



OCTOBER 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) 164 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	1300 LST	2400 LST	2400 LST	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
20	21	22	23	24																				
01	64	51	58	-6	45	51	7	0	RA	0		0.0	0.03	29.60	29.81	7.3	32	8.2	23	33	18	34	01	
02	58	49	54	-9	39	47	11	0	RA	0		0.0	T	29.72	29.93	9.4	28	9.9	28	29	21	30	02	
03	60	48	54	-9	44	49	11	0	RA	0		0.0	0.02	29.86	30.06	4.2	27	5.8	24	10	17	30	03	
04	71	48	60	-2	48	53	5	0	RA	0		0.0	T	29.96	30.16	6.8	31	7.5	24	30	20	30	04	
05	77	51	64	2	48	55	1	0		0		0.0	0.00	30.01	30.21	5.3	33	5.8	20	22	15	31	05	
06	72	50	61	-1	50	54	4	0		0		0.0	0.00	30.15	30.36	3.7	02	4.0	16	03	14	03	06	
07	74	47	61	0	48	53	4	0	MIFG	0		0.0	0.00	30.24	30.44	0.7	09	1.5	11	09	9	09	07	
08	74	49	62	1	49	54	3	0		0		0.0	0.00	30.30	30.50	1.8	05	2.8	15	03	10	11	08	
09	78	48	63	2	51	56	2	0		0		0.0	0.00	30.24	30.41	1.3	02	1.9	20	22	8	06	09	
10	78	54	66	5	57	61	0	1		0		0.0	0.00	30.06	30.24	3.1	04	3.4	18	14	8	07	10	
11	71	62	67	7	60	62	0	2	RA BR	0		0.0	0.03	29.91	30.08	5.1	03	5.6	18	03	15	04	11	
12	68	65	67	7	65	66	0	2	TSRA RA DZ FG+ FG BR	0		0.0	0.71	29.71	29.89	7.7	10	8.1	23	10	18	11	12	
13	81	67	74*	15	68	69	0	9	RA DZ FG+ BR	0		0.0	0.02	29.51	29.67	7.5	15	8.4	22	15	16	14	13	
14	75	51	63	4	52	58	2	0	RA	0		0.0	T	29.40	29.61	9.3	24	11.1	36	24	26	25	14	
15	73	52	63	5	39	51	2	0		0		0.0	0.00	29.65	29.87	11.7	25	12.2	36	27	29	27	15	
16	72	43	58	0	43	51	7	0		0		0.0	0.00	29.80	29.98	8.3	21	8.9	24	20	21	19	16	
17	82*	61	72	14	52	59	0	7		0		0.0	0.00	29.64	29.83	6.3	23	7.4	26	25	20	24	17	
18	81	58	70	12	58	62	0	5	RA	0		0.0	T	29.62	29.80	3.5	17	4.1	21	18	15	18	18	
19	70	61	66	8	64	65	0	1	RA DZ BR	0		0.0	0.21	29.29	29.45	2.9	06	8.9	36	22	29	21	19	
20	63	51	57	0	43	49	8	0		0		0.0	0.00	29.42	29.67	16.4	22	16.9	36	23	30	21	20	
21	66	46	56	0	42	49	9	0		0		0.0	0.00	29.82	30.03	3.7	28	7.1	20	25	15	25	21	
22	64	46	55	-1	42	48	10	0		0		0.0	0.00	29.95	30.14	1.7	01	2.2	20	08	10	01	22	
23	66	42	54	-2	45	49	11	0		0		0.0	0.00	29.95	30.14	1.9	15	2.4	12	17	9	22	23	
24	70	44	57	2	48	52	8	0	BR HZ	0		0.0	0.00	29.90	30.08	1.2	22	1.9		9		25	24	
25	70	44	57	2	43	50	8	0	MIFG	0		0.0	0.00	29.98	30.17	2.6	28	4.6	22	31	15	32	25	
26	77	47	62	7	48	54	3	0		0		0.0	0.00	29.79	29.95	9.3	21	9.7	25	22	21	22	26	
27	79	53	66	12	49	57	0	1	RA	0		0.0	T	29.55	29.77	7.1	25	12.2	40*	36	30*	36	27	
28	53	42	48	-6	36	41	17	0	RA BR	0		0.0	0.14	29.97	30.17	8.8	01	9.1	32	02	24	01	28	
29	45	36	41*	-13	39	40	24	0	RA DZ BR	0		0.0	1.32	29.78	29.98	11.9	34	12.8	32	32	25	34	29	
30	56	33	45	-9	30	38	20	0		0		0.0	0.00	30.06	30.30	3.0	35	3.4	17	35	13	35	30	
31	59	31*	45	-9	38	42	20	0	RA BR	0		0.0	0.31	30.12	30.31	1.9	12	3.1	20	14	16	12	31	

