



JULY 2010 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			
01	83	63	73	-4	47	59	0	8		0		0.0	0.00	30.01	30.20	7.1	02	7.9	30	01	16	01	01	
02	84	58	71*	-6	48	58	0	6		0		0.0	0.00	30.04	30.24	4.2	06	6.0	18	05	14	03	02	
03	87	56*	72	-5	52	61	0	7		0		0.0	0.00	30.01	30.18	2.5	24	4.4	16	22	12	22	03	
04	96	61	79	2	54	64	0	14		0		0.0	0.00	29.90	30.08	5.0	22	5.5	20	23	14	23	04	
05	100	66	83	6	58	68	0	18		0		0.0	0.00	29.85	30.04	3.1	22	4.6	20	31	12	24	05	
06	103	70	87	10	60	70	0	22		0		0.0	0.00	29.85	30.04	0.7	25	4.3	18	25	13	25	06	
07	104	72	88	11	63	72	0	23	HZ	0		0.0	0.00	29.82	30.00	4.6	03	5.7	24	01	18	02	07	
08	96	75	86	9	69	74	0	21	HZ	0		0.0	0.00	29.78	29.98	5.3	11	5.9	23	08	17	07	08	
09	93	72	83	6	68	73	0	18	RA	0		0.0	T	29.71	29.89	3.9	10	6.0	26	14	22	13	09	
10	86	72	79	1	69	72	0	14	RA BR	0		0.0	0.02	29.65	29.84	5.9	36	7.9	24	02	18	02	10	
11	95	69	82	4	59	68	0	17		0		0.0	0.00	29.71	29.90	2.7	35	5.8	18	32	15	33	11	
12	90	72	81	3	68	72	0	16	TSRA RA BR	0		0.0	0.57	29.70	29.89	7.6	18	8.0	35	18	25	18	12	
13	93	74	84	6	72	75	0	19	TS RA BR HZ	0		0.0	T	29.70	29.88	7.6	22	8.3	21	23	17	23	13	
14	93	72	83	5	68	72	0	18	TS RA	0		0.0	0.01	29.77	29.96	4.1	32	8.3	29	25	22	25	14	
15	96	71	84	6	67	73	0	19	BR HZ	0		0.0	0.00	29.85	30.03	1.2	12	4.5	15	36	12	32	15	
16	98	75	87	9	71	74	0	22	TSRA RA	0		0.0	T	29.80	29.98	6.6	24	7.0	35	25	28	26	16	
17	96	73	85	7	69	73	0	20	RA	0		0.0	T	29.80	29.98	6.9	25	7.8	26	26	21	24	17	
18	99	73	86	7	69	74	0	21	TS TSRA RA BR	0		0.0	0.17	29.78	29.96	7.8	26	8.6	32	25	25	26	18	
19	92	73	83	4	71	74	0	18	TS TSRA RA BR	0		0.0	0.13	29.74	29.93	10.5	24	11.1	29	27	23	27	19	
20	99	72	86	7	70	74	0	21	TS TSRA RA BR	0		0.0	0.17	29.83	30.01	6.2	27	7.0	35	27	25	27	20	
21	96	74	85	6	70	75	0	20	RA	0		0.0	T	29.82	30.00	8.3	27	9.1	25	29	20	29	21	
22	98	74	86	7	67	73	0	21		0		0.0	0.00	29.84	30.02	2.2	29	5.6	18	02	15	02	22	
23	101	74	88	9	72	77	0	23	HZ	0		0.0	0.00	29.83	30.00	6.2	24	7.4	23	24	18	25	23	
24	105	79	92	14	70	77	0	27		0		0.0	0.00	29.77	29.95	9.4	26	10.1	23	24	18	27	24	
25	105*	79	92*	14	69	76	0	27		0		0.0	0.00	29.73	29.92	6.8	29	9.9	32	03	25	03	25	
26	93	72	83	5	64	71	0	18		0		0.0	0.00	29.85	30.05	3.4	04	5.8	20	01	14	01	26	
27	85	69	77	-1	65	69	0	12	RA	0		0.0	0.03	29.93	30.11	3.5	21	4.2	16	20	14	27	27	
28	96	73	85	7	70	74	0	20		0		0.0	0.00	29.86	30.04	7.9	23	8.6	24	25	15	25	28	
29	101	76	89	11	71	75	0	24	TS TSRA RA SQ	0		0.0	0.05	29.72	29.90	2.9	24	6.5	47*	32	35*	32	29	
30	89	68	79	1	58	66	0	14		0		0.0	0.00	29.75	29.94	7.1	03	8.0	21	36	16	01	30	
31	87	65	76	-2	58	65	0	11	RA BR	0		0.0	0.04	29.76	29.95	2.6	20	4.1	16	16	14	15	31	

