



JUNE 2016 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	84	64	74	4	66	69	0	9		0		0.0	0.00	29.85	30.04	3.7	12	5.0	19	14	16	14	01	
02	83	66	75	5	68	70	0	10		0		0.0	0.00	29.87	30.05	3.5	10	4.9	16	14	13	11	02	
03	85	68	77	7	69	71	0	12	TS TSRA RA FG+ FG BR	0		0.0	3.63	29.83	30.01	2.9	12	4.3	26	03	18	09	03	
04	80	69	75	5	70	71	0	10	RA FG BR HZ	0		0.0	T	29.80	29.97	4.4	11	5.3	19	14	13	13	04	
05	87	68	78	8	69	72	0	13	TS TSRA RA BR	0		0.0	0.56	29.62	29.79	11.8	22	12.1	46	24	24	23	05	
06	85	70	78	8	66	70	0	13		0		0.0	0.00	29.59	29.77	9.0	23	9.9	23	22	17	25	06	
07	88	65	77	6	63	68	0	12	RA	0		0.0	T	29.44	29.63	2.8	27	7.1	39	31	32	35	07	
08	79	55	67	-4	47	57	0	2		0		0.0	0.00	29.62	29.83	8.8	32	10.4	35	29	28	32	08	
09	82	49*	66*	-6	49	58	0	1		0		0.0	0.00	29.78	29.98	5.8	26	7.9	25	26	18	25	09	
10	83	61	72	-1	51	60	0	7		0		0.0	0.00	29.88	30.08	2.7	34	6.7	17	01	14	36	10	
11	93	62	78	5	63	69	0	13		0		0.0	0.00	29.83	30.00	7.9	24	8.8	21	26	18	27	11	
12	94*	71	83*	9	60	69	0	18		0		0.0	0.00	29.65	29.84	9.0	29	11.3	27	27	22	27	12	
13	82	62	72	-2	49	59	0	7		0		0.0	0.00	29.73	29.92	6.2	34	9.9	32	34	23	35	13	
14	84	61	73	-1	56	63	0	8		0		0.0	0.00	29.75	29.97	5.3	03	7.5	21	04	16	03	14	
15	84	63	74	0	66	68	0	9	BR	0		0.0	0.00	29.76	29.93	5.5	15	6.4	16	15	12	22	15	
16	91	64	78	4	69	72	0	13	TS TSRA RA FG+ BR	0		0.0	1.64	29.54	29.73	2.3	29	8.4	60*	31	41*	32	16	
17	75	62	69	-5	63	65	0	4	TS RA DZ BR	0		0.0	0.08	29.65	29.89	6.9	04	7.8	27	03	20	04	17	
18	81	58	70	-4	53	60	0	5		0		0.0	0.00	30.03	30.24	6.1	07	7.3	22	07	15	06	18	
19	84	55	70	-4	53	61	0	5		0		0.0	0.00	30.15	30.34	2.1	21	3.5	14	21	12	20	19	
20	87	66	77	2	57	65	0	12		0		0.0	0.00	29.99	30.16	8.1	25	8.9	18	24	15	27	20	
21	89	71	80	5	66	71	0	15	RA	0		0.0	T	29.75	29.92	11.3	24	11.5	30	23	25	23	21	
22	84	71	78	3	65	70	0	13		0		0.0	0.00	29.76	29.96	8.0	25	8.9	22	02	16	27	22	
23	83	71	77	2	67	70	0	12	TS TSRA RA FG BR	0		0.0	0.46	29.72	29.90	7.6	27	10.3	38	26	29	23	23	
24	85	68	77	2	68	71	0	12	TS TSRA RA BR	0		0.0	0.55	29.77	29.98	1.7	21	5.3	20	26	16	18	24	
25	82	66	74	-2	67	69	0	9	BR	0		0.0	0.00	29.93	30.14	6.2	04	7.0	19	02	15	02	25	
26	83	62	73	-3	61	65	0	8	BR	0		0.0	0.00	30.01	30.20	3.1	11	3.8	14	14	12	13	26	
27	86	63	75	-1	67	70	0	10	RA BR	0		0.0	0.04	29.89	30.06	4.6	18	6.0	20	19	14	19	27	
28	83	70	77	1	71	72	0	12	RA BR	0		0.0	0.33	29.75	29.94	6.1	21	7.8	22	20	18	20	28	
29	86	67	77	1	64	68	0	12	RA BR	0		0.0	0.52	29.75	29.95	3.9	02	5.2	18	33	13	35	29	
30	82	66	74	-3	63	67	0	9		0		0.0	0.00	29.85	30.03	3.6	08	6.1	14	12	12	10	30	