69.3	49.4	59.4	☼	47.8	53.1	6.4	0.9	< MONTHLY AVERAGES TOTALS >				0.0	2.79	29.85	30.03	1.9	27	6.8	< MONTHLY AVERAGES			
0.0	2.2	1.1		-----DEPARTURE FROM NORMAL -----								-0.81	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS				GREATEST 24-HR PRECIPITATION : 1.46 DATE : 28-29				SEA LEVEL PRESSURE					
MONTHLY		SEASON TO DATE		GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM : 30.55		DATE 08		TIME 0848	
TOTAL DEPARTURE		TOTAL DEPARTURE		GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.30		DATE 19		TIME 1854	
HEATING :	197	-28	214	-39	NUMBER OF ->		MAXIMUM TEMP >= 90 : 0	MINIMUM TEMP <= 32 : 1	PRECIPITATION >= 0.01 INCH: 9				
COOLING :	28	-5	1898	470	DAYS WITH	MAXIMUM TEMP <= 32 : 0	MINIMUM TEMP <= 0 : 0	PRECIPITATION >= 0.10 INCH: 5					
						THUNDERSTORMS : 1	HEAVY FOG : 2	SNOWFALL >= 1.0 INCH : 0					

**OCTOBER 2011
RICHMOND, VA**

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
OCTOBER 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						T	T	0.03					01												01	0.03	0.03	
02					T	T						T	02												02	T	T	
03					T	0.01	T	0.01	T	T	T		03												03	0.02	0.02	
04				T	T								04												04	T	T	
05													05												05	0.00	0.00	
06													06												06	0.00	0.00	
07													07												07	0.00	0.00	
08													08												08	0.00	0.00	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11			T	T								11	0.03	0.03	
12	T	0.08	0.13	T				0.01	0.03	0.06	0.19	0.02	12	0.02	0.07	0.09	T						T	0.03	12	0.71	0.71	
13	T	T	T	T	T	T							13						0.01				T	T	13	0.02	0.02	
14						T							14						0.01	0.01					14	T	T	
15													15												15	0.00	0.00	
16													16												16	0.00	0.00	
17													17												17	0.00	0.00	
18													18												18	T	T	
19	0.03	T	0.03	0.03	0.03	0.04	T	T	0.01	T			19		T	0.01	0.01	0.01	0.01				T		19	0.21	0.21	
20													20												20	0.00	0.00	
21													21												21	0.00	0.00	
22													22												22	0.00	0.00	
23													23												23	0.00	0.00	
24													24												24	0.00	0.00	
25													25												25	0.00	0.00	
26													26												26	0.00	0.00	
27													27												27	T	T	
28	T	T	T		T	T	T	T					28	T	T	T	0.01	0.02	0.03	0.01	0.03	0.01	T	0.01	0.02	28	0.14	0.14
29	0.01	0.05	0.13	0.12	0.19	0.31	0.13	0.14	0.22	0.01	T	0.01	29	T	T									29	1.32	1.32		
30													30												30	0.00	0.00	
31													31					0.08	0.16	0.03	T	0.02	0.02	T	31	0.31	0.31	

* 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)	0.10	0.14	0.16	0.17	0.19	0.26	0.32	0.42	0.49	0.52	0.61	0.65
Ending Date	12	12	12	12	29	29	29	29	29	29	29	29
Ending Time (Hr/Min)	1026	1026	1030	1030	0814	0541	0554	0541	0602	0623	0647	0647

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 OCTOBER 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:MMS, 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							10.00	10.00	
06							10.00	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							10.00	10.00	
11							5.00	10.00	
12							0.12	10.00	
13							0.12	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							9.00	10.00	
19							1.50	10.00	
20							10.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							7.00	10.00	
24							4.00	10.00	
25							5.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							3.00	10.00	
29							2.50	10.00	
30							10.00	10.00	
31							4.00	10.00	
MONTHLY AVGS							7.78	10.00	
SUNSHINE (Minutes)									
Total : 0					Possible : 20853				
Percent Possible : 0									
NUMBER OF DAYS WITH : SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
MINIMUM VISIBILITY (MILES)									
<= .25			<= 3.0				>= 7.0		
2			5				22		