JULY 2010
RICHMOND, VA

94.8			70.7			82.8			☼	64.7			70.9			0.0		18.0		< MONTHLY AVERAGES TOTALS >				0.0		1.19		29.81		30.00		2.3		26		6.9		< MONTHLY AVERAGES			
7.3			2.4			4.9				<-----DEPARTURE FROM NORMAL----->												-3.48		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																	
DEGREE DAYS										GREATEST 24-HR PRECIPITATION : 0.57 DATE : 12										SEA LEVEL PRESSURE																					
MONTHLY					SEASON TO DATE					GREATEST 24-HR SNOWFALL : 0.0 DATE :					MAXIMUM : 30.28 02 0959					MINIMUM : 29.80 29 1554																					
TOTAL DEPARTURE					TOTAL DEPARTURE					GREATEST SNOW DEPTH : 0 DATE :					MINIMUM TEMP <= 32 : 0					PRECIPITATION >= 0.01 INCH: 9																					
HEATING : 0 0 0 0					COOLING : 559 144 1333 492					NUMBER OF DAYS WITH					MAXIMUM TEMP >= 90 : 24					MINIMUM TEMP <= 0 : 0					PRECIPITATION >= 0.10 INCH: 4																
															THUNDERSTORMS : 8					HEAVY FOG : 0					SNOWFALL >= 1.0 INCH : 0																

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
JULY 2010

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													06												06	0.00	0.00	
07													07												07	0.00	0.00	
08													08												08	0.00	0.00	
09													09												09	T	T	
10	T	T	T	T		T	0.01	0.01				T	10												10	0.02	0.02	
11													11												11	0.00	0.00	
12													12			T								12	0.57	0.57		
13	T												13											13	T	T		
14	T	0.01	T										14											14	0.01	0.01		
15													15											15	0.00	0.00		
16													16			T								16	T	T		
17													17		T	T								17	T	T		
18													18											18	0.17	0.17		
19													19											19	0.13	0.13		
20												0.01	20	0.12										20	0.17	0.17		
21													21											21	T	T		
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	0.03	0.03		
28													28											28	0.00	0.00		
29													29											29	0.05	0.05		
30													30											30	0.00	0.00		
31													31											31	0.04	0.04		

* 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)	0.22	0.30	0.31	0.31	0.31	0.33	0.37	0.46	0.57	0.57	0.57	0.57
Ending Date	12	12	12	12	12	12	12	12	12	12	12	12
Ending Time (Hr/Min)	2146	2151	2152	2152	2152	2226	2241	2301	2316	2316	2316	2316

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 JULY 2010

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							10.00	10.00	
06							9.00	10.00	
07							6.00	10.00	
08							4.00	10.00	
09							9.00	10.00	
10							4.00	10.00	
11							10.00	10.00	
12							3.00	10.00	
13							2.50	10.00	
14							9.00	10.00	
15							4.00	10.00	
16							7.00	10.00	
17							8.00	10.00	
18							7.00	10.00	
19							9.00	10.00	
20							4.00	10.00	
21							10.00	10.00	
22							8.00	10.00	
23							6.00	10.00	
24							8.00	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							7.00	10.00	
30							8.00	10.00	
31							5.00	10.00	
MONTHLY AVGS							7.66	10.00	
SUNSHINE (Minutes)									
Total : 0					Possible : 26883				
Percent Possible : 0									
NUMBER OF DAYS WITH : SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
MINIMUM VISIBILITY (MILES)									
<= .25		<= 3.0			>= 7.0				
0		2			22				

