



JUNE 2012 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 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	84	66	75	5	67	69	0	10	TS TSRA RA FG BR	0		0.0	0.48	29.64	29.80	7.3	16	8.2	39	23	29	22	01	
02	77	55	66	-4	53	59	0	1		0		0.0	0.00	29.62	29.82	4.6	31	6.0	20	36	15	33	02	
03	81	55	68	-2	52	59	0	3	RA	0		0.0	T	29.65	29.83	6.9	27	8.1	25	28	20	26	03	
04	83	58	71	1	55	61	0	6	RA	0		0.0	0.02	29.52	29.70	5.5	31	8.1	25	33	18	31	04	
05	67	54	61*	-9	54	57	4	0	RA BR	0		0.0	0.37	29.67	29.88	4.1	06	5.6	17	04	14	03	05	
06	73	54	64	-6	54	58	1	0		0		0.0	0.00	29.81	30.01	1.7	10	2.5	14	04	9	06	06	
07	81	54*	68	-3	54	60	0	3	RA	0		0.0	0.04	29.83	30.02	1.0	26	4.2	24	29	21	29	07	
08	84	58	71	0	55	62	0	6	RA	0		0.0	0.02	29.82	30.00	3.0	33	4.8	18	30	14	30	08	
09	90	61	76	4	54	64	0	11		0		0.0	0.00	29.82	30.02	3.5	23	4.6	16	23	13	24	09	
10	92	62	77	4	61	67	0	12		0		0.0	0.00	29.90	30.10	3.3	20	3.9	18	22	14	20	10	
11	85	66	76	3	64	68	0	11	RA	0		0.0	T	29.95	30.13	5.6	17	6.0	24	17	15	18	11	
12	80	68	74	0	70	71	0	9	TSRA RA BR	0		0.0	0.50	29.78	29.94	7.5	17	8.5	24	01	18	03	12	
13	83	64	74	0	59	65	0	9	TS RA BR	0		0.0	0.06	29.75	29.95	9.8	35	10.7	26	36	21	32	13	
14	77	63	70	-4	60	64	0	5		0		0.0	0.00	29.93	30.14	7.0	04	8.2	21	03	16	03	14	
15	81	59	70	-4	55	61	0	5		0		0.0	0.00	30.04	30.24	6.3	05	7.2	22	07	16	05	15	
16	81	56	69	-5	54	60	0	4		0		0.0	0.00	30.06	30.26	5.2	05	6.7	24	07	20	07	16	
17	78	55	67	-7	56	60	0	2		0		0.0	0.00	29.96	30.15	4.3	10	6.1	17	11	14	11	17	
18	76	56	66	-8	60	63	0	1	RA	0		0.0	0.04	29.91	30.10	4.9	14	5.3	15	15	13	14	18	
19	94	65	80	6	67	71	0	15	BR HZ	0		0.0	0.00	29.93	30.12	2.2	13	4.4	14	05	9	13	19	
20	98	71	85	10	69	74	0	20	BR HZ	0		0.0	0.00	29.91	30.09	0.4	12	3.5	13	02	12	02	20	
21	98	71	85	10	71	75	0	20	BR	0		0.0	0.00	29.78	29.95	0.7	13	3.8	25	26	16	28	21	
22	97	72	85	10	71	74	0	20	TS TSRA RA FG+ FG BR HZ SQ	0		0.0	1.85	29.65	29.85	0.8	23	4.8	55	31	40	31	22	
23	91	69	80	5	63	69	0	15	RA	0		0.0	0.01	29.75	29.95	4.7	35	6.2	23	35	17	01	23	
24	90	69	80	5	65	70	0	15		0		0.0	0.00	29.81	29.98	4.2	17	4.7	17	19	14	17	24	
25	92	67	80	4	64	69	0	15	TS TSRA RA BR SQ	0		0.0	0.27	29.59	29.78	1.3	30	7.5	60*	34	44*	34	25	
26	81	59	70	-6	48	58	0	5		0		0.0	0.00	29.68	29.87	8.5	35	8.7	25	34	21	36	26	
27	87	57	72	-4	53	62	0	7		0		0.0	0.00	29.73	29.93	6.6	32	7.2	30	32	20	33	27	
28	96	64	80	4	56	66	0	15		0		0.0	0.00	29.71	29.88	4.3	22	5.4	20	23	15	23	28	
29	103*	71	87*	11	68	74	0	22	TS TSRA RA SQ	0		0.0	0.04	29.58	29.77	1.4	27	5.6	59	31	43	31	29	
30	96	69	83	6	69	73	0	18	TS TSRA RA GS BR SQ	0		T	0.57	29.65	29.84	2.6	15	5.8	53	03	41	04	30	