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

OCTOBER 2011

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)														
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT			WET BULB	STATION				SEA LEVEL	Observation Time (LST)		Eff Cld Amt Oktas	VISIBILITY (MILES)	DRY BULB			DEW POINT	WET BULB	STATION	SEA LEVEL											
			SUNRISE: 0605								OCT 01						SUNSET: 1753							SUNRISE: 0610						OCT 07						SUNSET: 1744		
01	OVC	075			10.00							61	51	56	70	6	34	29.53	29.72	01	CLR	NC			10.00						49	46	48	89	0	00	30.20	30.40
04	OVC	080			10.00							58	49	53	72	9	34	29.53	29.72	04	CLR	NC			10.00						47	44	46	89	0	00	30.19	30.39
07	OVC	110			10.00							53	46	49	77	5	35	29.61	29.80	07	CLR	NC			10.00						50	47	49	90	0	00	30.24	30.43
10	BKN	080			10.00							58	45	51	62	10	33	29.63	29.83	10	CLR	NC			10.00						66	46	55	49	0	00	30.28	30.47
13	BKN	060			10.00							60	43	51	54	13	32	29.62	29.81	13	CLR	NC			10.00						71	48	58	44	3	15	30.25	30.44
16	BKN	150			10.00							61	42	51	50	9	27	29.64	29.83	16	CLR	NC			10.00						72	48	59	43	0	00	30.23	30.42
19	OVC	085			10.00							57	44	50	62	3	32	29.66	29.85	19	CLR	NC			10.00						62	52	57	70	8	09	30.26	30.45
22	SCT	080			10.00							52	41	47	66	8	30	29.68	29.87	22	CLR	NC			10.00						55	52	53	90	0	00	30.29	30.49
SUNRISE: 0605						OCT 02						SUNSET: 1751						SUNRISE: 0611						OCT 08						SUNSET: 1743								
01	OVC	047			10.00							51	41	46	69	10	30	29.67	29.86	01	CLR	NC			10.00						52	50	51	93	0	00	30.30	30.49
04	OVC	040			10.00							50	43	47	77	8	26	29.68	29.87	04	CLR	NC			10.00						50	48	49	93	0	00	30.30	30.49
07	BKN	110			10.00							50	42	46	74	7	30	29.70	29.89	07	CLR	NC			10.00						52	49	50	90	0	00	30.34	30.53
10	BKN	110			10.00							56	39	48	53	16	30	29.71	29.91	10	FEW	030			10.00						67	52	59	59	7	01	30.35	30.54
13	BKN	110			10.00							57	37	48	47	13	27	29.72	29.91	13	CLR	NC			10.00						73	50	60	44	6	03	30.30	30.49
16	OVC	070			10.00							56	36	47	47	15	28	29.75	29.94	16	CLR	NC			10.00						72	45	57	38	6	08	30.27	30.46
19	BKN	065			10.00							54	37	46	53	8	27	29.80	29.99	19	CLR	NC			10.00						62	47	54	58	0	00	30.28	30.47
22	BKN	095			10.00							51	39	45	64	6	23	29.82	30.01	22	FEW	250			10.00						55	48	51	77	0	00	30.31	30.50
SUNRISE: 0606						OCT 03						SUNSET: 1750						SUNRISE: 0612						OCT 09						SUNSET: 1741								
01	OVC	100			10.00							51	40	46	66	6	22	29.80	30.00	01	SCT	250			10.00						51	48	49	90	0	00	30.28	30.47
04	OVC	075			10.00							50	41	46	71	3	29	29.80	29.99	04	FEW	250			10.00						49	47	48	93	0	00	30.25	30.45
07	OVC	095			10.00							48	45	47	89	3	17	29.84	30.03	07	BKN	250			10.00						49	47	48	93	6	02	30.27	30.47
10	BKN	100			10.00							56	46	51	69	8	29	29.87	30.06	10	SCT	250			10.00						69	51	59	53	0	00	30.30	30.49
13	BKN	060			10.00							56	41	49	57	10	30	29.87	30.06	13	BKN	250			10.00						76	48	60	37	6	05	30.23	30.42
16	BKN	045			10.00							57	42	50	57	9	31	29.89	30.08	16	BKN	250			10.00						76	49	61	39	6	03	30.17	30.36
19	OVC	075			10.00							54	45	49	72	0	00	29.93	30.12	19	OVC	250			10.00						64	56	59	75	0	00	30.17	30.37
22	BKN	090			10.00							53	48	50	83	0	00	29.95	30.14	22	OVC	250			10.00						60	54	57	81	0	00	30.16	30.35
SUNRISE: 0607						OCT 04						SUNSET: 1748						SUNRISE: 0613						OCT 10						SUNSET: 1740								
01	FEW	095			10.00							49	46	48	89	3	18	29.93	30.12	01	SCT	300			10.00						58	54	56	87	0	00	30.13	30.32
04	OVC	080			10.00							51	47	49	86	3	31	29.93	30.12	04	BKN	300			10.00						56	53	54	90	0	00	30.11	30.29
07	SCT	085			10.00							51	45	48	80	5	29	29.97	30.16	07	OVC	300			10.00						56	53	54	90	5	01	30.10	30.29
10	SCT	042			10.00							64	48	55	56	13	34	30.00	30.19	10	OVC	300			10.00						71	56	62	59	3	06	30.11	30.29
13	SCT	045			10.00							69	47	57	46	16	32	29.96	30.15	13	OVC	300			10.00						77	56	64	48	5	07	30.04	30.23
16	BKN	060			10.00							71	48	58	44	18	32	29.95	30.14	16	OVC	300			10.00						76	59	66	56	5	07	30.00	30.19
19	SCT	250			10.00							62	51	56	67	7	31	29.99	30.18	19	OVC	300			10.00						69	62	65	79	3	04	29.98	30.17
22	FEW	060			10.00							59	51	55	75	6	29	30.00	30.19	22	OVC	300			10.00						66	60	62	81	0	00	29.97	30.16
SUNRISE: 0608						OCT 05						SUNSET: 1747						SUNRISE: 0613						OCT 11						SUNSET: 1738								
01	CLR	NC			10.00							57	51	54	80	8	29	30.00	30.19	01	OVC	170			10.00						63	59	61	87	3	03	29.95	30.14
04	CLR	NC			10.00							53	49	51	86	3	30	30.02	30.21	04	OVC	140			10.00						63	58	60	84	5	02	29.92	30.11
07	CLR	NC			10.00							54	49	51	83	0	00	30.05	30.24	07	OVC	130			9.00						63	59	61	87	0	00	29.94	30.13
10	CLR	NC			10.00							69	48	58	47	11	34	30.05	30.24	10	OVC	120			10.00						66	60	62	81	6	02	29.94	30.13
13	CLR	NC			10.00							75	46	59	36	9	34	30.00	30.19	13	OVC	100			10.00						70	60	64	71	0	00	29.91	30.10
16	CLR	NC			10.00							76	44	59	32	10	33	29.97	30.16	16	OVC	110			10.00						68	60	63	76	5	VR	29.87	30.06
19	CLR	NC			10.00							65	49	56	56	6	34	30.00	30.19	19	OVC	080			10.00						66	59	62	78	7	05	29.85	30.03
22	CLR	NC			10.00							59	52	55	78	6	35	30.05	30.24	22	OVC	085			8.00						66	61	63	84	5	07	29.84	30.03
SUNRISE: 0609						OCT 06						SUNSET: 1745						SUNRISE: 0614						OCT 12						SUNSET: 1737								
01	FEW	100			10.00							57	52	54	83	0	00	30.09	30.28	01	OVC	050			5.00	BR					66	64	65	93	8	06	29.79	29.98
04	CLR	NC			10.00							54	49	51	83	8	02	30.12	30.31	04	OVC	012			5.00	BR					66	65	65	97	7	06	29.76	29.95
07	CLR	NC			10.00							53	49	51	86	7	36	30.17	30.36	07	OVC	039			4.00	BR					67	65	66	93	8	09	29.74	29.93
10	CLR	NC			10.00																																	