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA
JULY 2010

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			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	RELATIVE HUMIDITY (PCT)				STATION	SEA LEVEL		Observation Time (LST)	Eff Cld Amt Oktas	VISIBILITY (MILES)		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	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: 0452						JUL 01						SUNSET: 1934						SUNRISE: 0455						JUL 07						SUNSET: 1933																																																																																																																																																																																																	
01	FEW	250			10.00	65	60	62	84	3	05	29.97	30.16	01	CLR	NC			8.00	78	64	69	62	0	00	29.84	30.03	04	CLR	NC			8.00	74	64	68	71	0	00	29.82	30.01	07	SCT	150			6.00	83	65	71	55	5	01	29.86	30.04	10	SCT	250			7.00	97	64	75	34	5	06	29.85	30.03	13	SCT	250			8.00	102	60	74	25	11	34	29.81	30.00	16	FEW	060			8.00	103	59	74	23	17	36	29.78	29.96	19	CLR	NC			6.00	95	62	73	34	7	08	29.77	29.96	22	CLR	NC			10.00	86	67	73	53	0	00	29.79	29.98																																																																																																		
SUNRISE: 0452						JUL 02						SUNSET: 1934						SUNRISE: 0455						JUL 08						SUNSET: 1933																																																																																																																																																																																																	
01	CLR	NC			10.00	61	47	54	60	7	02	30.05	30.24	01	FEW	150			8.00	79	67	71	67	0	00	29.79	29.98	04	CLR	NC			7.00	77	69	72	76	0	00	29.80	29.98	07	CLR	NC			10.00	66	48	56	52	9	04	30.08	30.27	10	SCT	250			10.00	76	51	62	42	8	10	30.09	30.27	13	SCT	250			10.00	82	47	62	29	7	08	30.05	30.24	16	SCT	250			10.00	84	46	62	27	11	04	30.02	30.21	19	SCT	250			10.00	77	46	60	33	7	08	30.01	30.20	22	FEW	250			10.00	67	50	58	55	0	00	30.04	30.23																																																																																																		
SUNRISE: 0453						JUL 03						SUNSET: 1934						SUNRISE: 0456						JUL 09						SUNSET: 1933																																																																																																																																																																																																	
01	CLR	NC			10.00	62	52	56	70	0	00	30.03	30.22	01	BKN	250			10.00	75	69	71	82	5	02	29.79	29.98	04	CLR	NC			10.00	58	52	55	81	0	00	30.04	30.23	07	FEW	250			10.00	67	54	60	63	3	27	30.07	30.26	10	SCT	250			10.00	79	50	62	36	3	02	30.05	30.24	13	SCT	250			10.00	84	49	64	30	5	VR	30.00	30.19	16	FEW	250			10.00	87	50	65	28	7	25	29.94	30.13	19	FEW	250			10.00	84	47	63	28	7	26	29.92	30.11	22	FEW	250			10.00	70	55	61	59	6	17	29.92	30.11																																																																																																		
SUNRISE: 0453						JUL 04						SUNSET: 1934						SUNRISE: 0457						JUL 10						SUNSET: 1933																																																																																																																																																																																																	
01	CLR	NC			10.00	67	55	60	66	5	19	29.95	30.14	01	OVC	100			10.00	76	70	72	82	0	00	29.63	29.82	04	CLR	NC			10.00	63	55	58	75	3	20	29.93	30.12	04	OVC	110			10.00	75	71	72	87	3	16	29.61	29.80	07	CLR	NC			10.00	70	56	62	61	6	22	29.94	30.13	07	OVC	140			4.00	76	72	73	87	5	30	29.63	29.82	10	CLR	NC			10.00	85	56	67	37	3	VR	29.91	30.10	10	OVC	019			8.00	77	72	74	85	11	34	29.64	29.83	13	CLR	NC			10.00	91	52	67	26	0	00	29.88	30.07	13	OVC	200			10.00	82	70	74	67	11	36	29.66	29.85	16	CLR	NC			10.00	94	48	67	21	7	19	29.83	30.01	16	OVC	060			10.00	83	67	72	59	13	01	29.65	29.84	19	FEW	150			10.00	88	54	67	31	8	21	29.82	30.01	19	SCT	120			10.00	82	65	71	56	9	04	29.66	29.85	22	FEW	250			10.00	74	56	63	54	7	20	29.85	30.04	22	FEW	120			10.00	76	66	70	71	7	35	29.70	29.89
SUNRISE: 0454						JUL 05						SUNSET: 1934						SUNRISE: 0457						JUL 11						SUNSET: 1932																																																																																																																																																																																																	
01	FEW	250			10.00	70	57	62	64	6	23	29.87	30.05	01	CLR	NC			10.00	71	66	68	84	6	35	29.70	29.89	04	FEW	250			10.00	69	58	62	68	5	22	29.86	30.05	04	CLR	NC			10.00	70	65	67	84	7	31	29.71	29.90	07	FEW	250			10.00	73	59	64	62	3	25	29.89	30.07	07	CLR	NC			10.00	75	65	69	71	5	34	29.74	29.92	10	SCT	250			10.00	91	61	71	37	0	00	29.88	30.06	10	FEW	150			10.00	87	58	69	37	9	35	29.74	29.92	13	BKN	250			10.00	97	57	71	26	6	20	29.84	30.03	13	SCT	070			10.00	90	53	67	28	5	06	29.72	29.91	16	BKN	250			10.00	100	56	72	23	10	21	29.80	29.99	16	SCT	080			10.00	94	51	68	23	3	29	29.69	29.88	19	BKN	250			10.00	92	58	70	32	5	19	29.82	30.00	19	FEW	090			10.00	89	49	65	25	8	01	29.68	29.87	22	BKN	250			10.00	83	61	69	48	0	00	29.86	30.04	22	CLR	NC			10.00	77	65	69	67	9	14	29.72	29.90
SUNRISE: 0454						JUL 06						SUNSET: 1934						SUNRISE: 0458						JUL 12						SUNSET: 1932																																																																																																																																																																																																	
01	SCT	250			10.00	80	58	66	47	7	26	29.87	30.05	01	CLR	NC			10.00	72	67	69	84	5	15	29.71	29.90	04	FEW	250			10.00	77	58	65	52	5	28	29.86	30.04	04	BKN	085			10.00	74	68	70	82	5	19	29.71	29.89	07	CLR	NC			10.00	80	59	67	49	5	31	29.88	30.07	07	BKN	250			10.00	77	69	72	76	9	16	29.73	29.91	10	CLR	NC			10.00	96	61	73	31	0	00	29.89	30.08	10	OVC	250			10.00	85	69	74	59	8	18	29.74	29.92	13	SCT	080			10.00	101	58	73	24	5	VR	29.86	30.04	13	OVC	200			10.00	88	67	74	50	9	19	29.70	29.89	16	FEW	090			10.00	102	57	73	23	5	08	29.82	30.01	16	OVC	150			10.00	87	65	72	48	8	18	29.70	29.88	19	SCT	095			10.00	94	60	72	32	5	17	29.82	30.01	19	OVC	140			10.00	83	67	72	59	7	17	29.67	29.85	22	FEW	090			9.00	84	63	70	49	0	00	29.85	30.04	22	OVC	110			3.00	77	72	74	85	17	20	29.71	29.89