84.5	64.5	74.5	☼	62.2	67.0	0.0	9.8	< MONTHLY AVERAGES TOTALS >				0.0	7.81	29.78	29.97	1.6	25	7.5	< MONTHLY AVERAGES				
-1.6	0.0	-0.8		<----- DEPARTURE FROM NORMAL ----->								3.88	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS								GREATEST 24-HR PRECIPITATION : 3.63 DATE : 03				SEA LEVEL PRESSURE				DATE TIME							
MONTHLY								GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM : 30.39				19 1106							
TOTAL DEPARTURE								GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.52				07 1516							
SEASON TO DATE								NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 3				MINIMUM TEMP <= 32 : 0				PRECIPITATION >= 0.01 INCH : 9			
HEATING : 0 -7 3325 -448								MAXIMUM TEMP <= 32 : 0				MINIMUM TEMP <= 0 : 0				PRECIPITATION >= 0.10 INCH : 7							
COOLING : 295 -20 404 -72								THUNDERSTORMS : 6				HEAVY FOG : 2				SNOWFALL >= 1.0 INCH : 0							

**JUNE 2016
RICHMOND, VA**

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
JUNE 2016

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						1.94	1.54	0.15	T			03	3.63	3.63	
04													04										T		04	T	T	
05	0.35	0.15	0.05	0.01									05						T	T					05	0.56	0.56	
06													06												06	0.00	0.00	
07													07												07	T	T	
08													08												08	0.00	0.00	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11												11	0.00	0.00	
12													12												12	0.00	0.00	
13													13												13	0.00	0.00	
14													14												14	0.00	0.00	
15													15												15	0.00	0.00	
16													16								0.22	1.13	0.20	0.09	16	1.64	1.64	
17	0.02				T								17	0.03	T										17	0.08	0.08	
18													18												18	0.00	0.00	
19													19												19	0.00	0.00	
20													20												20	0.00	0.00	
21													21												21	T	T	
22													22												22	0.00	0.00	
23					T	0.02	0.19	0.18	0.04	0.02			23		T	T	T	T	0.01	T	T	T	T		23	0.46	0.46	
24													24								0.01	0.41	0.13	T	24	0.55	0.55	
25													25												25	0.00	0.00	
26													26												26	0.00	0.00	
27													27											T	27	0.04	0.04	
28					0.05	0.28	T	T					28		T	T									28	0.33	0.33	
29	0.52												29												29	0.52	0.52	
30													30												30	0.00	0.00	

* 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)	0.68	1.18	1.56	1.79	2.20	2.77	2.96	3.36	3.54	3.61	3.63	3.63
Ending Date	03	03	03	03	03	03	03	03	03	03	03	03
Ending Time (Hr/Min)	1857	1856	1858	1902	1913	1918	1931	1953	2010	2025	2041	2041

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.

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).

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	
VC In the Vicinity	UP Unkown Precipitation		GL Glaze

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

RICHMOND, VA JUNE 2016

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet.

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.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

NORMALS ARE FOR THE YEARS 1981-2010

ADDITIONAL NOTES & ERRATA:

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	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	10.00	10.00
02	7.00	10.00
03	0.25	10.00
04	0.50	10.00
05	2.50	10.00
06	10.00	10.00
07	9.00	10.00
08	10.00	10.00
09	9.00	10.00
10	10.00	10.00
11	9.00	10.00
12	9.00	10.00
13	10.00	10.00
14	10.00	10.00
15	5.00	10.00
16	0.75	10.00
17	2.00	10.00
18	10.00	10.00
19	10.00	10.00
20	10.00	10.00
21	10.00	10.00
22	7.00	10.00
23	3.00	10.00
24	1.00	10.00
25	5.00	10.00
26	4.00	10.00
27	1.00	10.00
28	3.00	10.00
29	3.00	10.00
30	10.00	10.00
AVGS	6.37	10.00
MINIMUM VISIBILITY (MILES)		
<= .25	<= 3.0	>= 7.0
1	10	17