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

OCTOBER 2011

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND RELATIVE HUMIDITY (PCT)	WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)											
			Observation Time (LST)	Eff Cld Amt Oktas		DRY BULB	DEW POINT	WET BULB			STATION	SEA LEVEL				Observation Time (LST)	Eff Cld Amt Oktas		DRY BULB	DEW POINT	WET BULB			STATION	SEA LEVEL										
			Observation Time (LST)	Eff Cld Amt Oktas		DRY BULB	DEW POINT	WET BULB			STATION	SEA LEVEL				Observation Time (LST)	Eff Cld Amt Oktas		DRY BULB	DEW POINT	WET BULB			STATION	SEA LEVEL										
SUNRISE: 0615						OCT 13						SUNSET: 1735						SUNRISE: 0621						OCT 19						SUNSET: 1727					
01	VV	002			0.12	-DZ	FG	67	67	67	100	6	09	29.59	29.78	01	OVC	110			9.00	-RA	67	65	66	93	0	00	29.52	29.70					
04	OVC	002			0.12	-DZ	FG	68	67	67	97	8	12	29.55	29.73	04	OVC	055			7.00	-RA	65	63	64	93	5	02	29.42	29.61					
07	BKN	029			2.50	BR		69	68	68	97	7	15	29.55	29.74	07	BKN	030			9.00		61	58	59	90	16	03	29.36	29.54					
10	OVC	005			2.50	BR		71	69	70	93	8	16	29.53	29.72	10	OVC	006			10.00		63	61	62	93	14	03	29.29	29.48					
13	BKN	036			10.00			78	68	71	71	10	16	29.47	29.65	13	OVC	006			10.00		66	64	65	93	9	06	29.22	29.40					
16	BKN	100			10.00			76	69	71	79	9	14	29.41	29.59	16	OVC	004			3.00	BR	68	67	67	97	3	08	29.13	29.31					
19	SCT	050			10.00			71	69	70	93	9	15	29.41	29.60	19	OVC	009			4.00	BR	69	68	68	97	9	18	29.12	29.30					
22	SCT	050			10.00			69	67	68	93	8	17	29.44	29.61	22	OVC	040			7.00		69	67	68	93	10	20	29.15	29.33					
SUNRISE: 0616						OCT 14						SUNSET: 1734						SUNRISE: 0622						OCT 20						SUNSET: 1726					
01	CLR	NC			10.00			66	64	65	93	6	17	29.41	29.58	01	BKN	032			10.00		60	53	56	78	17	20	29.21	29.39					
04	OVC	210			10.00			65	63	64	93	8	17	29.36	29.54	04	BKN	050			10.00		56	45	50	67	21	23	29.29	29.48					
07	BKN	060			10.00			64	61	62	90	9	19	29.36	29.54	07	SCT	050			10.00		51	45	48	80	17	20	29.39	29.58					
10	BKN	100			10.00			70	60	64	71	18	23	29.36	29.54	10	FEW	020			10.00		57	42	50	57	21	23	29.47	29.65					
13	BKN	150			10.00			73	49	59	43	24	25	29.36	29.54	13	BKN	055			10.00		60	38	49	44	22	22	29.47	29.66					
16	SCT	080			10.00			73	40	56	30	17	25	29.39	29.58	16	BKN	065			10.00		60	38	49	44	17	22	29.52	29.71					
19	FEW	100			10.00			64	41	52	43	6	25	29.50	29.69	19	BKN	070			10.00		55	43	49	64	14	21	29.61	29.80					
22	CLR	NC			10.00			58	42	50	55	6	23	29.57	29.77	22	CLR	NC			10.00		52	43	48	72	9	24	29.69	29.88					
SUNRISE: 0617						OCT 15						SUNSET: 1733						SUNRISE: 0623						OCT 21						SUNSET: 1725					
01	CLR	NC			10.00			56	41	49	57	8	24	29.61	29.80	01	CLR	NC			10.00		51	40	46	66	9	25	29.72	29.91					
04	CLR	NC			10.00			53	42	48	66	8	22	29.62	29.81	04	CLR	NC			10.00		47	40	44	77	6	23	29.77	29.96					
07	FEW	100			10.00			55	41	48	59	7	23	29.66	29.85	07	CLR	NC			10.00		48	40	44	74	9	23	29.82	30.01					
10	CLR	NC			10.00			68	37	53	32	23	26	29.67	29.87	10	FEW	050			10.00		58	39	49	49	10	27	29.85	30.04					
13	CLR	NC			10.00			71	36	53	28	16	27	29.64	29.83	13	FEW	050			10.00		64	41	52	43	5	29	29.83	30.02					