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

JULY 2010

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)						
			Observation Time (LST)	Eff Cld Amt Oktas		DRY BULB	DEW POINT	WET BULB		RELATIVE HUMIDITY (PCT)	STATION				SEA LEVEL	Observation Time (LST)		Eff Cld Amt Oktas	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL		
			VISIBILITY (MILES)	DRY BULB																							DEW POINT	WET BULB
SUNRISE: 0459 JUL 13 SUNSET: 1931						74	72	73	94	5	17	29.69	29.88	SUNRISE: 0503 JUL 19 SUNSET: 1928						73	69	70	87	7	21	29.76	29.95	
01	BKN	035				75	73	74	94	5	25	29.68	29.87	04	FEW	250				74	70	71	87	7	21	29.74	29.93	
07	OVC	007			BR	76	72	73	87	8	22	29.72	29.91	07	OVC	250				77	71	73	82	10	23	29.77	29.95	
10	OVC	021			BR	79	72	74	79	6	21	29.74	29.93	10	OVC	250				84	72	76	67	13	23	29.77	29.96	
13	BKN	250			HZ	88	71	76	57	11	24	29.72	29.90	13	OVC	250				83	77	79	82	10	25	29.74	29.93	
16	BKN	250				91	70	76	50	9	22	29.67	29.85	16	SCT	250				91	70	76	50	20	27	29.70	29.88	
19	BKN	250				86	72	76	63	8	20	29.67	29.86	19	SCT	250				89	69	75	52	11	26	29.70	29.89	
22	OVC	250				83	73	76	72	10	21	29.68	29.87	22	CLR	NC				81	71	74	72	8	23	29.76	29.95	
SUNRISE: 0459 JUL 14 SUNSET: 1931						80	72	75	77	17	24	29.72	29.91	SUNRISE: 0504 JUL 20 SUNSET: 1928						79	71	74	77	9	29	29.78	29.97	
01	OVC	085			-RA	74	70	71	87	8	23	29.69	29.88	04	CLR	NC				76	70	72	82	5	26	29.79	29.97	
04	BKN	120				76	70	72	82	9	26	29.74	29.93	07	FEW	250				77	71	73	82	3	20	29.82	30.01	
07	BKN	250				86	68	74	55	16	34	29.76	29.95	10	SCT	250				92	69	76	47	15	29	29.85	30.04	
10	BKN	250				88	66	73	48	9	02	29.79	29.98	13	BKN	250				97	69	77	40	13	25	29.83	30.02	
13	BKN	250				91	64	73	41	8	36	29.78	29.96	16	SCT	250				97	67	76	38	11	26	29.79	29.97	
16	SCT	050				86	66	73	51	6	02	29.80	29.99	19	OVC	250			-TSRA BR	79	71	74	77	5	31	29.87	30.06	
19	SCT	090				78	68	71	71	0	00	29.83	30.01	22	SCT	250				75	73	74	94	0	00	29.87	30.05	
22	FEW	090				SUNRISE: 0460 JUL 15 SUNSET: 1931						SUNRISE: 0504 JUL 21 SUNSET: 1927						76	72	73	87	6	23	29.85	30.04			
01	CLR	NC				74	67	69	79	0	00	29.84	30.03	04	SCT	250				75	69	71	82	7	25	29.83	30.02	
04	CLR	NC				74	68	70	82	3	36	29.83	30.02	07	OVC	250				79	70	73	74	9	24	29.84	30.03	
07	CLR	NC				80	68	72	67	8	36	29.88	30.07	10	OVC	250				86	71	76	61	11	26	29.84	30.02	
10	SCT	250				90	68	75	48	5	VR	29.88	30.06	13	BKN	250				93	72	78	51	13	27	29.81	30.00	
13	SCT	055				93	64	74	38	5	VR	29.85	30.04	16	BKN	250				95	68	76	41	11	30	29.78	29.96	
16	SCT	060				94	64	74	37	0	00	29.83	30.01	19	BKN	250				91	69	76	49	8	27	29.78	29.96	