85.9	62.3	74.1	☼	60.0	65.4	0.2	9.5	< MONTHLY AVERAGES TOTALS >				T	4.27	29.78	29.97	0.3	36	6.1	< MONTHLY AVERAGES				
-0.2	-2.2	-1.2		----- DEPARTURE FROM NORMAL -----								0.34	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS								GREATEST 24-HR PRECIPITATION : 1.86 DATE : 22-23				SEA LEVEL PRESSURE				DATE TIME							
MONTHLY								GREATEST 24-HR SNOWFALL : T DATE : 30				MAXIMUM : 30.32				16 1022							
TOTAL DEPARTURE								GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.65				04 1654							
SEASON TO DATE								NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 12				MINIMUM TEMP <= 32 : 0				PRECIPITATION >= 0.01 INCH : 13			
HEATING : 5 -2 2860 -913								MAXIMUM TEMP <= 32 : 0				MINIMUM TEMP <= 0 : 0				PRECIPITATION >= 0.10 INCH : 6							
COOLING : 285 -30 538 62								THUNDERSTORMS : 7				HEAVY FOG : 1				SNOWFALL >= 1.0 INCH : 0							

**JUNE 2012
RICHMOND, VA**

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
JUNE 2012

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		T	0.08									01	0.48	0.48	
02													02												02	0.00	0.00	
03													03					T							03	T	T	
04													04			0.02		T		T					04	0.02	0.02	
05													05	0.01		T									05	0.37	0.37	
06													06												06	0.00	0.00	
07													07												07	0.04	0.04	
08	0.02												08												08	0.02	0.02	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11												11	T	T	
12													12	T	0.01	0.01	T								12	0.50	0.50	
13	0.06												13												13	0.06	0.06	
14													14												14	0.00	0.00	
15													15												15	0.00	0.00	
16													16												16	0.00	0.00	
17													17												17	0.00	0.00	
18								0.01					18	0.01	0.01										18	0.04	0.04	
19													19												19	0.00	0.00	
20													20												20	0.00	0.00	
21													21												21	0.00	0.00	
22													22			0.69	1.16	T	T		T	T			22	1.85	1.85	
23	0.01												23												23	0.01	0.01	
24													24												24	0.00	0.00	
25													25			0.14	0.13								25	0.27	0.27	
26													26												26	0.00	0.00	
27													27												27	0.00	0.00	
28													28												28	0.00	0.00	
29													29												29	0.04	0.04	
30													30												30	0.57	0.57	

* 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)	0.50	0.70	0.90	1.06	1.47	1.76	1.85	1.85	1.85	1.85	1.85	1.85
Ending Date	22	22	22	22	22	22	22	22	22	22	22	22
Ending Time (Hr/Min)	1611	1614	1612	1617	1616	1626	1634	1634	1634	1634	1634	1634

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 1981-2010

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 JUNE 2012

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							5.00	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							1.00	10.00	
06							10.00	10.00	
07							10.00	10.00	
08							9.00	10.00	
09							10.00	10.00	
10							10.00	10.00	
11							8.00	10.00	
12							1.50	10.00	
13							3.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							10.00	10.00	
18							7.00	10.00	
19							4.00	10.00	
20							5.00	10.00	
21							5.00	10.00	
22							0.50	10.00	
23							7.00	10.00	
24							8.00	10.00	
25							9.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							7.00	10.00	
30							4.00	10.00	
MONTHLY AVGS							7.47	10.00	
SUNSHINE (Minutes)									
Total : 0					Possible : 26456				
Percent Possible : 0									
NUMBER OF DAYS WITH : SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
MINIMUM VISIBILITY (MILES)									
<= .25		<= 3.0			>= 7.0				
0		4			21				