16	CLR	NC			10.00			71	34	53	26	18	26	29.65	29.84	16	SCT	045			10.00		64	42	53	45	7	34	29.84	30.03					
19	CLR	NC			10.00			62	41	51	46	9	22	29.70	29.89	19	BKN	045			10.00		58	46	52	65	5	04	29.89	30.08					
22	CLR	NC			10.00			59	41	50	51	10	25	29.77	29.96	22	OVC	050			10.00		56	45	50	67	7	02	29.92	30.11					
SUNRISE: 0618						OCT 16						SUNSET: 1731						SUNRISE: 0624						OCT 22						SUNSET: 1723					
01	CLR	NC			10.00			56	38	47	51	9	25	29.81	30.00	01	OVC	050			10.00		54	43	49	67	6	03	29.94	30.14					
04	CLR	NC			10.00			45	40	43	83	0	00	29.84	30.03	04	OVC	055			10.00		52	42	47	69	5	02	29.94	30.13					
07	FEW	250			10.00			45	41	43	86	3	19	29.88	30.08	07	BKN	300			10.00		50	42	46	74	0	00	29.97	30.16					
10	FEW	250			10.00			63	43	53	48	9	22	29.90	30.09	10	BKN	045			10.00		58	39	49	49	8	03	29.99	30.18					
13	FEW	250			10.00			70	41	55	35	10	23	29.82	30.01	13	BKN	045			10.00		60	40	50	48	5	30	29.94	30.13					
16	FEW	250			10.00			71	44	57	38	13	20	29.73	29.93	16	SCT	045			10.00		61	41	51	48	0	00	29.91	30.10					
19	FEW	250			10.00			64	47	55	54	13	18	29.70	29.89	19	FEW	050			10.00		50	45	48	83	0	00	29.93	30.12					
22	BKN	250			10.00			65	46	55	50	14	20	29.65	29.85	22	CLR	NC			10.00		48	45	47	89	0	00	29.94	30.14					
SUNRISE: 0619						OCT 17						SUNSET: 1730						SUNRISE: 0625						OCT 23						SUNSET: 1722					
01	OVC	250			10.00			65	46	55	50	13	21	29.63	29.82	01	CLR	NC			10.00		45	42	44	89	0	00	29.94	30.13					
04	OVC	250			10.00			64	48	55	56	15	20	29.62	29.81	04	CLR	NC			8.00		43	41	42	93	0	00	29.93	30.12					
07	OVC	250			10.00			64	49	56	58	10	23	29.65	29.85	07	CLR	NC			8.00		43	40	42	89	0	00	29.97	30.16					
10	OVC	250			10.00			67	53	59	61	5	02	29.69	29.88	10	SCT	250			10.00		59	48	53	67	5	20	30.00	30.19					
13	BKN	250			10.00			79	52	63	39	11	26	29.62	29.81	13	BKN	038			10.00		64	45	54	50	0	00	29.94	30.14					
16	SCT	250			10.00			81	53	64	38	10	25	29.60	29.79	16	SCT	250			10.00		64	45	54	50	6	17	29.91	30.11					
19	SCT	250			10.00			68	58	62	71	0	00	29.63	29.82	19	SCT	250			10.00		54	47	50	77	6	14	29.94	30.14					
22	FEW	250			10.00			65	57	60	75	0	00	29.64	29.83	22	FEW	250			10.00		50	46	48	86	6	15	29.96	30.16					
SUNRISE: 0620						OCT 18						SUNSET: 1729						SUNRISE: 0626						OCT 24						SUNSET: 1721					
01	BKN	100			10.00			60	57	58	90	0	00	29.63	29.82	01	CLR	NC			9.00		50	46	48	86	0	00	29.95	30.14					
04	SCT	100			10.00			60	56	58	87	3	13	29.63	29.82	04	CLR	NC			6.00	BR	46	44	45	93	0	00	29.91	30.10					
07	SCT	300			10.00			59	56	57	90	0	00	29.66	29.85	07	BKN	230			6.00	BR	45	42	44	89	0	00	29.93	30.13					
10	BKN	300			10.00			71	57	63	61	5	22	29.67	29.85	10	BKN	230			10.00		62	50	55	65	3	VR	29.94	30.13					
13	SCT	300			10.00			78	58	66	50	9	21	29.61	29.80	13	BKN	230			10.00		68	46	56	45	5	VR	29.86	30.05					
16	FEW	300			10.00			80	60	67	51	5	18	29.58	29.76	16	SCT	250			10.00		69	49	58	49	7	25	29.82	30.01					
19	OVC	200			10.00			70	61	64	73	6	13	29.59	29.78	19	SCT	150			10.00		57	52	54	83	0	00	29.84	30.03					
22	OVC	130			10.00			71	59	64	66	8	14	29.57	29.75	22	SCT	085			10.00		56	52	54	87	0	00	29.88	30.07					