19	BKN	070				89	66	74	47	5	12	29.80	29.99	22	BKN	250				84	69	74	61	11	29	29.81	29.99	
22	FEW	070				81	70	74	69	7	16	29.84	30.03	SUNRISE: 0505 JUL 22 SUNSET: 1927						80	68	72	67	7	32	29.82	30.01	
SUNRISE: 0501 JUL 16 SUNSET: 1930						78	72	74	82	5	20	29.84	30.03	01	SCT	250				76	68	71	76	0	00	29.82	30.01	
01	CLR	NC				76	72	73	87	3	22	29.83	30.01	04	CLR	NC				80	70	73	72	0	00	29.87	30.06	
04	SCT	065				79	73	75	82	5	22	29.85	30.03	07	CLR	NC				92	66	74	42	10	01	29.88	30.06	
07	FEW	100				90	72	77	56	6	26	29.83	30.01	10	SCT	250				95	63	74	35	10	28	29.85	30.04	
10	FEW	050				97	69	77	40	15	25	29.77	29.96	13	BKN	250				96	63	74	34	6	25	29.81	29.99	
13	SCT	070				93	70	77	47	16	24	29.74	29.92	16	BKN	250				93	63	73	37	5	26	29.81	29.99	
16	SCT	250				77	71	73	82	0	00	29.75	29.93	19	BKN	250				82	71	74	69	8	16	29.84	30.03	
19	BKN	250			-RA	77	70	72	79	9	24	29.78	29.97	SUNRISE: 0506 JUL 23 SUNSET: 1926						78	73	75	85	0	00	29.84	30.03	
22	BKN	250				SUNRISE: 0501 JUL 17 SUNSET: 1930						SUNRISE: 0507 JUL 24 SUNSET: 1925						75	71	72	87	3	21	29.83	30.02			
01	BKN	250				75	70	72	85	6	22	29.78	29.97	01	SCT	250				80	70	73	72	3	22	29.85	30.04	
04	BKN	250				75	71	72	87	5	24	29.79	29.98	04	SCT	250				93	73	79	52	8	24	29.86	30.04	
07	BKN	250				80	71	74	74	8	28	29.82	30.01	07	BKN	250				97	71	79	43	8	30	29.83	30.01	
10	BKN	250				88	70	76	55	0	00	29.81	30.00	10	OVC	250				100	69	78	37	7	VR	29.76	29.95	
13	BKN	250				94	71	78	47	9	23	29.79	29.97	13	OVC	250				94	74	80	52	11	20	29.78	29.97	
16	OVC	200				87	72	77	61	16	25	29.76	29.95	16	BKN	250				87	75	78	68	8	23	29.81	29.99	
19	BKN	250				82	63	70	53	10	27	29.78	29.97	SUNRISE: 0507 JUL 24 SUNSET: 1925						84	75	78	74	8	25	29.80	29.99	
22	CLR	NC				75	68	70	79	9	27	29.81	30.00	01	CLR	NC				81	75	77	82	8	25	29.78	29.97	
SUNRISE: 0502 JUL 18 SUNSET: 1929						73	68	70	84	9	26	29.80	29.98	04	FEW	250				84	75	78	74	8	27	29.81	29.99	
01	CLR	NC				74	69	71	84	7	27	29.78	29.96	07	OVC	250				95	70	77	44	8	30	29.81	29.99	
04	CLR	NC				79	69	72	72	9	30	29.81	30.00	10	SCT	250				100	68	78	35	9	29	29.78	29.97	
07	SCT	250				92	67	75	44	7	27	29.79	29.97	13	SCT	250				103	62	75	26	14	25	29.74	29.92	
10	SCT	250				95	67	76	40	9	26	29.79	29.98	16	SCT	250				99	63	75	31	11	24	29.70	29.88	
13	BKN	250				97	67	76	38	10	30	29.73	29.91	19	FEW	250				91	68	75	47	10	24	29.73	29.91	
16	BKN	250				93	68	76	44	9	25	29.74	29.93	22	CLR	NC												
19	BKN	250				79	74	76	85	7	25	29.78	29.96															
22	BKN	250																										