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

JUNE 2016

KRIC

WBAN # 13740

Table with columns: HOUR (LST), SKY COVER, CEILING 100's of FT., VISIBILITY (MILES), WEATHER, TEMPERATURE °F (DRY BULB, DEW POINT, WET BULB), RELATIVE HUMIDITY (PCT), WIND (SPEED (MPH), DIRECTION Tens of Deg), PRESSURE (INCHES, HG) (STATION, SEA LEVEL). Data is organized by date (JUN 01 to JUN 12) and time of day (SUNRISE/SUNSET).

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL
SUNRISE: 0450 JUN 25 SUNSET: 1934												
01	FEW	095	9.00		69	68	68	96	3	01	29.85	30.03
04	OVC	007	5.00	BR	71	69	70	94	9	03	29.88	30.07
07	OVC	022	7.00		71	68	69	90	9	03	29.94	30.13
10	OVC	037	10.00		74	67	69	79	14	04	29.98	30.17
13	BKN	044	10.00		78	67	71	69	9	03	29.98	30.16
16	SCT	035	10.00		81	65	71	58	7	05	29.98	30.16
19	FEW	033	10.00		76	65	69	69	5	07	29.99	30.18
22	CLR	NC	10.00		69	66	67	90	6	11	30.03	30.22
SUNRISE: 0450 JUN 26 SUNSET: 1934												
01	CLR	NC	7.00		64	63	63	96	0	00	30.01	30.20
04	CLR	NC	7.00		64	62	63	93	0	00	30.04	30.23
07	BKN	300	6.00	BR	67	65	66	93	0	00	30.04	30.23
10	BKN	300	10.00		77	62	68	60	7	09	30.05	30.24
13	CLR	NC	10.00		81	59	67	47	3	VR	30.03	30.22
16	BKN	300	10.00		82	57	67	42	5	11	29.99	30.18
19	BKN	300	10.00		75	63	67	66	8	12	29.95	30.14
22	SCT	300	10.00		68	63	65	84	3	15	29.98	30.16
SUNRISE: 0450 JUN 27 SUNSET: 1934												
01	FEW	250	10.00		64	62	63	93	3	18	29.97	30.16
04	OVC	004	3.00	BR	64	63	63	96	3	17	29.94	30.12
07	BKN	250	3.00	BR	65	65	65	100	5	20	29.94	30.13
10	SCT	250	10.00		78	66	70	67	6	VR	29.92	30.11
13	SCT	250	10.00		84	66	72	55	10	19	29.85	30.04
16	BKN	250	10.00		85	68	74	57	7	22	29.80	29.98
19	OVC	250	10.00		80	71	74	74	5	17	29.80	29.99
22	OVC	045	10.00	-RA	78	70	73	76	7	18	29.80	29.99
SUNRISE: 0451 JUN 28 SUNSET: 1934												
01	OVC	090	7.00		73	71	72	94	5	15	29.77	29.96
04	OVC	100	5.00	RA BR	72	70	71	94	8	21	29.77	29.96
07	OVC	120	3.00	BR	72	71	71	97	5	19	29.77	29.96
10	OVC	090	5.00	-RA BR	75	72	73	90	8	24	29.78	29.97
13	OVC	080	9.00		80	72	75	76	9	23	29.75	29.94
16	BKN	250	10.00		82	73	76	74	11	22	29.72	29.91
19	BKN	250	10.00		77	69	72	77	9	23	29.70	29.89
22	BKN	100	10.00		71	67	68	87	0	00	29.74	29.93
SUNRISE: 0451 JUN 29 SUNSET: 1934												
01	OVC	065	10.00	-RA	69	68	68	96	0	00	29.73	29.91
04	FEW	110	3.00	BR	68	67	67	96	3	28	29.71	29.90
07	FEW	250	10.00		71	66	68	84	8	35	29.76	29.95
10	SCT	250	10.00		78	66	70	67	8	36	29.78	29.97
13	BKN	250	10.00		82	62	69	51	8	36	29.77	29.96
16	SCT	250	10.00		86	60	69	42	3	35	29.75	29.94
19	SCT	250	10.00		78	64	69	62	5	06	29.76	29.95
22	FEW	250	10.00		70	63	66	79	6	04	29.83	30.01
SUNRISE: 0451 JUN 30 SUNSET: 1934												
01	BKN	050	10.00		68	60	63	76	7	02	29.86	30.05
04	BKN	045	10.00		66	58	61	75	6	02	29.84	30.03
07	FEW	250	10.00		70	58	63	66	10	04	29.85	30.04
10	BKN	250	10.00		78	60	67	54	6	12	29.88	30.07
13	OVC	250	10.00		80	64	70	58	5	VR	29.85	30.04
16	BKN	160	10.00		81	67	72	62	8	13	29.82	30.01
19	SCT	300	10.00		77	68	71	74	6	10	29.82	30.01
22	SCT	300	10.00		71	68	69	90	3	12	29.84	30.03