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

OCTOBER 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 Cl'd Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL			
SUNRISE: 0627						OCT 25						SUNSET: 1720					
01	CLR	NC			6.00	BR	53	51	52	93	0	00	29.91	30.11			
04	CLR	NC			6.00	MIFG	46	45	46	96	0	00	29.96	30.15			
07	CLR	NC			9.00	MIFG	45	44	45	96	0	00	30.02	30.21			
10	CLR	NC			10.00		64	40	52	42	11	33	30.06	30.25			
13	FEW	200			10.00		68	35	52	30	11	30	30.01	30.20			
16	FEW	250			10.00		67	37	52	33	5	23	29.97	30.16			
19	FEW	250			10.00		56	45	50	67	0	00	29.97	30.16			
22	CLR	NC			10.00		51	43	47	74	7	21	29.94	30.13			
SUNRISE: 0628						OCT 26						SUNSET: 1718					
01	CLR	NC			10.00		49	42	46	77	9	20	29.91	30.11			
04	CLR	NC			10.00		49	43	46	80	6	18	29.88	30.07			
07	BKN	300			10.00		49	44	47	83	8	20	29.84	30.03			
10	BKN	300			10.00		68	48	57	49	15	23	29.81	30.00			
13	BKN	300			10.00		74	48	59	40	11	21	29.73	29.93			
16	BKN	250			10.00		75	48	60	39	15	21	29.68	29.87			
19	BKN	250			10.00		63	53	57	70	8	21	29.68	29.87			
22	BKN	250			10.00		65	52	58	63	10	21	29.66	29.85			
SUNRISE: 0629						OCT 27						SUNSET: 1717					
01	BKN	210			10.00		64	50	56	61	9	23	29.61	29.80			
04	BKN	190			10.00		62	49	55	63	8	21	29.58	29.77			
07	OVC	300			10.00		58	50	54	75	5	19	29.58	29.77			
10	SCT	300			10.00		70	50	59	49	10	24	29.56	29.75			
13	BKN	110			10.00		78	51	62	39	20	22	29.47	29.66			
16	BKN	250			10.00		77	52	62	42	11	23	29.47	29.65			
19	OVC	100			10.00		74	53	62	48	8	29	29.56	29.75			
22	OVC	075			10.00		58	40	49	51	16	35	29.75	29.94			
SUNRISE: 0630						OCT 28						SUNSET: 1716					
01	OVC	070			10.00	-RA	51	34	43	52	17	36	29.87	30.06			
04	OVC	080			10.00		47	32	41	56	15	01	29.93	30.12			
07	OVC	075			10.00	-RA	44	37	41	77	8	02	30.00	30.20			
10	OVC	080			10.00		45	34	40	65	9	01	30.04	30.24			
13	OVC	075			10.00		47	36	42	66	6	04	30.02	30.21			
16	OVC	070			10.00	-RA	45	37	41	74	3	04	30.01	30.21			
19	OVC	050			7.00	-RA	42	39	41	89	5	01	29.99	30.19			
22	OVC	045			4.00	-RA BR	42	40	41	93	8	01	29.94	30.14			
SUNRISE: 0631						OCT 29						SUNSET: 1715					
01	OVC	005			5.00	-DZ BR	44	43	44	96	10	02	29.86	30.06			
04	OVC	005			4.00	RA BR	44	43	44	96	11	03	29.75	29.95			
07	OVC	060			8.00	-RA	43	41	42	93	13	01	29.70	29.89			
10	OVC	060			10.00		45	43	44	93	10	33	29.68	29.88			
13	OVC	014			2.50	-RA BR	40	38	39	93	16	33	29.70	29.90			
16	OVC	020			10.00		41	36	39	82	21	33	29.77	29.97			
19	OVC	070			10.00		40	35	38	82	11	35	29.87	30.06			
22	CLR	NC			10.00		38	33	36	82	7	31	29.90	30.09			
SUNRISE: 0632						OCT 30						SUNSET: 1714					
01	CLR	NC			10.00		35	32	34	89	7	34	29.93	30.13			
04	CLR	NC			10.00		34	31	33	89	0	00	29.99	30.19			
07	CLR	NC			10.00		34	31	33	89	5	32	30.07	30.26			
10	CLR	NC			10.00		49	31	41	50	11	35	30.13	30.32			
13	CLR	NC			10.00		54	26	42	34	3	VR	30.13	30.32			
16	FEW	250			10.00		55	23	42	29	0	00	30.12	30.31			
19	SCT	250			10.00		41	34	38	76	0	00	30.15	30.35			
22	CLR	NC			10.00		39	33	37	79	0	00	30.19	30.39			