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

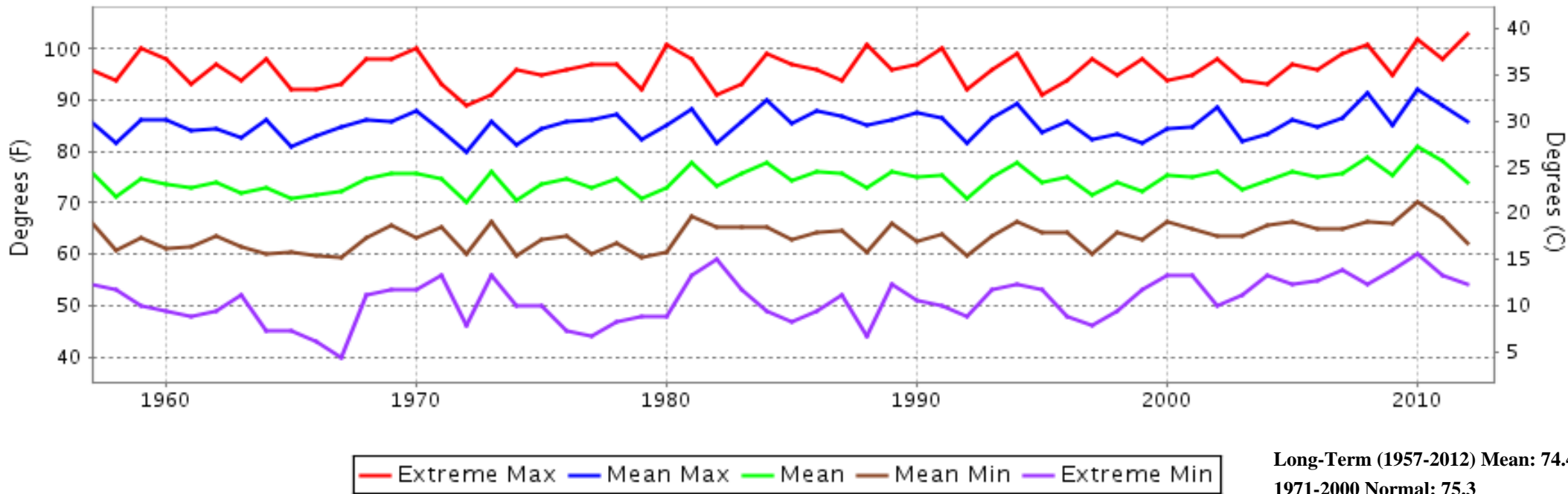
JUNE 2012

KRIC

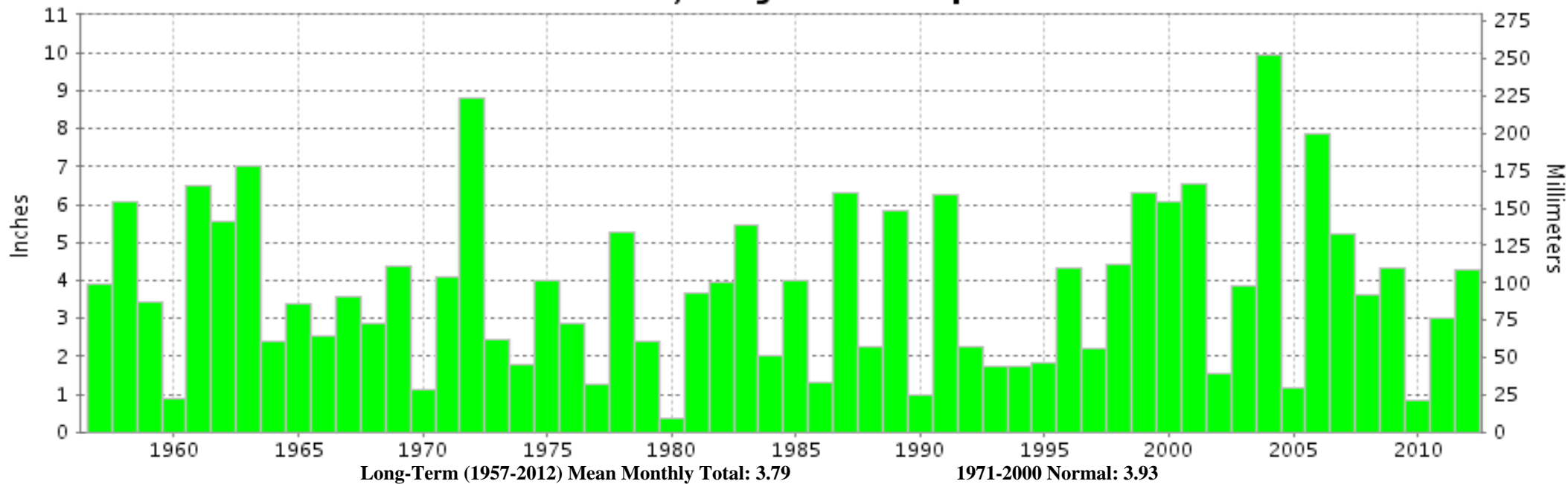
WBAN # 13740

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: 0450 JUN 01						SUNSET: 1924						SUNRISE: 0448 JUN 07						SUNSET: 1928											
01	OVC	220			10.00	69	63	65	81	7	15	29.71	29.90	01	BKN	110			10.00	58	55	56	90	0	00	29.85	30.04		
04	OVC	150			10.00	68	65	66	90	0	00	29.69	29.88	04	SCT	110			10.00	55	53	54	93	5	14	29.84	30.03		
07	BKN	300			10.00	72	66	68	82	6	15	29.70	29.88	07	FEW	085			10.00	62	55	58	78	6	21	29.86	30.05		
10	OVC	300			10.00	79	69	72	72	13	15	29.67	29.86	10	FEW	037			10.00	74	55	63	52	7	21	29.85	30.04		
13	OVC	300			10.00	82	70	74	67	10	15	29.60	29.79	13	SCT	060			10.00	80	50	63	35	5	VR	29.83	30.01		
16	BKN	250			10.00	79	71	74	77	14	16	29.54	29.72	16	SCT	110			10.00	78	51	62	39	0	00	29.79	29.98		
19	OVC	100			5.00	68	65	66	90	13	18	29.54	29.73	19	BKN	120			10.00	72	60	65	66	3	17	29.80	29.99		
22	OVC	110			7.00	69	67	68	93	6	27	29.55	29.73	22	FEW	090			10.00	67	55	60	66	7	04	29.84	30.02		
SUNRISE: 0450 JUN 02						SUNSET: 1925						SUNRISE: 0448 JUN 08						SUNSET: 1928											
01	OVC	120			10.00	66	62	64	87	7	26	29.58	29.76	01	OVC	140			10.00	63	57	60	81	3	30	29.83	30.02		
04	SCT	110			10.00	62	57	59	84	9	31	29.57	29.76	04	FEW	110			9.00	60	58	59	93	5	31	29.81	30.00		
07	SCT	120			10.00	63	54	58	73	9	30	29.64	29.83	07	CLR	NC			10.00	66	58	61	76	6	32	29.85	30.03		
10	SCT	180			10.00	72	52	61	50	5	VR	29.65	29.84	10	CLR	NC			10.00	77	53	63	43	8	36	29.85	30.04		
13	BKN	075			10.00	73	50	60	44	8	34	29.63	29.82	13	SCT	250			10.00	82	53	65	37	9	02	29.82	30.01		
16	BKN	075			10.00	75	51	61	43	10	31	29.63	29.82	16	SCT	075			10.00	84	52	65	33	6	VR	29.79	29.98		
19	SCT	075			10.00	70	50	59	49	0	00	29.65	29.84	19	FEW	250			10.00	80	50	63	35	6	28	29.77	29.96		
22	CLR	NC			10.00	60	53	56	78	0	00	29.68	29.87	22	FEW	250			10.00	67	57	61	70	0	00	29.80	29.99		