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA
JULY 2010

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
01	CLR	NC			JUL 25	88	74	78	63	11	26	29.76	29.95	
04	SCT	250				84	75	78	74	8	28	29.76	29.94	
07	SCT	250				86	74	78	68	8	27	29.77	29.95	
10	FEW	250				96	68	77	40	10	29	29.74	29.93	
13	SCT	250				101	64	76	30	11	29	29.67	29.86	
16	SCT	250				103	62	75	26	13	31	29.65	29.83	
19	BKN	250				87	68	74	53	11	03	29.72	29.90	
22	OVC	200				81	70	74	69	5	06	29.76	29.94	
				SUNRISE: 0508		JUL 26						SUNSET: 1924		
01	BKN	250				78	70	73	77	0	00	29.81	30.00	
04	BKN	250				77	70	72	79	3	01	29.82	30.01	
07	OVC	250				78	70	73	77	10	03	29.89	30.07	
10	BKN	250				84	64	71	51	8	03	29.91	30.10	
13	BKN	250				89	63	72	42	8	29	29.88	30.07	
16	BKN	250				92	59	71	33	11	36	29.84	30.03	
19	FEW	250				87	56	68	35	7	06	29.84	30.03	
22	CLR	NC				76	64	68	67	5	16	29.91	30.09	
				SUNRISE: 0509		JUL 27						SUNSET: 1923		
01	FEW	250				72	63	66	73	3	22	29.92	30.11	
04	FEW	250				70	64	66	81	0	00	29.92	30.10	
07	OVC	250				75	65	69	71	3	16	29.94	30.13	
10	OVC	065				81	59	67	47	9	20	29.95	30.14	
13	OVC	060				79	64	69	60	10	25	29.94	30.13	
16	OVC	065				84	62	70	48	9	22	29.91	30.10	
19	BKN	150				76	70	72	82	0	00	29.91	30.10	
22	OVC	031				76	70	72	82	5	23	29.92	30.11	
				SUNRISE: 0510		JUL 28						SUNSET: 1922		
01	OVC	050				75	67	70	76	5	21	29.90	30.09	
04	OVC	027				75	68	70	79	5	21	29.91	30.09	
07	SCT	080				77	70	72	79	8	24	29.91	30.10	
10	SCT	250				85	71	75	63	9	25	29.90	30.08	
13	SCT	043				92	71	77	50	10	23	29.86	30.04	
16	SCT	050				95	68	76	41	14	24	29.80	29.98	
19	SCT	250				90	70	76	52	11	25	29.79	29.97	
22	SCT	250				82	71	74	69	7	20	29.81	30.00	
				SUNRISE: 0511		JUL 29						SUNSET: 1921		
01	FEW	070				79	72	74	79	7	20	29.77	29.96	
04	SCT	150				77	72	74	85	8	21	29.75	29.94	
07	SCT	250				80	73	75	79	8	24	29.76	29.95	
10	SCT	250				92	71	77	50	7	31	29.74	29.93	
13	SCT	250				98	66	76	35	3	VR	29.67	29.86	
16	BKN	250				98	67	76	36	14	30	29.61	29.80	
19	BKN	250				78	72	74	82	7	14	29.70	29.88	
22	BKN	120				76	72	73	87	0	00	29.71	29.89	
				SUNRISE: 0511		JUL 30						SUNSET: 1920		
01	BKN	080				76	73	74	90	6	34	29.71	29.89	
04	CLR	NC				73	61	66	66	13	01	29.69	29.88	
07	BKN	150				73	63	67	71	8	04	29.77	29.96	
10	SCT	250				82	58	67	44	9	04	29.79	29.97	
13	BKN	250				87	54	67	32	5	VR	29.75	29.94	
16	BKN	250				88	53	67	30	13	01	29.74	29.93	
19	SCT	250				80	55	65	42	6	05	29.75	29.94	
22	SCT	250				71	56	62	59	0	00	29.78	29.97	