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)						
			Observation Time (LST)	Eff Cl'd Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL			
SUNRISE: 0633						OCT 31						SUNSET: 1713					
01	CLR	NC			10.00		36	32	34	85	0	00	30.19	30.38			
04	CLR	NC			10.00		33	30	32	89	0	00	30.19	30.38			
07	SCT	250			10.00		32	29	31	89	0	00	30.19	30.38			
10	SCT	250			10.00		51	36	44	57	8	09	30.16	30.36			
13	OVC	250			10.00		58	36	48	44	11	13	30.07	30.27			
16	BKN	100			10.00		56	41	49	57	3	VR	30.05	30.24			
19	OVC	045			5.00	RA BR	50	48	49	93	7	15	30.06	30.26			
22	OVC	050			6.00	-RA BR	49	47	48	93	0	00	30.06	30.25			

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.

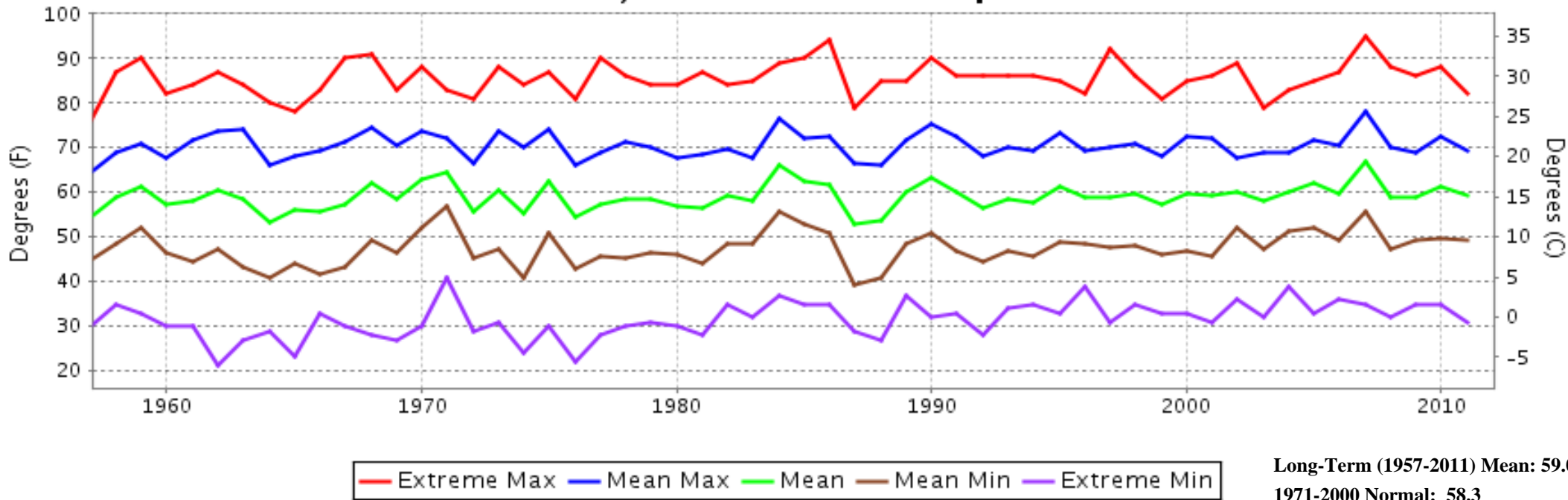
& = Original observation contained additional weather elements.