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL

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

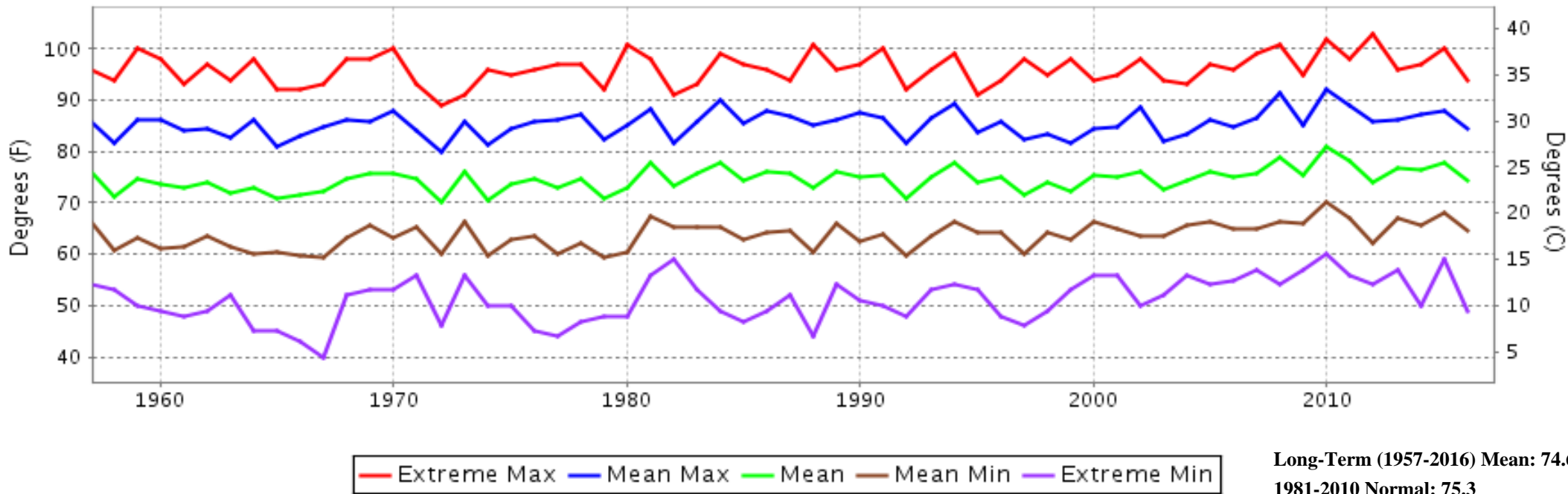
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC = No Ceiling detected.

& = Original observation contained additional weather elements.