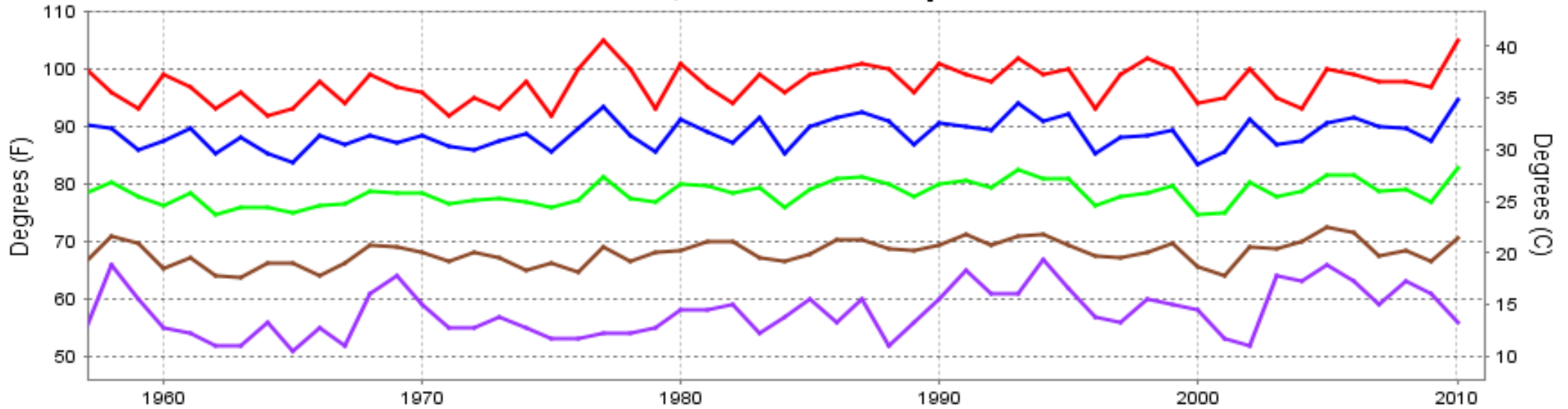
HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)			
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL
01	OVC	150				68	57	62	68	0	00	29.78	29.97	
04	OVC	150				68	59	63	73	0	00	29.77	29.96	
07	BKN	150				72	61	65	68	0	00	29.80	29.99	
10	OVC	150				81	55	65	41	5	15	29.79	29.98	
13	OVC	150				84	55	66	37	6	15	29.75	29.94	
16	BKN	150				85	53	66	33	3	12	29.72	29.91	
19	BKN	150				81	57	66	44	6	22	29.71	29.90	
22	OVC	100				76	61	67	60	6	23	29.76	29.95	