SUNRISE: 0449 JUN 03						SUNSET: 1925						SUNRISE: 0448 JUN 09						SUNSET: 1929											
01	FEW	250			10.00	56	52	54	87	0	00	29.68	29.87	01	FEW	250			10.00	66	54	59	65	0	00	29.82	30.01		
04	SCT	250			10.00	59	50	54	72	5	30	29.67	29.86	04	FEW	250			10.00	65	54	59	68	7	24	29.82	30.01		
07	FEW	100			10.00	65	52	58	63	5	29	29.71	29.90	07	FEW	300			10.00	72	57	63	59	3	29	29.84	30.03		
10	FEW	250			10.00	73	47	59	40	7	29	29.70	29.88	10	SCT	300			10.00	84	54	66	36	6	27	29.86	30.05		
13	SCT	060			10.00	77	48	61	36	18	30	29.66	29.85	13	BKN	300			10.00	87	52	66	30	11	21	29.83	30.01		
16	FEW	070			10.00	79	49	62	35	10	28	29.59	29.78	16	BKN	250			10.00	89	51	66	27	6	VR	29.79	29.98		
19	SCT	120			10.00	75	54	63	48	8	23	29.58	29.77	19	SCT	250			10.00	85	52	65	32	5	29	29.80	29.99		
22	SCT	300			10.00	67	57	61	70	7	22	29.60	29.79	22	FEW	250			10.00	71	59	64	66	3	19	29.84	30.03		
SUNRISE: 0449 JUN 04						SUNSET: 1926						SUNRISE: 0448 JUN 10						SUNSET: 1929											
01	SCT	300			10.00	64	57	60	78	5	24	29.56	29.75	01	FEW	250			10.00	69	59	63	71	0	00	29.85	30.04		
04	BKN	300			10.00	64	55	59	73	5	25	29.52	29.70	04	CLR	NC			10.00	64	59	61	84	3	15	29.87	30.06		
07	OVC	180			10.00	66	55	60	68	7	26	29.52	29.71	07	FEW	250			10.00	73	61	66	66	8	25	29.91	30.09		
10	BKN	170			10.00	76	54	63	47	13	28	29.52	29.70	10	FEW	250			10.00	85	63	71	48	5	24	29.92	30.11		
13	BKN	250			10.00	80	50	63	35	13	30	29.47	29.66	13	BKN	250			10.00	90	57	69	33	0	00	29.91	30.10		
16	BKN	250			10.00	78	56	65	47	9	35	29.47	29.65	16	BKN	300			10.00	88	61	71	40	7	19	29.90	30.09		
19	BKN	250			10.00	66	60	62	81	3	04	29.52	29.70	19	OVC	300			10.00	81	63	69	54	8	20	29.92	30.11		
22	SCT	100			10.00	61	53	57	75	8	01	29.55	29.74	22	OVC	300			10.00	74	63	67	69	0	00	29.95	30.13		
SUNRISE: 0449 JUN 05						SUNSET: 1926						SUNRISE: 0448 JUN 11						SUNSET: 1930											