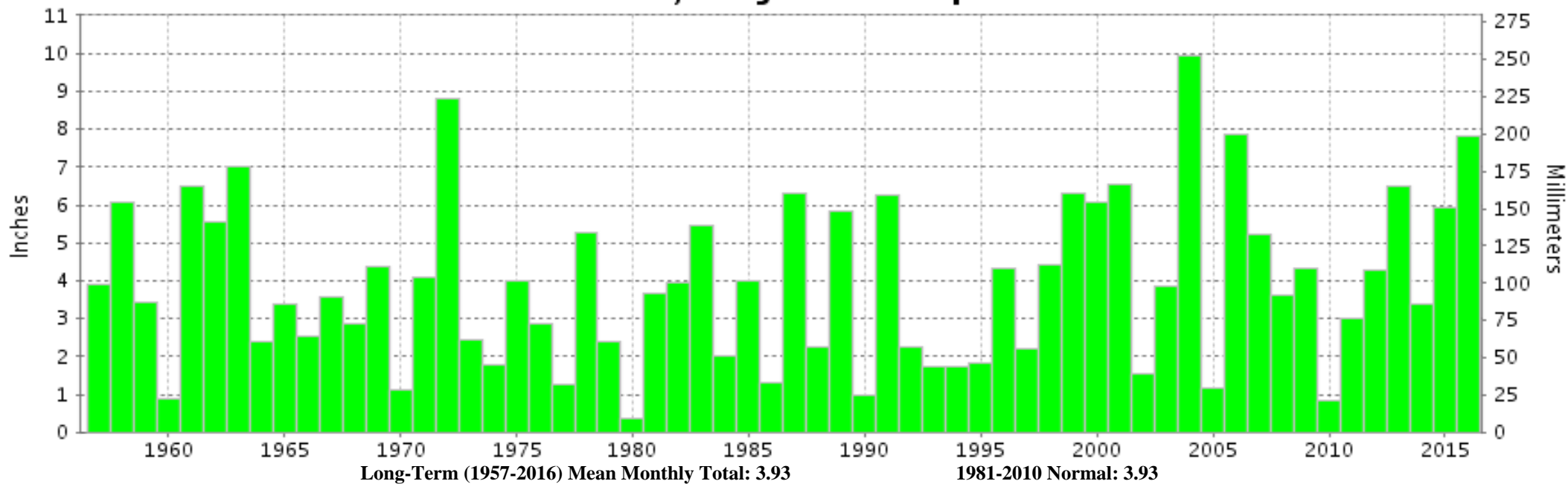
See page 3 for additional notes.

HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)	
	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		VISIBILITY (Miles)	WIND SPEED (MPH)	SPEED	DIRECTION
					STATION	SEA LEVEL				
01	68	62	64	82	29.79	29.98	9.22	5	2	23
02	67	62	64	83	29.78	29.97	9.03	5	2	23
03	67	62	64	84	29.78	29.97	8.44	6	2	23
04	67	62	64	85	29.78	29.97	8.30	5	2	23
05	66	62	64	87	29.79	29.98	8.02	5	2	22
06	67	62	65	85	29.80	29.99	8.07	6	2	22
07	70	63	66	79	29.81	30.00	8.36	7	2	23
08	73	63	67	71	29.81	30.00	9.12	8	2	23
09	75	62	67	66	29.82	30.01	9.50	8	3	24
10	77	62	68	62	29.82	30.00	9.67	8	2	22
11	79	62	68	57	29.81	30.00	9.50	9	4	25
12	81	62	69	55	29.80	29.99	9.53	9	3	24
13	82	62	69	53	29.79	29.98	9.60	10	4	25
14	82	61	69	52	29.78	29.97	9.87	10	4	25
15	83	62	70	51	29.76	29.95	9.93	10	4	25
16	83	62	70	52	29.76	29.95	9.90	9	2	23
17	82	63	70	54	29.75	29.94	9.87	10	1	21
18	80	62	69	56	29.75	29.94	9.80	9	1	18
19	77	63	69	64	29.76	29.95	9.48	8	2	22
20	74	64	68	72	29.77	29.95	9.63	8	1	15
21	73	63	67	74	29.79	29.97	9.33	9	2	22
22	71	63	66	77	29.80	29.99	9.40	6	2	22
23	70	63	66	79	29.80	29.99	9.28	6	2	22
24	69	62	65	81	29.80	29.98	9.27	6	2	22

RICHMOND, VA JUNE Temperatures



RICHMOND, VA JUNE Precipitation





JUNE 2016
RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center

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

DIRECTOR

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