See page 3 for additional notes.

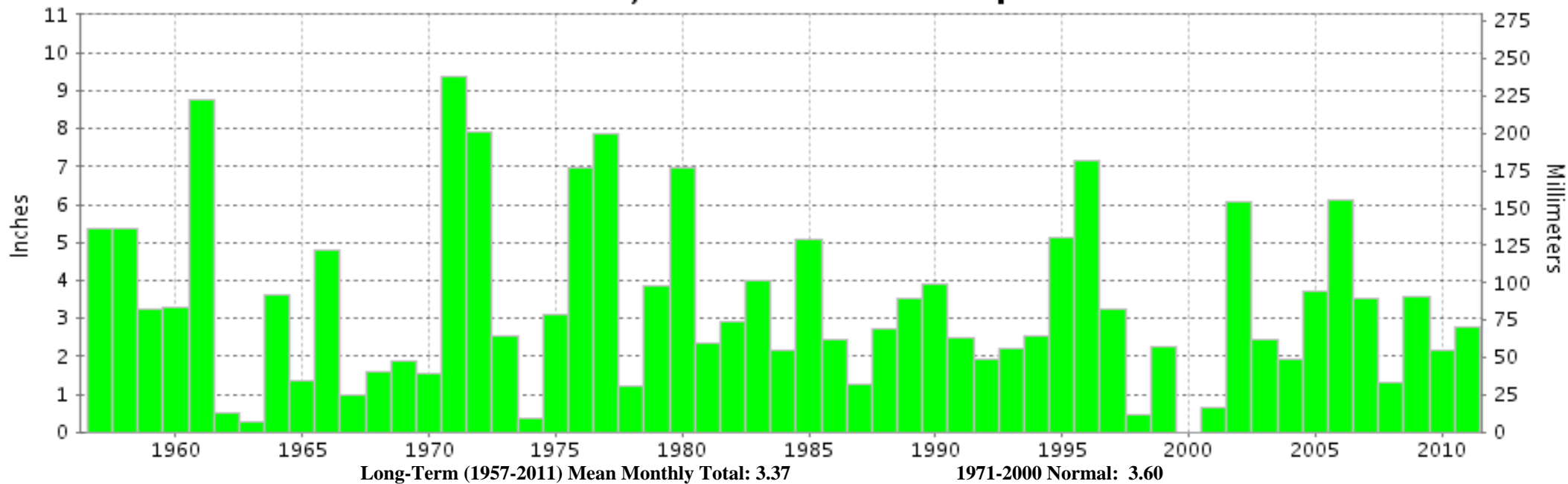
SUMMARY BY HOUR

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			55	48	51	80	29.84	30.03	9.17	5	2	27
02			54	48	51	82	29.83	30.02	8.89	5	2	27
03			53	47	50	82	29.83	30.02	8.94	6	2	27
04			52	47	50	83	29.83	30.02	8.91	5	1	26
05			52	47	49	82	29.84	30.03	8.94	6	2	27
06			52	46	49	84	29.85	30.04	8.90	6	2	26
07			52	47	49	84	29.86	30.05	9.21	5	1	26
08			55	49	52	79	29.87	30.06	8.66	7	2	27
09			59	49	54	70	29.87	30.07	9.24	8	2	27
10			62	48	55	61	29.87	30.06	9.63	9	3	27
11			64	47	55	57	29.86	30.06	9.47	8	4	27
12			66	47	56	53	29.85	30.04	9.56	9	4	27
13			67	46	56	50	29.83	30.02	9.66	10	4	27
14			67	46	56	48	29.82	30.01	9.63	10	5	27
15			68	46	56	49	29.81	30.00	9.81	9	4	27
16			67	46	56	51	29.81	30.00	9.65	9	4	27
17			65	47	56	56	29.81	30.00	9.52	7	2	27
18			61	49	55	67	29.82	30.01	9.21	6	1	26
19			60	50	54	72	29.83	30.03	9.29	5	0	24
20			59	50	54	74	29.84	30.03	9.39	6	1	26
21			57	49	53	76	29.85	30.04	9.52	6	0	24
22			57	49	53	77	29.86	30.05	9.21	5	2	27
23			56	49	52	79	29.85	30.05	9.29	5	2	27
24			55	48	52	80	29.85	30.04	9.13	5	2	27

RICHMOND, VA OCTOBER Temperatures



RICHMOND, VA OCTOBER Precipitation





OCTOBER 2011
RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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