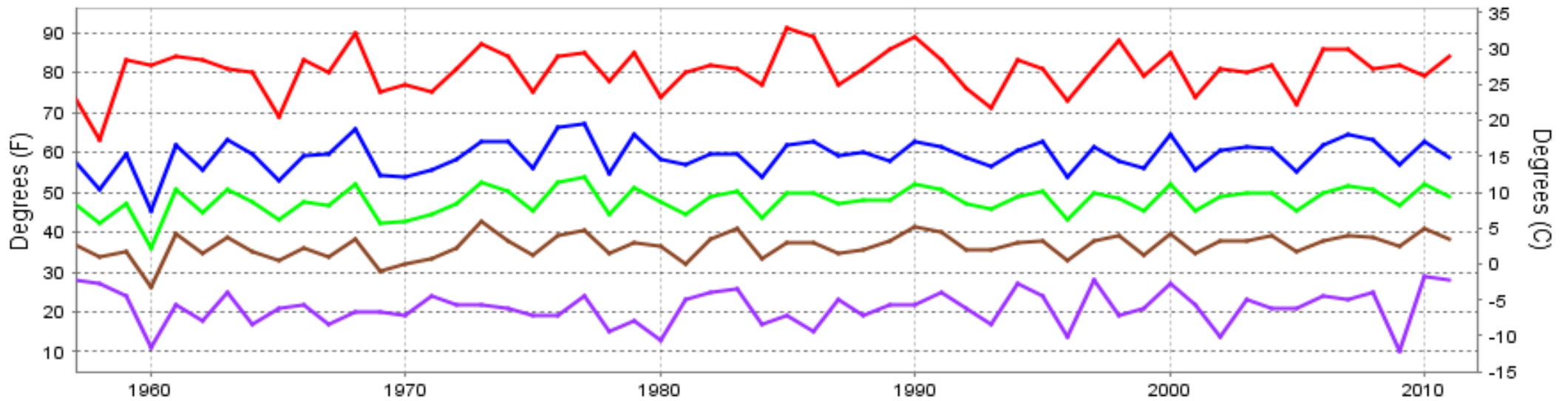
& = Original observation contained additional weather elements.

See page 3 for additional notes.

SUMMARY BY HOUR

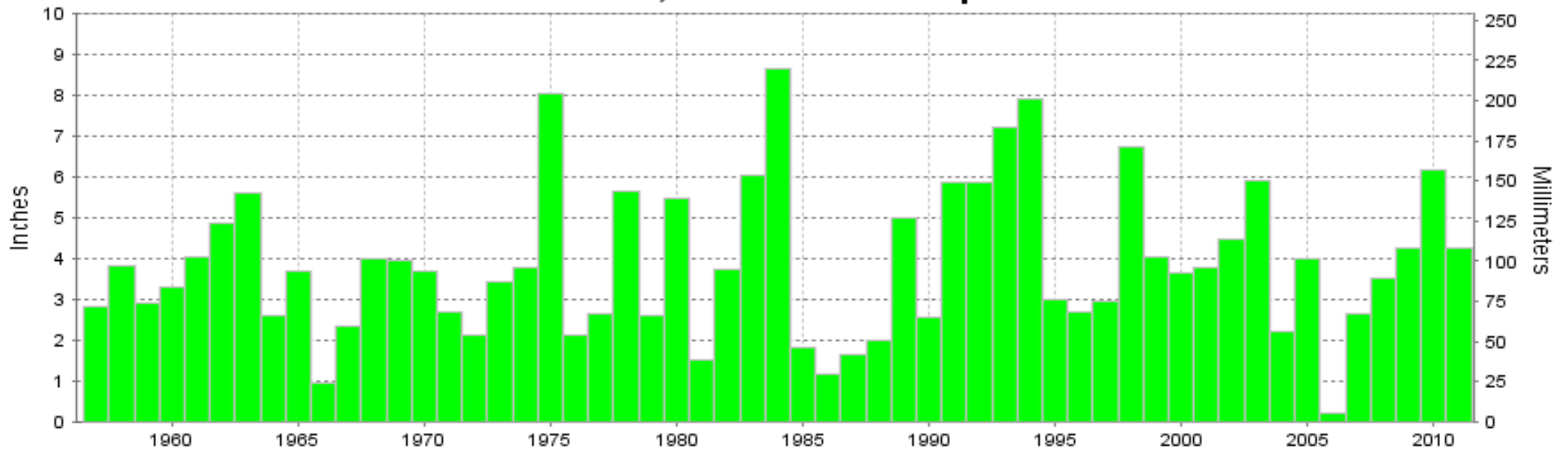
HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		VISIBILITY (Miles)	WIND SPEED (MPH)	SPEED	DIRECTION
							STATION	SEA LEVEL				
01			45	35	41	71	29.94	30.14	9.48	8	1	03
02			44	35	40	72	29.94	30.13	9.65	7	1	36
03			43	35	40	74	29.94	30.13	9.61	7	1	35
04			42	34	39	75	29.94	30.13	9.23	7	2	02
05			42	34	39	74	29.95	30.14	9.19	7	2	03
06			42	33	38	73	29.96	30.15	9.19	7	2	03
07			42	33	38	73	29.98	30.17	8.64	8	2	03
08			44	34	40	68	29.99	30.18	8.82	9	3	06
09			47	33	41	62	29.99	30.19	9.42	10	2	06
10			50	33	43	55	29.99	30.19	9.97	10	2	06
11			52	33	44	52	29.99	30.18	9.74	9	1	01
12			54	32	45	48	29.97	30.16	9.49	9	2	33
13			56	32	45	45	29.95	30.14	9.77	10	2	31
14			57	32	46	44	29.92	30.11	9.87	9	2	32
15			57	32	46	44	29.90	30.09	9.39	9	2	31
16			58	32	47	44	29.89	30.08	9.84	10	1	36
17			57	33	46	46	29.89	30.08	9.81	10	1	34
18			54	34	46	50	29.89	30.09	9.50	9	2	04
19			52	35	44	55	29.90	30.10	9.31	9	2	04
20			49	35	43	60	29.92	30.12	8.85	8	2	03
21			48	35	43	63	29.93	30.13	9.47	8	2	03
22			47	35	42	67	29.94	30.13	9.32	7	2	05
23			46	35	41	69	29.94	30.13	9.42	8	2	04
24			45	35	41	70	29.94	30.13	9.12	8	2	33

RICHMOND, VA MARCH Temperatures



Long-Term (1957-2011) Mean: 47.9
1971-2000 Normal: 47.7

RICHMOND, VA MARCH Precipitation



Long-Term (1957-2011) Mean Monthly Total: 3.87

1971-2000 Normal: 4.09



MARCH 2011
RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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