01	FEW	090			10.00	57	52	54	83	5	34	29.57	29.75	01	SCT	300			10.00	71	62	65	73	0	00	29.94	30.13		
04	SCT	024			10.00	54	52	53	93	3	01	29.58	29.77	04	BKN	300			10.00	67	62	64	84	0	00	29.94	30.13		
07	BKN	039			10.00	59	56	57	90	6	02	29.65	29.85	07	OVC	300			10.00	71	63	66	76	5	20	29.98	30.16		
10	OVC	075			10.00	62	58	60	87	7	09	29.70	29.89	10	OVC	300			10.00	80	65	70	60	6	16	29.98	30.17		
13	BKN	080			10.00	64	57	60	78	7	08	29.71	29.90	13	BKN	100			10.00	82	63	70	53	9	16	29.95	30.14		
16	BKN	095			10.00	66	54	59	65	9	10	29.70	29.90	16	OVC	080			10.00	80	64	70	58	8	23	29.91	30.10		
19	BKN	100			10.00	64	56	59	75	3	17	29.74	29.93	19	OVC	090			10.00	77	68	71	74	8	19	29.91	30.10		
22	SCT	100			10.00	57	53	55	87	5	12	29.77	29.96	22	OVC	055			10.00	75	65	69	71	8	17	29.90	30.09		
SUNRISE: 0449 JUN 06						SUNSET: 1927						SUNRISE: 0448 JUN 12						SUNSET: 1930											
01	BKN	130			10.00	57	54	55	90	0	00	29.78	29.97	01	OVC	050			10.00	71	66	68	84	10	15	29.86	30.05		
04	OVC	110			10.00	56	54	55	93	0	00	29.79	29.98	04	OVC	041			10.00	70	66	67	87	9	14	29.82	30.01		
07	BKN	120			10.00	60	54	57	81	0	00	29.83	30.03	07	OVC	030			10.00	73	68	70	84	10	16	29.82	30.01		
10	OVC	250			10.00	68	51	58	55	8	03	29.84	30.03	10	OVC	025			10.00	78	69	72	74	14	18	29.78	29.97		
13	BKN	250			10.00	71	51	60	49	5	13	29.82	30.01	13	OVC	033			10.00	76	71	73	85	8	17	29.74	29.93		
16	OVC	140			10.00	69	54	60	59	6	12	29.80	30.00	16	BKN	090			10.00	78	72	74	82	7	21	29.68	29.87		
19	SCT	100			10.00	66	55	60	68	5	16	29.83	30.02	19	OVC	130			10.00	77	72	74	85	5	17	29.67	29.86		
22	FEW	110			10.00	59	55	57	87	0	00	29.85	30.04	22	OVC	170			10.00	75	73	74	94	3	16	29.68	29.87		

RICHMOND, VA JUNE Temperatures



RICHMOND, VA JUNE Precipitation





**JUNE 2012
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.

A handwritten signature in black ink, appearing to read "Thomas R. Karl".

DIRECTOR

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