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			75	66	69	76	29.82	30.01	9.52	5	4	24
02			74	66	69	76	29.81	30.00	9.45	5	3	23
03			74	66	69	78	29.81	30.00	9.52	5	3	23
04			73	66	69	79	29.81	30.00	9.42	5	3	23
05			72	66	68	80	29.82	30.01	9.02	5	3	23
06			73	66	69	80	29.83	30.02	8.79	5	3	23
07			77	67	70	71	29.84	30.03	9.02	6	3	23
08			80	66	71	64	29.85	30.03	9.23	7	4	24
09			84	66	72	55	29.84	30.03	9.48	7	3	24
10			87	65	72	49	29.84	30.03	9.65	8	3	23
11			89	64	72	45	29.84	30.02	9.84	8	5	25
12			90	63	72	42	29.83	30.01	9.84	9	4	24
13			91	63	73	41	29.81	30.00	9.94	8	5	25
14			92	62	73	38	29.80	29.98	9.90	9	4	24
15			93	62	72	37	29.78	29.97	9.97	9	4	24
16			93	61	72	37	29.77	29.96	9.84	10	4	25
17			91	62	72	39	29.77	29.95	9.77	10	3	24
18			89	62	72	42	29.77	29.96	9.87	9	3	24
19			86	63	71	49	29.78	29.97	9.68	7	2	20
20			82	64	71	56	29.79	29.97	9.84	6	2	17
21			80	65	70	62	29.80	29.99	9.87	6	2	20
22			78	66	70	67	29.81	30.00	9.61	6	3	22
23			77	66	70	70	29.81	30.00	9.52	5	3	23
24			76	66	70	73	29.81	30.00	9.61	5	3	23

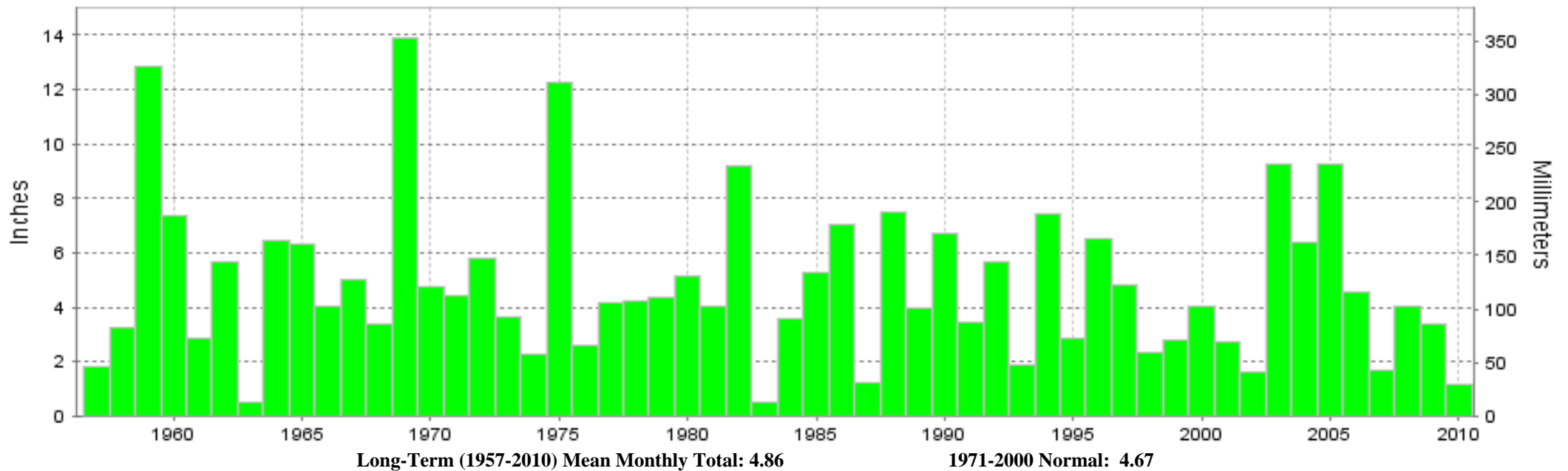
RICHMOND, VA JULY Temperatures



— Extreme Max
 — Mean Max
 — Mean
 — Mean Min
 — Extreme Min

Long-Term (1957-2010) Mean: 78.4
1971-2000 Normal: 77.9

RICHMOND, VA JULY Precipitation



Long-Term (1957-2010) Mean Monthly Total: 4.86

1971-2000 Normal: 4.67



JULY 2010
RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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